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Congestive Heart Failure and Strategies To Improve Quality of Life

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Walden University

College of Health Sciences

This is to certify that the doctoral study by

Esther Okorie

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2020

Abstract

Congestive Heart Failure and Strategies To Improve Quality of Life

by

Esther Okorie

MSN, Walden University, 2015

BSN, South Carolina State University, 2004

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

February 2020

Abstract

Congestive heart failure is a global, chronic, progressive, and debilitating disease affecting mostly older adults. The multiple complications associated with the health issue led to readmissions and markedly reduced ability of heart failure (HF) patients to perform the self-care management of the problem. Nurses are responsible for providing a standardized quality education for patients; however, nurses at the project site lacked adequate skills and knowledge to bridge the gap in HF self-care management education. The project was guided by health belief model and self-care deficit with the goal of boosting the staff knowledge and confidence with providing patient HF self-care management strategies. The purpose of this project was to develop a staff in-service education program on HF for nurses in an outpatient practice. After review from an expert panel, a PowerPoint presentation with discussion was presented. Seven participants completed the 10-question pretest and 8 participants completed the 10-question on the posttest. Pretest responses ranged from 71.4 % ($n = 5$) to 85.7 % correct ($n = 6$). Posttest responses ranged from 87.5 % correct ($n = 7$) to 100% ($n = 8$). Results from the staff exit surveys indicated that the 8 participants agreed, or strongly agreed to the project planning, execution, and leadership. This staff education program will promote positive social change in the organization and improved quality of life for patients and families.

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Dedication

I humbly dedicate this project to my Lord and Savior Jesus Christ and my Prophet T.B Joshua. My Father and Mother who were both deceased. Finally, my husband Martin Okorie, my children Ronald, Christian, and Esther Jr., and my siblings Florence, Obiageri, Grace, Obiora, Rose, Ngozi and Chetachi for their inspiration.

Acknowledgement

This doctoral education project was accomplished with the support and help of friends and colleagues. I would also like to acknowledge Dr. McWhirt my Chair, Dr. Lee, and other members of the committee for working tirelessly with me. A special thanks to Dr. Whitehead for her guidance, encouragement and expertise to make this project a reality. Thank you to Dr. McGinnis, Bobadilla APRN, Dr. Chesoni and the rest whose names I cannot mention here due to space.

Table of Contents

List of Tables	iv
List of Figures	v
Section 1: Nature of the Project	1
Introduction.....	1
Problem Statement.....	2
Purpose.....	3
Nature of the Doctoral Project	3
Significance of the Project	4
Summary.....	5
Section 2: Background and Context	6
Introduction.....	6
Concepts, Models, and Theories.....	6
Health Belief Model.....	6
Self-Care Deficit Theory.....	8
Relevance to Nursing Practice	9
Clinical Practice Guidelines.....	9
Patient Education	10
Self-Care Strategies	11
Health Beliefs.....	16
Local Background and Context	17
Role of the DNP Student.....	18

Summary	18
Section 3: Collection and Analysis of Evidence.....	19
Introduction.....	19
Practice-Focused Question.....	19
Operational Definitions.....	20
Sources of Evidence.....	21
Participants.....	22
Procedures.....	22
Planning	23
Implementation	24
Evaluation	24
Protection	25
Analysis and Synthesis	26
Summary.....	26
Section 4: Findings and Recommendations.....	28
Introduction.....	28
Protections.....	28
Findings and Implications.....	28
Expert Panel Review.....	30
Expert Result.....	30
Data Analysis	31
Implications.....	35

Implications for Positive Social Change.....	36
Strength and Limitations of the Project	38
Strength.....	38
Limitations	38
Recommendations.....	38
Summary	39
Section 5: Dissemination Plan	40
Analysis of Self.....	41
Practitioner.....	41
Scholar	41
Project Manager	42
Summary.....	42
References.....	44
Appendix A: PowerPoint.....	51
Appendix B: Expert Panel	56
Appendix C: Patient Flyer	57
Appendix D: Pretest and Posttest.....	58
Appendix E: Exit Survey	60
Appendix F: Outpatient Assessment.....	61

List of Tables

Table 1. Expert Panel Results	31
Table 2. Pretest Resultss	32
Table 3. Posttest Results	32
Table 4 Exit Survey Results.....	33

List of Figures

Figure 1. Naturalistic decision making	12
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Section 1: Nature of the Project

Introduction

Congestive heart failure (CHF) is a chronic, progressive, and debilitating disease resulting in multiple complications, leading to the inability to manage the health problem that reduces patient quality of life (QOL) (Reigel et al., 2017). Heart failure (HF) is the inability of the heart to pump adequate blood to meet the metabolic demands. HF is a global health problem affecting more than 26 million people worldwide (Savarese & Lund, 2017). Currently in the United States, approximately 5.7 million people have HF and the number is projected to increase by 8 million in 2030, accounting for 46% increase (Savarese & Lund, 2017). The continued increase in prevalence of HF diagnosis in patients 65 years and older is worrisome with the increase in the aging population (Vigen, Maddox, & Allen, 2012). HF affects patients' QOL and includes physiological, social, emotional, and psychosocial effects on the patient. Management of HF includes educating the staff to assist patients with self-care management skills, recognizing signs and symptoms of HF, and adhering to the prescribed medical regimen. McGreal et al. (2014) reported that self-care management education for HF patients improves body weight, disease knowledge, and adherence to the treatment regimen to maintain QOL.

My goal in this project was to develop a patient education program on HF for staff in an outpatient cardiology clinic. The program included patient self-care management guides that can improve staff knowledge on HF. In Section 1, I discussed the local nursing practice problem, purpose of the project, and significance and relevance of the problem to nursing.

Problem Statement

The social, physical, and economic burden of HF cannot be underestimated. The disease causes health problem in the United States. Nearly one in every four HF patients among the Medicaid beneficiaries in the United States is hospitalized within 30-days after discharge with HF (Lee et al., 2016). Lee et al. (2016) estimated the prevalence for HF in 2014 at 12.4 in 1,000 adults, whereas the economic cost was approximately calculated at US\$752.8 million. Staff at the clinic site for this project has noted a large percentage of outpatients with the diagnosis of HF. The cardiology nurse practitioner at the clinic estimated that 80% of these patients require hospitalization at some point in their care. Most of the patients seen at the local cardiology clinic are adults ages 65 years and older. Older adults at the clinic have difficulty with HF management related to the inability to recognize signs and symptoms and when to seek professional help. HF and other chronic health problems inherent in this population result in reduced life expectancy, prevalence for hospital acquired infections, decrease for long-term survival, and reduced expectation for QOL (Alter et al., 2012).

The providers identified a need for an evidenced-based staff HF education program due to the knowledge gap found in nursing staff related to patient teaching in self-care management. Nurses need a standardized self-care management education so they can, in turn, provide adequate HF education to patients on reportable signs and symptoms and self-care management. Staff lacked the time and adequate knowledge to provide patients with the HF guidelines and ways to manage the symptoms.

Therefore, it becomes important to develop a staff education program that teaches staff the current HF guidelines signs and symptoms of HF and self-care management. HF education at the clinic assisted the staff to develop the knowledge of teaching patients' evidence-based self-care management skills of their disease.

Purpose

My purpose in this evidence-based project was to develop a staff education program on HF. My goal in this project was to improve staff education on HF using the evidence-based practice (EBP) guidelines and patient management strategies. The practice-focused question that I sought to answer was: Will staff education on HF guidelines principles and symptom recognition increase the nursing staff's knowledge, skills, and confidence in managing patients with a diagnosis of HF? This doctoral project took place in an outpatient cardiology clinic in the Southern United States. This project has the potential to address the gap in-practice noted at the clinic through staff education on HF. As an advanced practice nurse (APN), I developed an EBP education program incorporating guidelines as outlined by the American College of Cardiology and American Heart Association. I encouraged nursing staff to collaborate with providers, patients and families during the education program.

Nature of the Doctoral Project

The project involved designing a staff education program on EBP guidelines to educate patients on HF self-care management and symptom recognition. I developed the education project by completing an extensive literature review of peer-reviewed journals within the past 5 years in databases including Nursing and Allied Health and ProQuest

databases, CINAHL, MEDLINE, and Ovid Nursing. Other sources of evidence include the Centers for Disease Control (CDC), The National Institute of Health (NIH), American Heart Association (AHA), and the American Association of Heart Failure (AAHF) guidelines (2017).

I designed the staff education program using the Walden Staff Education Manual. A panel of experts reviewed the educational content and evaluated the program prior to providing the education to the clinic staff. A pretesting and posttesting were completed to evaluate the program content and application to the clinical practice site.

Significance of the Project

Management of HF is a multidisciplinary approach that involves patients, providers, and an interdisciplinary team. The stakeholders who were involved in addressing the local project problem and supporting the project included the medical director, a physician, the nurse practitioner, registered nurses, and medical assistants. Each stakeholder has a role to play in the management of HF and the goal of decreasing the prevalence of HF and complications associated with the disease. Patients and their families are also stakeholders in this project, gaining education from nursing staff. Establishing HF strategies for educating staff on the current HF guidelines for patient management is a significant step to reducing HF complications, hospital readmissions, and improving QOL of patients at the clinic. This project created a potential for social change through nursing staff education, enhanced knowledge, and the transfer of knowledge to patients for self-care management of HF signs and symptoms.

Summary

HF is a chronic debilitating condition that leads to multiple complications. It is important for patient and staff to recognize the signs and symptoms of HF and to be knowledgeable on the current EBP guidelines. My goal in this project was developing staff education to improve knowledge and management of HF patients in an outpatient cardiology clinic. Involving stakeholders in HF management has proven to be a positive effect on health outcomes. In Section 2, I discussed the theory to guide the staff education on HF, the relevance to nursing, and the local context for the project.

Section 2: Background and Context

Introduction

The prevalence of HF continues to present as a diagnosis requiring chronic outpatient management and supportive patient education. My purpose in this project was to develop a patient centered-education program on HF for staff in an outpatient cardiology clinic. In Section 2, I described the theories that support this project, the literature related to HF, and the local context to reduce the disease. The practice-focused question that I used in this study was: Will staff education on HF guidelines and symptom recognition increase the nursing staff's knowledge, skills and confidence in managing patients with a diagnosis of HF?

Concepts, Models, and Theories

Health Belief Model

The health belief model (HBM) is a social psychological model that researchers use to attempt to explain and predict the health behaviors that focus on the beliefs and attitudes of patients on health issues. The HBM promotes the idea of planning and using educational interventions to improve staff knowledge of patients perceived low susceptibility of illness and explained to them how they are susceptible. The model consists of five concepts including (a) perceived susceptibility, (b) perceived severity, (c) perceived benefits, (d) perceived barriers, and (e) perceived self-efficacy. The model assisted staff to understand that some factors contribute to change and result to valuable outcome when patients are educated on the purpose of seeking early treatment.

It is important that staff are aware of some perceived barriers that hinder the patient's desire to seek early medical treatment. The barriers affecting early medical treatment include cost resulting from socioeconomic status, lack of health insurance coverage, the copay, and access to care prevents patients to seek early medical attention (Adams, 2010).

The health belief framework could be applied to change staff and patient's perception about health and disease control. Primarily, the model is all about the essence of preventing illnesses. Nurses could assist patients substantially to attain the knowledge of HF and adequate self-care management behavior. To achieve the expected health outcomes, providers should evaluate patients' perceptions of the severity of the illness, treatment plans, barriers to receiving treatment, and the effects of the environment on the ability to comply appropriately to treatment (De Smedt, Clays, & De Bacquer, 2016). Evaluating patients in practice concerning their disease perception will assist the nurses and providers in planning care and using individualized perspective to achieve expected health outcome.

The HBM was an appropriate model for this project because of its reinforcing preventive positive behaviors such as screening, controlling the disease risk factors, and encouraging necessary annual immunization (Becker, 2010). HBM-based education can increase staff knowledge in HF perceived threat, and perceived benefits. In addition, staff knowledge of HF self-care management education guidelines can reduce the perceived barriers and improve the control of HF complications amongst patients. The model formed the framework for this staff HF education guideline and its relevance in nursing

practice due to the positive effects of education with this model during cardiac rehabilitation and changes in lifestyle of patient suffering from HF and other heart disease (Ebrahimi, Salehi, Pourmirza, Abdyazdan, & Sharifi, 2013). The staff knowledge of essence of patient motivations stem from the perception of illness, the severity, knowing the benefits of early medical intervention, and awareness of the barriers to access care, self-efficacy that depicts patient's belief in self-worth, ability, and adequacy to promote positive change in their health (Ebrahimi et al., 2013). The model could demonstrate the improvement in medical interventions, enhanced knowledge, and improve activities in HF patients.

Self-Care Deficit Theory

I used self-care deficit theory (SCDT) to support this project to improve patient self-management through staff education. My aim in choosing the model was to help reduce the HF complications due to self-care management deficit in the self-care of chronic illness and to acquaint staff with the knowledge of self-care deficit in patients diagnose with HF. *Self-care* is defined as the activities a patient performs to manage their illness to achieve well-being (Nursing Theories, 2011), whereas the *self-care deficit* is a patient's inability to perform self-care of their chronic disease due to an extenuating circumstance such as age, literacy level, disability, and multiple chronic illnesses. Staff educating patients on HF self-care management skills will assist patients in improving their health and wellness. Stern et al. (2014) explained that the nurse-guided HF education intervention program is capable of improving patient self-care management

activities that will reduce the risk of exacerbation and improve outcomes for patient with HF.

Relevance to Nursing Practice

Staff education is recognized as the key roles in the management of HF, which focuses mainly on the structured follow up monitoring of patients who are at increased risk of recurrent hospitalization (Riley, 2015). Nurses' roles are notable in improving HF patient outcomes in delivery of quality care (Riley, 2015). My project is about involvement of staff in HF guideline education to improve patient self-care strategies in the management of the disease which will help reduce preventable readmissions, complications, and improve self-care management of patients at this practice. Providing staff with self-care management guideline principles in HF patient will assist them in providing structured education focused on optimizing HF therapy, out-patient follow-up, education for care coordination, and self-care, for which staff are mostly responsible (Riley, 2015).

Clinical Practice Guidelines

The clinical practice guidelines that I used for this project was the ACC, AHA, and HFSA recommendations in the most recent 2017 focused guidelines for management of HF according to the report of the ACC/AHA task force on clinical practice guidelines as guiding strategies in the treatment and management of HF patients (Bozkurt, 2017). Lab screening including natriuretic peptides for prevention of HF in high-risk patients, biomarkers, the diagnostics, and prognostic role of natriuretic peptides were included as a measure of monitoring patients (Bozkurt, 2017). Successful HF management requires

recognition and incorporation of indications, contraindications, benefits, safety, and the risk of the new therapies (Bozkurt, 2017). The guidelines increased the choices for patient treatment and provided the opportunity to implement personalized treatment strategies for HF patients (Tran & Fonarow, 2015). However, the guidelines did not replace the individualized clinical judgement. Adherence to the HF guidelines leads to improved care outcomes in HF patients (Tran & Fonarow, 2015).

Patient Education

Patients will receive HF self-care management education from staff with incorporation of the guidelines. Increasing evidence has proven that a multimodal intervention such as incorporating both verbal and educational materials improves the overall patient outcomes (Athar, Record, Martire, Hellmann, & Ziegelstein, 2018). Identifying and incorporating means of reducing patient related factors that led to nonadherence to HF medications, low sodium diet, and physical activities play an important role in reducing preventable readmissions (Athar et al., 2018). Patients could also benefit from more effective motivational personalized education that influences change in behavior, rather than the usual generic counseling (Athar et al., 2018). Also, combining interventions such as picture-based educational materials were associated with reduced rates of mortality, complications, readmission, and increased rate of patient adherence to treatment (Athar et al., 2018).

This type of intervention is effective due to individual differences and learning styles. Teaching patients how to recognize signs of worsening HF symptoms and when to

use extra diuretic doses will help to keep them away from frequent emergency room visit or possible admission (McGreal, Hogan, Walsh-Irwin, Maggio & Jurgens, 2015).

The staff in the primary care setting were educated to teach patients the strategies to care for their disease. Also, McGreal et al. (2015) stated that staff could provide instrumental support such as weighing scales, pill boxes, measuring cups, and calls to assess for weight and blood pressure monitoring capability. Studies have also proven that self-care education (SCE) has lower effects on those patients who have sociopsychological problem such as depression, anxiety, and alcohol dependence (McGreal et al, 2015). Therefore, screening, counseling, and boosting the self-efficacy are considered vital while providing SCE. Educational intervention program such as stress management trainings, exercises, nutrition, and maintaining healthy lifestyle could reduce HF exacerbation efficiently (Navidian, Yaghoubinia, Ganjali, & Khoshsimae, 2015). Lack of adherence to medical instructions in HF have multiple negative effects and exacerbates patients' situation (Navidian et al., 2015).

Self-Care Strategies

Despite the significance of self-care in managing HF, a majority of the patients, especially older adults, have difficulties in performing self-care activities as recommended through the clinical guidelines (McGreal et al., 2015). Patients who are not well informed about self-care management seek professional assistance through advice from friends or relatives when their limited knowledge of self-care fails (Riley, 2015). Therefore, the ability to perform effective self-care stem from the number of teachings sessions, quality educational contents, and the time frame allocated to each patient due to

individual learning style (McGreal et al., 2015). Being diagnosed with HF is a stressor that accompanies multiple personal, psychosocial, and environmental factors that influence self-care (McGreal et al., 2015; Schwalm, McKee, Huffman, & Yusuf, 2016). However, the patient may develop their own personal values about managing their health issue after mastering the self-care skill. Harkness, Spaling, Currie, Strachan, and Clark (2015) explained that this information is critical to understanding the difficulty and nature of HF self-care needs and to developing more effective support, health services, and interventions that are responsive to patients' needs.

Acquiring the strategies to perform self-care may be embedded in patients' perceptions that reflect cultural beliefs, social norms, or spirituality and caregiver's perception or beliefs when available, to help them navigate key stages in decision-making processes around self-care of HF, especially in relation to timely help-seeking from the appropriate sources (Harkness et al., 2015).

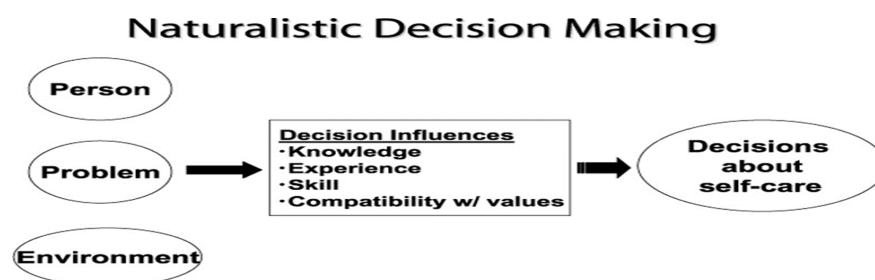


Figure 1. Naturalistic decision making. Source: Riegel B., Dickson V. V. (2008).

Providers should assess patient readiness to learn when performing self-care assessment including patient perception, physical and emotional barriers. Nasiri, Rahimian, Jahanshahi, Fotoukian, and Motamed-Omran (2016) suggested that though

caregivers' assistance is vital and ranges from simply reminding patients to take over some of the care responsibilities such as organizing their medications, skills in buying groceries and preparing meals according to dietary guidelines, monitoring their disease symptoms, and ability to navigate the health care system.

Patients often go through a phase of acceptance and adjustment as they have to modify their expectations about life, adjust their lifestyles to HF, and place HF in some context (Nasiri et al., 2016). This type of strategy may be embedded in perceptions that reflect cultural beliefs, social norms, or spirituality and caregivers when available, to help them navigate the key stages in decision-making processes around self-care of HF, especially in relation to timely help-seeking from the appropriate sources (Nasiri et al., 2016).

Fatigue is one of the first chronic symptoms of HF, which occurs due to increase muscle weakness, which decreases activities and causes fatigue, reduced skeletal muscle function, and cardiac output (Nasiri et al., 2016). These patients have reduced ejection fraction (EF), and the problem causes restrictions in performing physical daily life activities, patient functions, and hypoperfusion in skeletal muscles. These directly affect patients performing the self-care (Nasiri et al., 2016). Therefore, it's critical to educate patients on the effects of exercise in improving the body's function, disease symptoms, cardiac muscle strength and output, and QOL.

Decrease hemoglobin and anemia can cause low energy in HF that could affect effective self-care management or impair self-functional activities (Okonko, Mandal,

Constantinos, Missouri, and Poole-Wilson, 2011). Okonko et al. (2011) reported that anemia is one of the deciding factors of low energy, exercise intolerance, and depression.

Finding ways to teach patients to conserve energy to be able to perform their daily activities and to maintain effective cardiac function is essential to reducing poor prognosis and complications associated with HF (Nasiri et al., 2016). Staff must also assess patient knowledge of HF and physical activity because the underlying problem resulting in activity impairment may be related to lack of knowledge, depression, and sense of hopelessness due to the poor disease prognosis (Nasiri et al., 2016).

Family involvement is essential in conserving energy, therefore training patients together with family or caregiver is important for promoting activities (Nasiri et al., 2016). Patients could modify daily activities to control symptoms including bathing, grocery shopping, cleaning the house, meal preparation, and participating in leisure activities (McGreal et al., 2015). Patients could schedule activities around the best time of day suitable for them or could recruit the help of family or caregiver to run some errands to preserve energy (McGreal et al., 2015).

Arranging medications in small boxes for easy identification and retrieval is important to prevent overdose and remaining compliance with the treatment regimen (McGreal et al., 2015). Taking medications such as a diuretic in the morning prevents insomnia, and also taking them when the patient is not traveling helps to prevent an unexpected incontinence.

Decrease hemoglobin and anemia can cause low energy in HF that could affect effective self-care management or impair self-functional activities (Okonko, Mandal,

Constantinos, Missouri, and Poole-Wilson, 2011). Okonko et al. (2011) reported that anemia is one of the deciding factors of low energy, exercise intolerance, and depression.

Patients should be encouraged to follow up with the scheduled lab appointments to monitor levels of hemoglobin, iron circulation in blood, and cardiac markers to prevent reduce cardiac output, muscle functions, and fatigue (Okonko et al., 2011). Other labs including potassium, magnesium, echocardiogram, renal functions, and annual immunizations to prevent flu and other seasonal illness, which may exacerbate HF.

Adults with underlying health conditions such as HF or chronic obstructive pulmonary disease (COPD), pneumonia, and flu adversely affect these pre-existing conditions and are likely to experience frequent exacerbations compared with the patients who did not develop flu, or pneumonia (Bornheimer, Shea, Sato, Weycker, & Pelton, 2017).

Sleep quality and anxiety is one of the deciding factors of fatigue as maintaining adequate sleep is one of the essential needs of human well-being (Okonko et al, 2011). It is necessary for conserving energy, physical well-being, and physical appearance. Nasiri et al. (2016) found that impaired sleep negatively affects physical, emotional, and social function of HF patients. HF patients could be screened for sleep apnea by referral for a sleep study.

Staff could help patients use varieties of creative, well-planned, and deliberate self-care action strategies to help them create their own coping mechanism to perform daily self-care activities (McGreal et al.,2015). Patients could be educated on finding efficient ways to accomplish important tasks while preserving energy (Nasiri et al.,

2016). Also, staff needs to assess the patient's self-care barriers and facilitators to understand the strategies patients' needs to develop to perform their self-care (McGreal et al., 2015).

Health Beliefs

Health beliefs can be affected by behaviors and attitudes a patient may hold on the health problem. HF patients; perception or beliefs, and behaviors toward their health conditions, medications, exercise, and dietary modifications may be contrary to their health and medical advice (Percival, Cottrell, & Jayasinghe, 2013). Conversely, a patient's positive beliefs about medical interventions may prompt their adherence or compliance to treatment, such as taking prescribed medications, or performing health maintenance behaviors (Percival et al., 2013). The attitudes and beliefs that guide a patients' health behaviors or self-care management skills may be influenced by multiple factors including health care professional's personal health beliefs, self-perception, family, and friends' views (Shashivadan & Stanton, 2005).

HF patients who hold high self-efficacy have the potential to control HF complications and symptoms because they have foreseen the adverse effects of HF, including depression and anxiety (Shashivadan, & Stanton, 2005). These patients have confidence to exercise and modify their diets, and they have the potential to engage in the required level of exercise to maintain the positive health outcomes and QOL (Shashivadan, & Stanton, 2005). Studies have proven that patients who have stronger

health beliefs and positive self-efficacy regarding the control of progression of their illness are in the better position of adhering to treatment (Percival et al., 2013). Patients' perceptions of their self-care skills, abilities, and resources to take control of their health issues are essential areas to activate to maintain HF behavioral changes (Shashivadan, & Stanton, 2005).

Health beliefs need to be examined also among nurses. They need to realize that their strong health beliefs may influence patient education and these need to be addressed to provide adequate HF care for patient (Cao, Stone, Petrini, & Turale, 2018). Moreover, to implement a standardized evidence-based HF staff education, nurses need to examine the influences of culture, societal pressure, and the extent to which their health beliefs influence providing future education (Cao et al., 2018). Providing an in-service education program on HF for nurses requires critical thinking, reflection on their beliefs, and readiness for using the evidenced-based interventions in their clinical practice.

Local Background and Context

The project site is a primary care cardiology clinic that sees many older adults, mostly ages 60 years and older. The majority of the patients are retired and live in a mixed mid- and low-income neighborhood. These patients live on fixed incomes and have medical coverage including private insurance, Medicaid, and Medicare. The patient population is as follows: 83% African Americans, 10% Caucasians, 5% Asians, and about 2% Hispanic Americans. The clinic staff consists of a physician, a nurse

practitioner, two nurses, one echo and vascular technician, one cardiovascular technician, two medical assistant, two pacemaker interrogators, and several office staff.

Role of the DNP Student

As a nurse, I realize that nursing is a profession that requires continuous improvement in quality of care provided to patients. As such, the profession requires my inputs, the providers, and the staff in planning, implementing, and evaluating the program aimed at improving and maintaining the QOL in HF patients. The Association of the American Colleges of Nursing (2006) encourages DNP students to expand the scientific bases in patient care. I planned to implement and evaluate this staff education program. However, the medical director of the clinic served as one of the content experts to review the education program after IRB approval.

Summary

My purpose in this evidence-based project was to develop a staff education program on HF. My goal in this project was to improve staff education on HF using the EBP guidelines and patient management strategies. The practice-focused question that I sought to answer was: Will staff education on HF guidelines and symptom recognition increase the nursing staff's knowledge, skills and confidence in managing patients with a diagnosis of HF? In Section 2, I introduced the HBM and Orem's theory of self-care deficit. These two models provided the framework for the project. I discussed the relevance to nursing practice, the local background and context, and my role in the project. Section 3 described the planning, implementation, and evaluation process for this project.

Section 3: Collection and Analysis of Evidence

Introduction

My purpose in this project was to educate nursing staff on how to teach HF patients self-care management of the illness while incorporating HF guidelines. Nurses are at the forefront of providing quality HF care for patients and understand the complications associated with HF (Mosalpuria et al., 2014). My goal in developing a patient education program on HF is to provide nursing staff with knowledge about the strategies to help the patients cope with the disease. The program included patient self-care management guides that can improve staff knowledge on HF management. I conducted the project in an outpatient clinic where cardiac patients are seen on a daily basis. This evidence-based project should reduce HF readmissions, complications improve self-care management skills, and wellness in HF patients. Kieft, De Brouwer, Francke, and Delnoij (2014) have proven that providing care based on evidenced-based guideline principles could improve health outcomes.

Practice-Focused Question

This staff in-service education program is expected to close the gaps of inadequate patient HF education, improve staff and patients' knowledge of HF, use standardized teaching skills, and provide a plan for teaching self-care management for effective HF care outcomes. The HF staff education program also promoted consistency and efficiency in the delivery of HF self-care management that incorporated the HF guidelines. The practice-focused question was as follows: Does staff education on HF

management guidelines and symptom recognition increase the nursing staff's knowledge, skills, and confidence in managing patients with a diagnosis of HF?

My goal in this evidence-based staff in-service education program was to improve the nurse's knowledge on HF, self-care management skills, recognizing the complications associated with HF, and boosting staff confidence with providing HF care and patient education. My objectives in this DNP project aligned with the practice-focused question. The aim of the project was to improve the knowledge, self-efficacy, skills, and confidence of nurses in providing patient HF education with strategies to improve QOL and health in the patients with HF who present daily to the practice setting.

Operational Definitions

- *Cardiorenal syndrome*: Cardiorenal syndromes a disorder of the heart and kidney whereby acute or chronic dysfunction in one organ induces acute or chronic dysfunction of the other (Francesco, Kristjan, & Simon, 2017).
- *Congestive heart failure*: Is a clinical condition caused by functional and structural defects in myocardium leading to reduced ventricular filling or ejection of blood to vital organs (Inamdar & Inamdar, 2016).
- *Heart failure*: The inability of the heart to pump adequate blood to meet the body's need (Inamdar & Inamdar, 2016).
- *Health-related quality of life (HRQOL)*: A multidimensional concept that includes physical, mental, emotional, and social functioning. It is the direct measure of population health, life expectancy, and causes of death, and is focused on the

affect health status has on QOL (Baert, Pardaens, De Smedt, Pauwels, & Clays., 2016).

- *Self-care management*: A supportive care health care staff render to increase patients' skills and confidence in managing their chronic health problems example ability of patient to perform self-care management to change diuretic dose in response to symptoms of increase fluid retention (Jaarsma, Cameron, Riegel, & Stromberg., 2017).
- *Self-care*: In health care, self-care is a necessary function that is self-initiated and under an individual's control, that is performed to achieve health and well-being. Self-care is built from main concepts of self-care maintenance, (ability to take medications as prescribed), self-care monitoring (daily weight monitoring), and self-care management (ability to change diuretic pill as needed during exacerbation) (Jaarsma et al., 2017).
- *Self-care maintenance*: The ability to make healthy lifestyle choices such as physical activity and healthy eating, which allow the maintenance of good health and the prevention of illness and complications (Jaarsma et al., 2017).
- *Quality of life*: General well-being, life-satisfaction, health, and wellness. A chronically ill patient strives to maintain QOL while working on self-management of a disease such as HF (Jaarsma et al., 2017).

Sources of Evidence

I administered a survey before and after the in-service education to determine staff knowledge of HF self-management that incorporates the HF guideline, identifying

complications, and skills for self-care. A posttest material based on the education evaluation, and exit survey consisting of five questions were given to participants to help determine the staff's overall rating of the in-service and the usefulness of the education material.

Other sources of evidence came from peer-reviewed journal articles published within the past 5 years (i.e., 2015-2019), which I found through databases including Nursing and Allied Health and ProQuest databases, CINAHL, MEDLINE, Ovid Nursing, American Colleges of Cardiology, American Heart Association (AHA), and the American Association of Heart Failure (AAHF) guidelines.

Participants

The participants in this project included one medical doctor and manager, one nurse practitioner, and two nurses from the Midlands outpatient primary care practice located in the southern region of the United States. Other health care personnel who work closely with these patients who are willing to gain more knowledge are welcome to participate in the intervention as supported by the Walden Manual for Staff Education, (2014, p. 3). The participants are responsible for providing HF education to patients.

Procedures

The staff education was on HF management using the HF guidelines and principles to help patients perform self-care management and recognize exacerbation. The education program incorporated the AHA/ACC/AAHF guidelines 2017, and knowledge related to HF questions, and I created a HF patient assessment questionnaire for the primary care. The goal for staff HF education was to increase nurses' knowledge

of HF self-care management skills and increase the staff confidence in providing HF education following the guidelines. I conducted the in-service education program via PowerPoint presentation. I designed a staff education program using the Walden Manual for Staff Education (2019). A panel of experts reviewed the educational content and evaluated the program prior to providing the education to the clinic staff.

Planning

The staff HF management needs was also included in the staff in-service education such as the health belief and patient assessment on self-care needs. The education program consists of HF management guidelines, knowledge, symptoms recognition, and complications, awareness of barriers, and patient self-care. The DNP project included developing the design, choosing the target population, and contacting expert opinions from my preceptor, the clinic medical director, and other expert opinions from nursing education were consulted. The project followed the Walden University Education project manual recommendations. I asked for participants' consent before commencing the staff in-service education program. I invited the participants to the staff education program through a letter and conducted the education in only one phase to accommodate staff time. I also prepared a pretest and posttest questionnaire, and the participants responded to the questions for feedback before and after the in-service. I was involved in all areas of the project from planning through evaluation. The selection of materials was based on the project topic, significance, target population, studies on education, HF guidelines, self-management, sample size, older adults, research method, and strength and weakness of the research. I sought for information about the content on

best evidence-based strategies that decreases HF complications, reviews of the clinic policies, and plans to maintain the QOL.

Implementation

The evidenced-based staff HF management implementation took place in the primary care practice site. The education program considered the stakeholders and practice site interest by focusing on the strategies and awareness among staff that improves patient care outcome. To successfully design an implementation program, I involved the stakeholders (i.e., the director or the medical manager, and the project leader) and I identified all the parties who will be affected by the project outcomes (see Hodges & Videto, 2011). They are those who could affect or be affected by the behaviors or decisions of a new implementation of care (Hodges & Videto, 2011). The project values the involvement of the stakeholders as an essential source of knowledge to improve the quality of HF care outcomes.

Evaluation

Ten summative questions were distributed to the participant who are considered the end users. The summative members are the medical director who is the medical doctor, manager, and advanced nurse practitioner as the expert opinion. Five staff members were excluded from the evaluation because they do not play direct roles in care of HF patients. The staff include the front desk clerk, cardiovascular technician, Echo and stress test technicians, and the pacemaker interrogators. The participants returned the questionnaires after completion of the evaluation at the allotted time. The evaluation

determined the expert opinions of the nurse's education on HF self-care management, symptoms recognition, and guidelines intervention for managing the disease.

The stakeholders at the clinical site understood the gap in staff HF teaching process. They were also involved in addressing the local project problem and supported the project including the medical director, a physician, nurse practitioner, registered nurses, and me, the DNP student. Each stakeholder has a role to play in the management and evaluation of HF and the goal that decreases the prevalence of the disease and complications. A panel of experts have reviewed the educational content and evaluated the program prior to providing the education to the clinic staff. A pretest and posttest were completed to evaluate the content and application to the clinical practice site.

Protection

The implementation of the nurse HF education training started after receiving a sealed approval from the Institutional Review Board (IRB) of Walden University. After receiving the IRB approval, the facility manager and other stakeholders were notified about starting the staff in-service education. The project also included in the strategies to evaluate and improve knowledge of HF and self-care management through the education, a review of the policies, data from literature reviews, and discussion of the education program to determine the effectiveness of the educational intervention toward bridging the gaps in strategies for improving patient self-care and QOL in HF at the practice . Staff personal information and other identities were protected according HIPPA.

Participation in the staff HF education was completely voluntary. The primary care staff was the target population for the sample size for completion and evaluation of

the education program. The clinic policy regarding staff participation in a new project was reviewed with the manager. Questionnaires were used to assess the expert opinions of the research.

Analysis and Synthesis

Data collection and analysis started after the Walden University IRB, and the project site approval. The data collection was in two phases from the pretest and posttest feedback. A postcompletion exit questionnaire were completed to evaluate the staff education content and application to the practice site. I prepared the exit questionnaires in a Likert-format grading level from 1 being *strongly disagree* to 5 being *strongly agree*. Also, an instructional health education material, particularly for patients with chronic disease such as HF are essential nursing interventions to enhance patient self-care and health management literacy (Azza, Faiza, & Mohammed, 2016). A PowerPoint was designed and used to present the staff education that include a flyer made using a third-grade reading level for patients to remember the key self-management skills. I also created a HF outpatient disease evaluation questions for the staff to determine levels of self-management education and care required.

Summary

This evidence-based staff HF education offered an innovative and effective means for staff at the outpatient practice to provide quality HF self-management education. The in-service education was designed to improve staff knowledge about HF self-management guidelines, increase their knowledge of HF, and decrease complications associated with the disease in patients at the project site. Several databases were also

searched including the Walden University Library for peer-review journals, studies, and expert opinions to obtain information for this project. Involving the stakeholder's input at the site concerning the project cannot be overstated because maintaining the QOL and reducing HF complications will benefit the patients, family, providers, and the community if implemented. The IRB and participants' consent were obtained before data collection, staff education, and implementation commenced. Staff information was kept confidential to maintain the HIPAA act. The evaluation was conducted in two phases, of a pretest and posttest, to validate staff knowledge of the HF self-care management using the HF guideline. The evidence that I obtained during the data collection was made available to staff and other stakeholders to encourage the project site to adopt the strategies as the standard of patient care in the management of their health issue.

Section 4: Findings and Recommendations

Introduction

HF poses a major risk to the U.S. population, especially older adults. In that case, staff and patients will benefit from an in-service education intervention (Reilly, 2017). My purpose in this evidenced-based project was to develop a staff education program on HF for nurses in an outpatient practice. The practice-focused question was: Will staff education on HF guidelines and symptom recognition increase the nursing staff's knowledge, skills and confidence in managing patients with a diagnosis of HF?

In this section, I present the project findings and implications, including the expert panel (EP) review of content, results from the pretest and posttest questions, and recommendations based on the data results. The project strengths and limitations were also discussed.

Protections

The staff education project was approved by the Walden University International IRB (Approval # 10-24-19-0291090). Prior to collection of data, the staff at the clinic were provided the consent for anonymous questionnaire, which indicated their consent to participate in the educational project. All data were anonymous and will be held for 5 years. Participants were given the option to withdraw from participation at any time in the program. There were eight participants in the program.

Findings and Implications

CHF and strategies to improve the QOL educational program was designed to educate staff of an outpatient clinic on HF management skills to maintain QOL. The staff

will, in turn, be able to educate the clinic patients on self-care management. The staff education program was designed with contents from current literature on HF and HF guidelines from American Heart Association (AHA,2017) and the American Association of Heart Failure (AAHF, 2017) guidelines.

To educate the nurses on this health issue, a PowerPoint presentation (see Appendix A) was created to educate staff on the following information: introduction to HF, incidence, health belief both patients and staffs, health promotion and disease prevention, and being aware of the dietary aspect of the disease management. Also included in the presentation were fluid restrictions, exercise, adherence to medication, and when to take extra water pill in the incidence of exacerbation, ability to call for ambulance or primary care provider if patient gained 2 to 3 pounds in a week. PowerPoint content included information on follow-up appointments, scheduled blood work, and energy management strategies. The project structure was based on the HBM and SCD. The intervention was designed to empower staff to be aware of patient health believes and the effect on performing self-care management of their health condition.

The educational program was first evaluated by a panel of experts in the field of cardiology. After panel review and evaluation, the program content was modified based on panel results. The educational program was then provided to participating clinic staff and evaluated through a pretest and posttest. Results were analyzed and presented to clinic administration and staff.

Expert Panel Review

The education materials and the research project were reviewed and evaluated by the expert panel in the primary care practice. The expert panel included the medical director, a cardiologist with many years' experience in different aspect of cardiovascular management, and the comanager of the clinic who is an APN with specialization in cardiovascular disease. The panel read and reviewed the project (Appendix A) and evaluated the content for applicability and clinical information on HF. The expert panel review survey included five questions and was scored using a 5-point Likert scale, with 5 *being strongly agree* and 1 *being strongly disagree* (Appendix B). There were not modifications required after the expert panel's evaluation panel. The questionnaires results are presented in Table 1.

Expert Result

The expert panel responded *strongly agree* to four questions, which are Questions 1, 2, 4, and 5, and *agree* to one, Question 3. There was no response to *somewhat agree*, *disagree*, or *strongly disagree*. There were no changes made but the constructive feedback was taken into consideration.

Table 1

Expert Panel Results

Exit panel questions	5 = strongly agree	4 = agree	3 = somewhat agree	2 = neither agree nor disagree	1 = strongly disagree
1. Rate the project content	100 % (n = 2)				
2. Rate the student skills level in project planning and leadership management	100 % (n = 2)				
3. The project and the applicability in the clinical setting		100% (n = 2)			
4. Would you recommend this evidenced-based intervention to other facility	100 % (n = 2)				
5. Rate effectiveness of the project, and possible staff response to the change.	100 % (n = 2)				

Data Analysis

Seven participants completed the 10-question pretest and eight participants completed the 10-question on the posttest. One of the participants was not present due to an unforeseen circumstance that require her absence. The education included (a) introduction of HF guidelines, (b) optimizing medication especially after discharge, (c) knowledge on providing quality self-care management education and assisting patients to understand the need for appropriate self-care skills while in the comfort of their home, (d) staff acquired knowledge of monitoring patient for early indication of exacerbation, and (e) removing the cultural beliefs barrier that may negatively affect patient education, evaluating and addressing patient's health beliefs prior teaching. The participants also

completed an exit survey to evaluate the in-service education material, the student, and the overall program.

Analysis of pretest and posttest score as presented in Table 2 and Table 3 showed that the number of participants who took the pretest were $n = 7$, and posttest was $n = 8$. Individual questions were evaluated according to the number of percentages of correct responses and number of respondents. The mean for pretest 78.5 and posttest was 91.3. The overall percentage improvement between both pretest and posttest scores was 12.8%. The percentage increase score in posttest showed improvement in understanding the education intervention as represented in increased individual questions and overall posttest scores.

Pretest survey results are also presented in Table 2 and posttest results in Table 3.

Table 2

Pretest Results

Pretest questions	Percentage correct responses (<i>n</i> = 7)
1. How often should patients with severe heart failure weigh themselves?	71.4% (<i>n</i> = 5)
2. Why should a heart failure patient monitor their weight?	85.7% (<i>n</i> = 6)
3. From the list below circle the common comorbidities with heart failure	71.4% (<i>n</i> = 5)
4. Patient health belief as barriers to achieving disease management goal. Yes/No?	71.4% (<i>n</i> = 5)
5. How much fluid are heart failure patients allowed to take each day?	85.7% (<i>n</i> = 6)
6. Which of these statements are true?	85.7% (<i>n</i> = 6)
7. A patient states, I don't think I will get better, we are just wasting time managing the disease. My uncle died of heart disease.	71.4% (<i>n</i> = 5)
8. In case of increase weight and shortness of breath, what is the best thing to do?	85.7% (<i>n</i> = 6)
9. What are the common courses of worsening symptoms of heart failure?	71.4% (<i>n</i> = 5)
10. What is the definition of heart failure?	85.7% (<i>n</i> = 6)

Table 3

Posttest Results

Posttest questions	Percentage correct responses (<i>n</i> = 8)
1. How often should patients with severe heart failure weigh themselves?	87.5% (<i>n</i> = 7)
2. Why should a heart failure patient monitor their weight?	100% (<i>n</i> = 8)
3. From list below circle the common comorbidities with heart failure	87.5% (<i>n</i> = 7)
4. Patient health belief as barriers to achieving disease management goals. Yes/ No	87.5% (<i>n</i> = 7)
5. How much fluid are heart failure patients allowed to take each day?	100% (<i>n</i> = 8)
6. Which of these statements are true?	87.5% (<i>n</i> = 7)
7. A patient states, I don't think I will get better, we are just wasting time managing the disease. My uncle died of heart disease	87.5% (<i>n</i> = 7)
8. In case of increase weight and shortness of breath, what is the best thing to do?	87.5% (<i>n</i> = 7)
9. What are the common causes of worsening symptoms of heart failure?	100% (<i>n</i> = 8)
10. What is the definition of heart failure?	87.5% (<i>n</i> = 7)

An exit survey was also prepared for the staff to evaluate the DNP student, education material, and the applicability of the information in clinical setting. The four-question survey was completed by eight participants. The Likert scale responses ranged from 5 (strongly agree) to 1 (strongly disagree). 100% of the participants responded strongly agree to Questions 1, 2, 4, and 5. A total of 100% of the participants responded to agree for Question 3. Exit survey results are presented in Table 4.

Table 4

Exit Survey Results

Exit survey questions	5 = strongly agree	4 = agree	3 = somewhat agree	2 = neither agree nor disagree	1 = strongly disagree
1. Did you find the educational material helpful?	100 % (<i>n</i> = 8)				
2. Will the material help you as a nurse to provide a well-rounded patient education?	100 % (<i>n</i> = 8)				
3. Please evaluate the presenter and the flow of information		100% (<i>n</i> = 8)			
4. Would you implement the information in clinical care?	100 % (<i>n</i> = 8)				

The participants demonstrated a knowledge of HF self-care management from the pre and posttests that incorporated the HF guidelines and recognizing signs and symptoms of exacerbation, and skills for self-management strategies. The staff indicated confidence in teaching patient's self-care management behaviors and the strategies for improving the QOL. The participating staff also indicated a marked change in their health beliefs and patient assessment with the in-service educational intervention.

Implications

Planning stage of the project resulted to the development of staff education on HF self-care management skills, and strategies to improve the QOL. The adult population are more prevalence to HF and other comorbidity diseases. The need for self-care

management skills is paramount, coupled with the strategies to manage their disease and maintain QOL. The need evidence-based intervention was designed to improve staff management and education of HF patients with confidence. The patients are also empowered to take charge of the illness, learn how to manage, and perform simple self-care behaviors to prevent hospitalization, hospital acquired illness and save money. Patient ability to understand signs and symptoms of HF will prevent exacerbation which led to readmissions. I believe the staff education program will be implemented not only in the primary care clinic but will spread to other healthcare facilities.

The implication could start from the primary care clinic and go beyond to other outpatient clinics, and hospitals. Patients who are able to care for their disease are easy to manage in an outpatient care setting. Poor self-care management lead to rapid health deterioration. A standardized staff HF education will empower nurses and staff to provide quality education to patient which will improve their health outcomes. The staff education has the capability to positively impact staff, patients, other healthcare setting and the community.

Implications for Positive Social Change

In reference to the clinic, the staff-HF education which they received will continue to empower and increase their awareness of patient needs in respect to the gaps in self-care management and maintenance. Self-care in chronic illness is ability to maintain adequate level of physical, emotional and psychosocial well-being, reduce morbidity and mortality, improve patient satisfaction and a sense of well-being, and QOL (Da Conceição, Dos Santos, Dos Santos, & Da Cruz, 2015). The reasons of their inability

to perform self-care management is a major concern in patients diagnosed with HF. This project was developed to utilize a quality staff in-service education program to help bridge the gap.

A positive social change included the activities meant to improve the life of individuals, community and the society (Walden University, 2014). Therefore, the staff in-service education program was designed to improve the nurse's knowledge of HF self-care management education which improves patient health outcomes. The benefits gleaned from the evidenced-based intervention improved the nurse's knowledge of HF guidelines, confidence, and readiness to educate patients. Through the project, I initiated an outpatient assessment which determines the level of self-care management skill for better health outcomes. The evidenced-based project will lead to positive change in the patients, nurses, community, and the society. The benefits will also lead to improved QOL in HF patients, increased HF exacerbation awareness, reduction of readmissions, improved diet and exercise. Change occur when HF patients could care for their health issues and reduce the cost of recurrent hospitalization and account for positive changed behavior.

Therefore, the staff education resulted to providing quality care, improved outcomes, reduced spending in the areas of unnecessary readmissions, emergency room visitations, and constant prescriptions changes (Salmond & Echevarria, 2017). The staff in-service education at the practice could ultimately reduce mortality associated with HF.

Strength and Limitations of the Project

Strength

The project site staff collaboration in the educational program and the intervention improved the nurse's knowledge of HF patient self-care management education was successful. Moreover, the education program has improved the staff knowledge of HF, improved their health belief as barriers to providing patients education, improved the HF health literacy, and self-care management skills. The project was a thorough effort with the intension to guide the clinical site to adopt the intervention.

Limitations

One major limitation of this project was a small sample size. Other project limitations were that the staff level of education and years of experience were not included in the survey. However, the staff education, level and years of experience, were pertinent information relevant for the in-service education. However, an unanticipated absence of one staff who did not participate in the pretest due to an unforeseen circumstance.

Recommendations

There is significant high long and short-term morbidity and mortality rates noted in patients with HF who have problems with performing their self-care management due to multiple reasons. In the future, more research should be directed towards providing nurses in depth education that addresses other interventions that may improve self-care management and the strategies to improve QOL in staff HF education. This will provide more insight on other HF topics usually overlooked that could contribute to improved

ability to perform activities of daily living, self-care of the disease management skills, and increases QOL in HF patients.

Summary

The clinical site needed a standardized quality CHF staff education program that will help to boost their confidence to deliver quality patient education that improves QOL in patients diagnosed with CHF. The education incorporated some information from the HF guideline 2017, Questionnaires, PowerPoint presentation, pretest and posttest, staff exit questionnaires, and expert panel project evaluation questionnaires were created and the scores were calculated using a simple percentage on number of staff who answered each question correctly and percentage on question answered correctly. The project site needed a quality staff education prepared with evidenced-based resources, the validity made the project intervention applicable to the primary care and qualified to be adopted in other facility. Self-care management is an essential area in healthcare management with a widest gap. So, nurses should be well equipped to close the gap by delivering quality education to HF patients.

Section 5: Dissemination Plan

The ability to disseminate the project is an essential part of evidenced-based project. The staff in-service education program will be presented to the expert panel, which consists of the project site medical director, and the advanced practice NP. Both experts met and provided feedback, which I then incorporated into the dissemination. The presentation will occur in the when the panel is ready. My purpose for dissemination was to communicate the project result or the positive outcome to the audience for the benefit of best clinical outcome.

The nurses are the end users, to achieve ultimate dissemination of the evidence. Therefore, the staff needs to show confidence and buy-in from the in-service education intervention. The change in nursing education requirement must start from the outpatient project site that will affect the patient outcomes, and the health of the community and the environs.

The dissemination will give me the opportunity to respond to stakeholders' questions, after summarizing the outcome, having educational sessions with EP and an educationist who may be interested in incorporating the evidence into their practice. Completing the dissemination of the project is a positive outcome for the evidence that may attract other agencies who might want to implement the intervention in their practice. The project outcome will also be disseminated through prominent nursing journal publishers, cardiac journals, and other interested health care publishers.

Analysis of Self

Practitioner

My role as a practitioner is, first of all, in self-observation, judgement, and evaluation the most pertinent aspects of practice as a nurse. As an advance practice nurse, I examine myself daily by evaluating the quality of care and services that I give to patients, use of evidence, and staying abreast the current evidence. As the project continues to progress, the whole process accorded me the opportunity to continue to grow as a practitioner and as a scholar. I am currently a member of Heart Failure Nurse Association and one of my future goals is to become certified as an advanced practice HF nurse.

Scholar

As a scholar, I learned how to develop, apply relevant models, and plan, implement, and evaluate evidence-based intervention. A scholar represents a single individual involved in a research intervention. I was able to analyze and evaluate the clinical barriers to delivering quality evidence-based intervention that was cost effective strategies to management of HF. The advanced practice scholar embarked on broader search for scholarly literatures and reviews of articles through the Walden Library to become an expert in this health topic. The project motivated me to read and search for more information such as evidenced-based research articles, systemic reviews, and journals to gain more knowledge that positively influences the staff education.

Project Manager

As a project manager, this was the first project that I have ever managed. However, from the beginning of the DNP program, I was thinking of selecting my project topic from CHF, but I had to start talking to my preceptor and the other stakeholders, while I continued to assess the need of the practice involving implementation of a suitable evidence for the practice. The practice had few clinical needs to choose from, so I had problems with what I needed to implement. It was slightly difficult to choose the right evidence that will benefit the nurses, patients, and the practice. Eventually, I decided to choose CHF with the strategies to improve the QOL in HF patients, as well as considering the age of the patients at the site. Therefore, improving self-care behavior became one of the key aspects of the staff education while incorporating the clinical guidelines. Inadequate staff patient education left a gap in practice which could be filled with a standardized staff education that will result to a positive patient care outcome. The project supported my hope of making a difference in exploring the strategies to improving the QOL in HF.

Summary

Providing adequate staff education positively affects patient HF education, deeming it crucial to improving QOL, self-care management skills, decreased exacerbation, staff patient education confidence, and reduced hospitalization. Staff inservice education accorded them the ability to recognize patients at high risk for poor self-care management behavior and help them to seek ways to bridge the gap. The staff have a responsibility to provide HF patients quality self-management education. This

intervention outcome will be presented to the stake holders, staffs, and expert panel in the practice. The purpose of using staff in-service education was for staff who see patients during the office visits to educate them to improve the disease management skills, QOL, and care outcomes.

References

- Adams R. J. (2010). Improving health outcomes with better patient understanding and education. *Risk Management and Healthcare Policy*, 3, 61-72.
doi:10.2147/RMHP.S7500
- American Heart Association. (2017). Rise above heart failure. Retrieved from http://www.heart.org/HEARTORG/Conditions/HeartFailure/HeartFailure_UCM_002019_SubHomePage.jsp
- American Association of Colleges of Nursing. (2006). The essentials of doctoral education for advanced nursing practice. *American Association of Colleges of Nursing Publication*. Retrieved from http://care.diabetesjournals.org/content/37/Supplement_I/S1
- Alter, D. A., Ko, D. T., Tu, J. V., Stukel, T. A., Lee, D. S., Laupacis, A., ... Austin, P. C. (2012). The average lifespan of patients discharged from hospital with heart failure. *Journal of General Internal Medicine*, 27(9), 1171-1179.
<https://doi.org/10.1007/s11606-012-2072-y>
- Athar, M. W., Record, J. D., Martire, C., Hellmann, D. B., & Ziegelstein, R. C. (2018). The effect of a personalized approach to patient education on heart failure selfcare management. *Journal of Personalized Medicine*, 8(4), 39.
<https://doi.org/10.3390/jpm8040039>
- Azza, F. I., Faiza, M. T., & Mohammad, O. A. (2016). Using a self-care management tool to improve self-care and quality of life in patients with congestive heart failure. *Clinical Nursing Studies*.4(3) <https://doi.org/10.5430/cns.v4n3p1>

- Baert, A., Pardaens, S., De Smedt, D., Pauwels, N., & Clays, E. (2016). Predictive factors for health-related quality of life in congestive heart failure: Systematic review. *European Journal of Public Health, 26*(1),
<https://doi.org/10.1093/eurpub/ckw174.118>
- Becker, M. L. (2010). The health belief model: A decade later. *Journal of Transcultural Nursing, 11*(1), 1-47. <https://doi.org/10.1177/109019818401100101>
- Bornheimer, R., Shea, K. M., Sato, R., Weycker, D., & Pelton, S. I. (2017). Risk of exacerbation following pneumonia in adults with heart failure or chronic obstructive pulmonary disease. *PLoS ONE, 12*(10),
<https://doi.org/10.1371/journal.pone.e0184877>
- Bozkurt, B. (2017). What is new in heart failure management in 2017? Update on ACC/AHA heart failure guidelines. *Current Cardiology Report, 20*(6), 39.
<https://doi.org/10.1007/s11886-018-0978-7>
- Cao, R. I., Stone, T. E., Petrini, M. A., & Turale., S. (2018). Nurse's perceptions of health beliefs and impact on teaching and practice: A Q-sort study. *International Nurses Review, 65*(1), 131-144. doi:10.1111/inr.12399
- Chaghari, M., Saffari, M., Ebadi, A., & Ameryom, A. (2017). Empowering education. A new model for in -service training of nursing staff. *Journal of Advances in Medical Education & Professionalism, 5*(1), 26-32. <https://doi.org/10.4103/1735-9066.19340>
- Curtis, K., Fry, M., Shaban, R. Z., & Considine, J. (2017). Translating research findings to clinical nursing practice. *Journal of Clinical Nursing, 26*(5-6), 862-

872. doi:10.1111/jocn.13586

- De Smedt, D., Clays, E., & De Bacquer, D. (2016). Measuring health related quality of life in cardiac patients, *European Heart Journal Quality of Care and Clinical Outcomes*, 2(3), 149-150. <https://doi.org/10.1093/ehjqcco/qcw015>
- Da Conceição, A. P., Dos Santos, M. A., Dos Santos, B., & Da Cruz, D. (2015). Self-care in heart failure patients. *Revista Latino-Americana de Enfermagem*, 23(4), 578-586. doi:10.1590/0104-1169.0288.2591
- Ebrahimi, P. L., Salehi, S. H., Pourmirza, K. R., Abdyazdan, G. H. R., & Sharifi, A. (2013). Assessing the effect of health belief model application on behavior change of the patients with myocardial infarction. *Iran Journal of Critical Care Nursing*, 6(2), 101-108. Retrieved from https://pdfs.semanticscholar.org/1140/e956c6ef2ae9d27ef83b45c5f3701640e342.pdf?_ga=2.45064292.1982990753.1574662202-171241012.1574662202
- Francesco, F., Kristjan, K., Simon, M. (2017). Pharmacological approaches to cardio-renal syndrome: A role for the inodilator levosimendan. *European Heart Journal Supplements*, 19, C22-C28. <https://doi.org/10.1093/eurheartj/sux002>
- Jaarsma, T., Cameron, J., Riegel, B., & Stromberg, A. (2017). Factors related to self-care in heart failure patients according to the middle-range theory of self-care of chronic illness: A literature update. *Current Heart Failure Reports*, 14(2), 71-77. doi:10.1007/s11897-017-0324-1
- Harkness, K., Spaling, M. A., Currie, K., Strachan, P. H., & Clark, A. M. (2015). A systemic review of patient heart failure self-care strategies. *The Journal of*

Cardiovascular Nursing, 30(2),121-35. doi:10.1097/JCN.0000000000000118

Hodges, B., & Videto, D. (2011). *Assessment and planning in health programs* (2nd ed.).

Sudbury, MA: Jones and Barlett Learning.

Inamdar, A. A., & Inamdar, A. C. (2016). Heart failure: Diagnosis, management and utilization. *Journal of Clinical Medicine*, 5(7), 62. doi:10.3390/jcm5070062

Kieft, R. A., de Brouwer, B. B., Francke, A. L., & Delnoij, D. M. (2014). How nurses and their work environment affect patient experiences of the quality of care: A qualitative study. *BMC Health Services Research*, 14, 249. doi:10.1186/1472-6963-14-249

Lee, H., Oh, S. H., Cho, H. J., & Kang, H. Y. (2016). Prevalence and socio-economic burden of heart failure in an aging society of South Korea. *Cardiovascular Disorders*, 16(1), 215. doi:10.1186/s12872-016-0404-2

McGreal, M., Hogan, M., Walsh-Irwin, C., Maggio, N., & Jurgens, C. (2014). Heart failure selfcare interventions to reduce clinical events and symptoms burden. *A Research Report in Clinical Cardiology*, 5, 234-257.

<https://doi.org/10.2147/RRCC.S48424>

McGreal, M., Hogan, M., Walsh-Irwin, C., Maggio, N., & Jurgens, C. (2015). Heart failure self-care interventions to reduce clinical events and symptom burden, *Dovepress*, 5, 243-257. <https://doi.org/10.2147/rcc.s48424>

Mosalpuria, K., Agarwal, S. K., Yaemsiri, S., Pierre-Louis, B., Saba, S., Alvarez, R., & Russell, S. D. (2014). Outpatient management of heart failure in the United States, 2006-2008. *Texas Heart Institute Journal*, 4(3), 253-261.


doi:10.14503/THU-12-2947


- Nasiri, M., Rahimian, B., Jahanshahi, M., Fotoukian, Z., & Motamed-Omran, C. A. (2016). Study of fatigue and associated factors in patients with chronic heart failure, *Critical Care Nursing Journal*, 9(3), <https://doi.org/10.1016/j.ejheart.2006.01.016>
- Nayidian, A., Yaghoubinia, F., Ganjali, A., & Khoshsimae, S. (2015). The effect of self-care education on the awareness, attitude, and adherence to self-care behaviors in hospitalized patients due to heart failure with and without depression. *PloS One*, 10(6). <https://doi.org/10.1371/journal.pone.0130973>
- Nursing Theories. (2011). A companion to nursing theories and models: Application of Orem's self-care deficit theory. *Current Nursing Publication*. Retrieved from http://currentnursing.com/nursing_theory/application_self_care_deficit_theoryhttp://currentnursing.com/nursing_theory/application_self_care_deficit_theory.html
- Okonko, D., Mandal, A., Constantinos, G., Missouriis, C., Poole, & Wilson, P. (2011). Disordered iron homeostasis in chronic heart failure: Prevalence, predictors, and relation to anemia, exercise capacity, and survival. *Journal of American College Cardiology*, 58(12), 1241-1251. doi:10.1016/j.jacc.2011.04.040
- Percival, M. I., Cottrell, W. N., & Jayasinghe, R. (2013). Exploring the beliefs of heart failure patients towards their heart failure medicines and self-care activities. *International Journal of Clinical Pharmacy*, 34(4), 618-25. doi:10.1007/s11096-012-9655-
- Riegel, B., Dickson, V.V., & Faulkner, K.M. (2017). The situation-specific theory of

- heart failure self-care: Revised and updated. *The Journal of Cardiovascular Nursing*, 31(3), 226-235 doi:10.1097/JNC.000000000000244
- Riegel, B., & Dickson, V. V. (2008). A Situation-Specific Theory of Heart Failure Self-care. *The Journal of Cardiovascular Nursing*: 23(3), p 190-196
doi:10.1097/01.JNC.0000305091.35259.85
- Riley, J. (2015). The key roles for the nurse in acute heart failure management. *Cardiovascular Failure Review*, 1(2):123-127. doi: 10.15420/cfr.2015.1.2.123.
- Salmond, S. W., & Echevarria, M. (2017). Healthcare transformation and changing roles for nursing. *Orthopedic Nursing*, 36(1), 12-25.
doi:10.1097/NOR.0000000000000308
- Schwalm, J. D., McKee, M., Huffman, M. D., & Yusuf, S. (2016). Resource effective strategies to prevent and treat cardiovascular disease, *Circulation*, 133(8), 742-755. doi:10.1161/circulationaha.115.008721
- Shashivadan, P. H., & Stanton, P. N. (2005). Patients beliefs about their cardiovascular disease. *General Cardiology*, 91, 1239. doi:10.1136/hrt.2003.025262
- Sterne, P., Grossman, S., Migliardi, J., & Swallow, A. (2014). Nurses knowledge of heart failure: Implications for decreasing 30 -day re-admission rates. *MedSurg Nursing*, 23(5), 321-329.
- Savarese, G., & Lund, L. H. (2017). Global public health burden of heart failure. *Cardiac Failure Review*, 25:2;3(1), 7-11. <https://doi.org/10.15420/cfr>.
- Tran, B., & Fonarow, G. C. (2015). Gaps in the heart failure guidelines. *Cardiovascular Failure Review*, 1(1), 50–55. doi:10.15420/CFR. 2015.01.01.50

- Vigen, R., Maddox, T. M., & Allen, L. A. (2012). Aging of the United States population: Impact on heart failure. *Current Heart Failure Reports*, 9(4), 369-74
<https://doi.org/10.1007/s11897-012-0114-8>.
- Walden University. (2017). Manual for staff education project: Doctor of nursing practice (DNP) scholarly project. Retrieved from
https://academicguides.waldenu.edu/ld.php?content_id=32804379
- PR Newswire. (2014,). Walden University Survey finds Schools and Universities play important role in positive social change. *Hispanic PR Wire*. Retrieved from
<https://search-ebshost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=bwh&AN=201402101623PR.NEWS.HSPR.EN.HPR20140210EN25941&site=eds-live&scope=site>


Appendix A: PowerPoint Presentation


STAFF IN-SERVICE EDUCATION PROGRAM
ON HEART FAILURE MANAGEMENT AND MAINTAINING QUALITY OF LIFE
ESTHER OKORIE
MSN-FNP



HEART MANAGEMENT GUIDELINES

- Heart failure is the inability of the heart to pump blood to the different areas of the body as required.
- American college of cardiology/American heart association/American association of heart failure 2017 guidelines listed the guidelines to improve quality of life/ health related quality of life(HRQOL).



GOAL FOR STAFF IN-SERVICE EDUCATION


- Reduce readmission/recurrent hospitalization
- Improve and empower staff on more knowledge of heart failure management skills
- Improve staff evaluation of patients at high risk for poor self-care behavior
- Reduce heart failure (HF) exacerbation
- Reduce morbidity and mortality associated with heart failure
- Improve health related quality of life(HRQOL), Quality of life (QOL)
- Nurses and staff to educate patients to recognize when to
 - seek professional care
 - Take extra water pill
 - Call provider
 - Call ambulance

LEARNING OBJECTIVES

- Learning Objectives
- At the end of this presentation the nurses/staff should be able to:
 - Educate heart failure patients
 - Recognize patients who are high risk for:
 - Heart failure exacerbation
 - Hospitalization
 - Recurrent readmission
 - Poor self-care management skills
- Nurses will be able to identify common comorbidities with heart failure.
- Nurses will be able to manage heart failure while incorporating the clinical practice guidelines according to ACC/AHA/HFSA current guideline
- Patient education
- List strategies for self-care management that improves QOL
- Understand health beliefs as a barrier to improve care
- Discuss health promotion and disease prevention.

LEARNING OBJECTIVES CONTINUE

- Address both patient and their health belief as barriers to achieving disease management goals.
 - Patient age
 - Hearing loss
 - Living situation
 - Environment
- Lack of access to care due to certain limitations
 - Transportation
 - Lack of family
 - Low income (Diez-Villanueva, & Alfonso, 2016)




PATIENTS AT HIGH RISK FOR HEART FAILURE

- Hypertension
- Atherosclerosis
- Diabetes Mellitus
- Obesity
- Sedentary Lifestyle
- Metabolic syndrome
- Patients who use cardiotoxins
 - chemotherapy
- Family history of cardiomyopathy American Heart Association (Diez-Villanueva, & Alfonso, 2016)



IDENTIFICATION OF HEART FAILURE COMMOBIDITIES

- Chronic obstructive pulmonary disease
- Anemia-with marked low ferritin/iron deficiency
- Hypertension
- Dyslipidemia
- Sleep Apnea
- Diabetes Mellitus
- Cardioresenal syndrome due to decreased cardiac output and increase venous pressure (Olonka, Mandl, Constantinos, Missouri, and Poole-Wilson, 2011).



EFFECT OF HEART FAILURE ON COGNITION

Picture from: Cardiac Failure Review, 2016;2(2):106-109

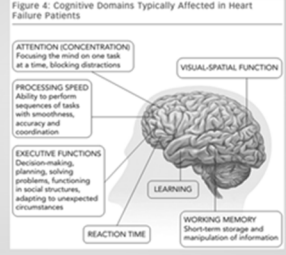



Figure 4: Cognitive Domains Typically Affected in Heart Failure Patients

- ATTENTION (CONCENTRATION)**
Focusing the mind on one task at a time, blocking distractions
- PROCESSING SPEED**
Ability to perform sequences of tasks with smoothness, accuracy and coordination
- EXECUTIVE FUNCTIONS**
Decision-making, planning, solving problems, functioning in social structures, adapting to unexpected circumstances
- REACTION TIME**
- LEARNING**
- WORKING MEMORY**
Short-term storage and manipulation of information
- VISUAL-SPATIAL FUNCTION**



EFFECTS OF HEART FAILURE CARDIO-RENAL SYSTEM

Retrieved from <https://ahajournals.org/doi/10.1161/CIRCULATIONAHA.117.028814>

HEALTH PROMOTION AND DISEASE CONTROL

- Smoking 1 to 20 cigarette per day carries risks for developing coronary heart disease and stroke.
- No safe level exist for smoking in cardiovascular disease.
- Recommend smoking cessation instead of cutting down.
- Quitting smoking helps to drastically reduce the risk of causing two common major disorders (McGreal et al., 2015).
- Lifestyle modification
- Exercise
- Community heart failure resources
- Changes in type of food
 - Limit salt/ fast food/ low fat food
 - Mediterranean diet
 - Fruits and vegetables
 - Alcohol
 - Monitor Fluid intake (American Heart Association, 2017)

STRATEGIES

- Follow up with primary care provider
- Lab draws
 - Brain Natriuretic Peptides
 - CBC
 - Anemia
 - Albumin
- Staff follow up with patient
- Patient adherence
- Facility/Organization Participation (Okonko, et al., 2011).

STRATEGIES CONTINUED

- Lab Appointments:
 - monitor hemoglobin levels, and iron circulation in blood, cardiac markers, to prevent reduce cardiac output, muscle functions and fatigue (Okonko et al., 2011). Other labs including potassium, magnesium, echocardiogram, renal functions, and annual immunizations to prevent flu and other seasonal illness which may exacerbate HF.
- Assess sleep quality
- Screen for Apnea
- Staff could help patients use varieties of creative, well-planned, and deliberate self-care action strategies
- create own coping mechanism to perform daily self-care activities.
- Assess patient's self-care barriers and facilitators (McGreal et al., 2015).

STRATEGIES CON'T

- The patients' perceptions:
 - Reflects cultural beliefs, social norms, or spirituality and caregivers (Harrison et al., 2015).
- Nurses assess patient readiness to learn and perform self-care.
 - Assessment including patient perception, physical, and emotional barriers.
- Staff and caregivers' assistance needed with organizing medications
- Skills in buying groceries and preparing meals according to dietary guidelines
- Monitoring symptoms, and navigating the healthcare system (Nasir, et al., 2016)
- Schedule activities with rest.
- Fatigue occurs due to low hemoglobin and decrease ejection fraction.

CONTRIBUTING FACTORS TO LIMITATIONS IN SELF-CARE

- Age
- Demographic
- Poor knowledge of diagnosis
- Fragility which means a decreased physiologic reserve and resistance to stressors, that is also very common in elderly patients with HF
- Anxiety, depression, and unrecognized cognitive impairment
- Decreased decision making ability
- Co-morbidities, respiratory disease(s)
- Low level of physical activities (Tancy et al. 2017).

STRATEGIES CONT'D

- Low hemoglobin, and hematocrit cause low energy in HF
 - Affect effective self-care management or impaired self-functional activities.
 - low energy, exercise intolerance and depression (Chonko, et al., 2011).
- Teach staff to educate HF patients on how to conserve energy :
 - Family involvement
 - Promoting activities
 - Modifying daily activities like bathing, grocery shopping, cleaning the house, meal preparation, and participation in leisure activities.
 - Patient to schedule activities around the best time of the day that suits them
 - Recruit family or caregiver to run errands to preserve energy (McGreal et al., 2015).
 - Assess patient lack of knowledge, sense of hopelessness, depression due to disease prognosis.



HEALTH BELIEF

- Definition: Health beliefs can be affected by behaviors and attitudes a patient and staff may hold. Perception or beliefs, and behaviors towards their health condition, medications, exercise, and dietary modification (Percival, Cottrell, & Jaysinghe, 2013).
- **NURSES**
 - The attitudes, and beliefs that guide a patients' health behaviors may be influenced by multiple areas including health care professional, self-perception, family and friends (Shashivadan, & Stanton, 2005).
 - Strong health belief negatively influences patients education
 - Examine the impact of culture, societal pressure, health beliefs influences providing future education (Cao et al., 2018).
- **PATIENTS**
 - Negative effect to care adherence
 - Educate on positive belief effects on ability to own up to their health monitoring
 - Medical interventions may prompt adherence or compliance to treatment, (Percival et al., 2013).



REFERENCES

- American Heart Association. (2017). Rise above heart failure. Retrieved from http://www.heart.org/HEARTORG/Conditions/HeartFailure/HeartFailure_UCM_002019_SubHomePage.jsp
- Athar, M.W., Record, J. D., Martire, C., Hellmann, D. B., & Ziegelstein, R. C. (2018). The effect of a personalized approach to patient education on heart failure self-care management. *Journal of Personalized Medicine*, 8(4), 39.
- Celutkienė, J., Valkevičius, A., Jakštienė, S., & Jatužis, D. (2016). Expert opinion-decline in heart failure: More attention is needed. *Cardiac Failure Review*, 2(2), 106-109. doi:10.15420/cfr.2016.19.2
- Čerlinskaitė, K., Javanainen, T., Cinotti, R., Mebazaa, A., & Global research on acute conditions team (GREAT) network (2018). Acute Heart Failure Management. *Korean circulation journal*, 48(6), 463-480. doi:10.4070/kcj.2018.0125
- Díez-Villanueva, P., & Alfonso, F. (2016). Heart failure in the elderly. *Journal of geriatric cardiology : JGC*, 13(2), 115-117. doi:10.11909/j.issn.1671-5411.2016.02.009



REFERENCES

- Douglas, D. Schocken, Emelia, J. Benjamin, Gregg, C. Fonarow, Harlan, M. Krumholz, & Daniel Levy . (2008). *Prevention of Heart Failure*, 117(19), 2544-2565, doi: (10.1161/CIRCULATIONAHA.107.188965)
- Harkness, K., Spaling, M.A., Currie, K., Strachan, P.H., & Clark, A.M. (2015). A systemic review of patient heart failure self-care strategies. *The Journal of Cardiovascular Nursing*, 30(2)-p121-135.
- McGreal, M., Hogan, M., Walsh-Irwin, C., Maggio, N., & Jurgens, C. (2015). Heart failure self-care interventions to reduce clinical events and symptom burden. *Dovepress*, 5, 243-257.
- Nasiri, M., Rahimian, B., Jahanshahi, M., Fotoukian, Z., & Motamed-Omran, C.A. (2016). Study of fatigue and associated factors in patients with chronic heart failure. *Critical Care Nursing Journal*, 9(3): e8124.
- Okonko, D., Mandal, A., Constantinou, G., Missouris, C., Poole, Wilson, P. (2011). Disordered iron homeostasis in chronic heart failure: Prevalence, predictors, and relation to anemia, exercise capacity, and survival. *Journal Of American College Cardiology*, 58(12,13):124-51.
- Yancy et al. (2017). Heart failure management guideline (2017) 2017 ACC/AHA/HFSA focused update of the 2013 ACCF/AHA guideline for the management of heart failure: A report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Failure Society of America.



Appendix B: Expert Panel

Rate the project content on the scale of 5 to 1, 5 being excellent/ strongly agree, and 1 being strongly disagree.

1. Rate the project content

5. strongly agree, 4 agree, 3 somewhat agree, 2 disagree, 1 strongly disagree

2. Rate the student skills level in project planning and leadership management

5. strongly agree, 4 agree, 3 somewhat agree, 2 disagree, 1 strongly disagree

3. The project and the applicability in the clinical setting

5. strongly agree, 4 agree, 3 somewhat agree, 2 disagree, 1 strongly disagree

4. Would you recommend this evidenced-based intervention to other facility

5. strongly agree, 4 agree, 3 somewhat agree, 2 disagree, 1 strongly disagree

5. Rate effectiveness of the project, and possible staff response to the change.

5. strongly agree, 4 agree, 3 somewhat agree, 2 disagree, 1 strongly disagree

Appendix C: Patient Flyer

THINGS TO KNOW THAT CAN AFFECT YOUR HEALTH
Is your health belief negative about managing your health problem?

Having a negative or positive thought about your disease management can influence your self-care and the outcome of your health. Staying positive with self-care management skills benefits in slowing the progression of your disease.

ANNUAL DISEASE VACCINE PREVENTION

- ▶ Your Annual Flu Vaccines
- ▶ Check if you have sleep apnea

YOU ARE NOT ALONE
Do not be discouraged about your diagnosis there is a lot of help out there like Cardiac rehabilitation

SELF-CARE MANAGEMENT

HEART FAILURE

References
A million Heart (n.d.). Cardiac Rehabilitation Communications Toolkit retrieved from <https://a-millionhearts.hhs.gov/partners-progress/partners/cardiac-rehab-toolkit.html>
World Heart Federation. (2018). Tobacco breaks heart: choose health not tobacco retrieved from <https://www.world-heart-federation.org/world-no-tobacco-day-2018/>

HOW TO WORK HARD TO RETAIN YOUR HEART FUNCTION

Your heart pump blood throughout the body. A weak heart is unable to pump enough blood through the body. The body start backing up fluid, leading to swelling of different parts of the body. The lungs get congested with fluid resulting to difficulty breathing.

Heart Failure Self-Care Management THINGS YOU CAN ELIMINATE

- ▶ Smoking Cessation Limit drinking alcohol
- ▶ Fatty foods

Limit salt/ and food with too much salt content like Chips and canned food

Eat more fruits and vegetables, and grains

THINGS YOU CAN DO TO HELP YOUR HEART

EXERCISE AT LEAST 3 TIME A WEEK

- ▶ Walk as much as you can tolerate
- ▶ Do a little at a time do not over whelm yourself
- ▶ Rest between activities to prevent exacerbating your body
- ▶ Ask family help with grocery and house keeping

THINGS TO MONITOR

Check your blood pressure daily and record it

- ▶ Monitor your fluid and salt intake. Salt add more fluid to your body
- ▶ Monitor your weight daily. Any increase more than 2 lbs. are an alarm
- ▶ Know the signs and symptoms of heart failure exacerbation
- ▶ Shortness of breath or difficulty breathing
- ▶ Face, arm, abdomen, and leg swelling
- ▶ Call the ambulance, notify your primary care provider
Take additional water pill.
- ▶ Monitor your lab by asking provider about what each lab mean to your health at each visit.

Patient Flyer on self-care management Behavior

Appendix D: Pretest and Posttest

Please respond to the following questions below by selecting the best response to the questions. Thank you.

1. How often should patients with severe heart failure weigh themselves?
 - a. Every month
 - b. Every other day
 - c. Daily

2. Why should a heart failure patient monitor their weight?
 - a. because they have energy
 - b. to monitor weight and fluid retention
 - c. to monitor weight loss

3. From list below circle the common comorbidities with heart failure
 - a. Hypertension
 - b. diabetes
 - c. Respiratory disease
 - d. Obesity

4. Patient health belief as barriers to achieving disease management goals. Yes/ No
 - a. yes
 - b. No

5. How much fluid are heart failure patients allowed to take each day?
 - a. 1.2 to 1.5 L at most
 - b. As little fluid as 500 ml/day
 - c. As much as they could drink

6. Which of these statements are true?
 - a. Patients diagnosed with heart failure are knowledgeable to the disease management.
 - b. They need education on heart failure self-care management skills
 - c. Health belief is a barrier to effective self-care management

7. A patient states, I don't think I will get better, we are just wasting time managing the disease. My uncle died of heart disease.
This statement reflects: check all that applies
 - a. Poor health belief
 - b. Depression and given up on maintaining quality of life
 - a. Good acceptance of change in health status

8. In case of increase weight and shortness of breath what is the best thing to do?
 - a. Call the ambulance and take your water pill

- b. Tell your family to wait you are fine
- c. Wait until you see your nurse

9. What are the common causes of worsening symptoms of heart failure?

- a. Eating unhealthy diet
- b. Lack of follow-up with seasonal vaccine
- c. Physical inactivity

10. What is the definition of heart failure?

- a. The heart inability to pump blood
- b. The heart is lacking blood.
- c. The heart is in poor pathetic condition and needs help.

Appendix E: Exit Survey

Exit in-Service education Evaluation Questions

Four exit questions to evaluate the quality of the in-service material and impact on the staff to providing patient heart failure education

1. Did you find the educational material helpful?

(5) Strongly agree (4) Somewhat agree, (3) agree (2) neither agree nor disagree,
(1) Strongly disagree

2. Will the material help you as a nurse to provide a well-rounded patient education?

(5) Strongly agree (4) Somewhat agree, (3) agree (2) neither agree nor disagree,
(1) Strongly disagree

3. Please evaluate the presenter and the flow of information

(5) Strongly agree (4) Somewhat agree, (3) agree (2) neither agree nor disagree,
(1) Strongly disagree

4. Would you implement the information in clinical care?

(5) Strongly agree (4) Somewhat agree, (3) agree (2) neither agree nor disagree,
(1) Strongly disagree

Appendix F: Outpatient Assessment

Outpatient Heart Failure Patient Assessment

The physical and psychological symptoms of HF such as shortness of breath, mild to moderate cognitive impairment, sleep deprivation/disturbance, fatigue, anxiety, and depression make it generally challenging for patients to receive and retain information. The following assessment enables the provider find out areas of intervention in the care of the patient.

1. Demographic questions

Age

35 -50

55-70

75-90

2. GENDER

Male

Female

3. What is your highest educational level?

Did not complete high school

Did complete high school

Some College

4. MARITAL STATUS

Are you married?

Yes

No

If No, Are you

Single

Divorced

Separated

Widowed

5. EMPLOYMENT

Are you employed?

Yes

No

6. Are working Full time?

Yes

No

7. Or Part time

Yes

No

8. Are you retired?

Yes

No

9.Are you disabled?

Yes

No

10. Unemployed?

Yes

No

OTHER COMOBIDITY

11.Do you have high blood pressure?

Yes

No

12.Are you diabetic?

Yes

No

13.High Cholesterol

Yes

No

RESPIRATORY

14.Asthma

Yes

No

15.Chronic Obstructive Pulmonary disease

Yes

No

SLEEP APNEA

16.Do you have problem sleeping?

Yes

No

17. Do you sleep on the bed or chair?

Yes

No

18. Have you ever been screened for sleep apnea?

Yes

No

19. Do you sleep with CPAP?

Yes

No

ACUTE KIDNEY

20. Have you ever been diagnosed with acute kidney disease?

Yes

No

21. Are You on dialysis?

Yes

No

CARDIOVASCULAR

22. How long have you had heart failure? And have you ever stayed 2 or more days in the hospital?

Yes

No

23. In the past 6 months how many times have you visited the emergency room?

Yes

No

24. Do you have coronary artery disease, previous heart attack, heart rhythm problems

Yes

No

25. do you have implantable cardiac device? (heart monitor, pacemaker, defibrillator)

Yes

No

26. If yes. What type of monitoring device do you have?

A loop recorder

A cardioMEMs device

HEALTH HABIT

27. Do you Smoke? If yes how long have you been smoking? And how many packs a day?

Yes

No

28. Do you drink alcohol?

Yes

No

29. if yes, AHA more than 2 drinks a day for men is considered heavy drinking and more than 1 drink for women.

Occasionally

One beer a day

Two or more drinks need counselling

30.If yes how much do you drink in a day?

Occasionally

One beer a day

Two or more drinks a day

31.Do you use recreational drugs such as cocaine, marijuana, heroin and how often?

Yes

No

32. Do you walk around with or without assistance?

Yes, with assistance

No, without assistance

AHA definition of sedentary lifestyle is less than 150 minutes of moderate intensity activity a week.

33.How often do you exercise?

On a daily basis

Twice a week

More than 4 times a week

Once a week

MEDICATION COMPLIANCE

34. Do you use a pill organizer? If yes – how do you remember to take your medications?
How often do you miss taking your medications?

Never

Sometimes but I take it immediately I remember

HOUSING

35. Do you have a caregiver?

Yes

No

36. Do you Live alone?

Yes

No

MENTAL HEALTH ASSESSMENT

37. Are you Depressed?

Yes

No

Do you regularly feel anxious and find it difficult to control yourself? Does it interfere with your sleep?

38. Anxiety

Yes

No

IMMUNIZATION

39. Did you get your recommended annual Immunization?

Yes

No

40. Flu Vaccine?

Yes

No

41. Pneumonia Vaccine?

Yes

No

ADDITIONAL METHOD OF EDUCATION

42. Patient education Material/preferred method of receiving heart failure education
Do you prefer written material or verbal instruction?

Both

Verbal

Written only

43. Have you ever received HF education?

Yes

No

44. Have you ever heard about self-care management of heart failure?

Yes

No

45. Are you knowledgeable about self-care management?

Yes

No

46. Keeping Appointments/Lab draw

Do you have problems with keeping Doctors' appointments?

Yes

No

HEALTH BELIEF

47. How would you rate your current state of health.

Excellent

Good

Fair

Poor

48. What is your belief about your health condition?

Positive

Negative