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Education Regarding Advance Directives Improves the End-of-Life Choices Documentation in Heart Failure Patients

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Education Regarding Advance Directives Improves the End-of-Life Choices Documentation in Heart Failure Patients

A DNP Project Submitted to the
Graduate Faculty
of Jacksonville State University
in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Nursing Practice

By

Phebe Hagins Wright

Jacksonville, Alabama

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Phebe Hagins Wright August 5, 2022

Abstract

Background: Heart failure affects the lives of more than 6 million people in the United States and outpatient heart failure clinics offer an opportunity to educate patients while providing evidence-based care. A needs analysis revealed that many heart failure patients do not have an advance directive (AD) on file.

Purpose: The DNP project aims to implement an educational program that provides the tools and knowledge to heart failure patients to assist patients in determining their end-of-life care goals and allow them to document these goals in the Five Wishes document.

Methods: This quality improvement project consisted of a didactic educational program offered to newly enrolled heart failure patients in a rural outpatient heart failure clinic that focused on general information about the diagnosis of heart failure, the prognosis, and what an advance directive is and its benefit. All 12 patients were provided with free copies of the Five Wishes document.

Results: Key results included an increase of 25% of patients who understand this disease better and the benefits of having an AD to express their end-of-life choices. Four patients (33.3%) returned a completed AD to the clinic to file their medical records.

Conclusion: This quality improvement project was multifaceted and stressed the importance of increasing patient knowledge through an educational session about heart failure and advance directives in patients diagnosed with heart failure, which would increase the completion rates of advance directives in these patients.

Keywords: *heart failure, advance directive, education, compliance.*

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Education Regarding Advance Directives Improves the End-of-life Choices Documentation in Heart Failure Patients

Congestive heart failure is a condition that can be treated but not cured. Patients who suffer from this disease have hearts that are not working as efficiently as before to circulate blood through their bodies. This inefficient blood pumping means that the cells are not receiving oxygen and nutrient-rich blood. According to the Centers for Disease Control and Prevention (CDC), about 6.2 million adults in the United States are diagnosed with heart failure (Centers for Disease Control and Prevention, 2020). Research has shown that patients with heart failure have an increased risk of morbidity and mortality. The Framingham Heart Study indicates that the mortality rate after receiving a diagnosis of heart failure in patients in the United States is approximately 10% after one month, 20% to 30% after one year, and 45% to 60% after five years of follow-up (Bytyci & Bajraktari, 2015). In 2018, the death certificates of 379,800 people included heart failure as a cause of death (CDC, 2020).

Patients with heart failure have an increased risk of hospital admission, mortality, and increased financial responsibility for the treatment that they must receive. The potential for disease progression is high if not managed appropriately, and with this progression comes increased cost and potential for aggressive medical treatment. Advance directives (AD) are legal documents that are "signed by a competent person to provide guidance for medical and health-care decisions…in the event the person becomes incompetent to make such decisions" (Merriam-Webster, 2021). This documentation can prevent unwanted medical interventions or hospitalizations, reduce medical costs, and ensure patients receive preferred end-of-life care.

Goals of Care discussions in the heart failure population should be initiated after a diagnosis. The cardiology provider has the opportunity to educate the patient and family on the diagnosis and prognosis and the need for advanced care planning (Butler et al., 2015).

As of 2020, recommendations made by The Joint Commission regarding ADs are as follows: all patients who have a diagnosis of congestive heart failure must have documentation of a discussion regarding advance care planning to improve compliance with patient wishes (The Joint Commission, 2020). The Joint Commission also recommends that patients have an AD on file with any medical facility where treatment is received. The current percentage of heart failure patients evaluated and treated by the heart failure clinic associated with a rural hospital in northwest Georgia with an AD on file is less than 30%. An unsuccessful pilot study was initiated at an outpatient heart failure clinic associated with a rural hospital in northwest Georgia. Compliance with completing ADs was not increased by only providing a free copy of an AD to patients to complete and return. This DNP project aims to increase the knowledge that patients with heart failure possess regarding advance directives and assist them in completing the Five Wishes advance directive document. This will allow them to receive the medical care they prefer at the end of life and prevent unwanted aggressive medical interventions, potential hospital stays, and intensive care admissions.

Background

According to the CDC, heart failure affects the lives of an estimated 6.2 million adults in the United States and is partially responsible for over 375,000 deaths per year (CDC, 2020). More than 900,000 new cases are diagnosed each year (American Heart Association, 2017). Medical expenses for patients with this chronic illness have been estimated to cost over $30.7 billion in 2012. About 80% of the estimated cost is related to hospitalizations (AHA, 2017). The estimated financial burden includes health care services, medication, and time away from work (CDC, 2020).

Risk Factors

Heart failure is linked to many medical conditions, including coronary artery disease, diabetes, high blood pressure, obesity, and valvular heart disease. Many of these chronic conditions appear together and lead to frequent readmissions to the hospital. Unhealthy behaviors can increase the risk of heart failure as well. Some behaviors that can lead to heart failure include smoking, eating a diet high in fat, sodium, or cholesterol, leading a sedentary lifestyle, and excessive alcohol intake (CDC, 2020). Other conditions that can increase a person's risk of developing heart failure include obesity, obstructive sleep apnea, severe anemia, severe lung disease, and previous heart attacks (AHA, 2017).

Management of Heart Failure

The management of heart failure is focused on treating symptoms and requires knowledge of the symptoms of heart failure. Symptoms of heart failure include shortness of breath, persistent coughing or wheezing, the buildup of excess fluid in the body tissues, fatigue, lack of appetite or nausea, confusion or the inability to think clearly, and increased heart rate. Lifestyle modifications that include increasing physical activity and dietary changes can improve heart failure symptoms. Cardiac rehabilitation programs are available and assist with education related to physical exercise, diet and nutrition, and other aspects of chronic cardiac conditions (AHA, 2017).

Medications utilized in treating heart failure have been proven to improve heart function, prolong life, and save lives (AHA, 2017). There are many different classes of drugs used to treat heart failure. These medications can include angiotensin-converting enzyme inhibitors (ACEi), angiotensin II receptor blockers (ARBs), angiotensin-receptor neprilysin inhibitors (ARNIs), beta-adrenergic blocking agents (BBs), aldosterone antagonists, and diuretics. Other medications that may be utilized to manage comorbidities include anticoagulants and cholesterol-lowering drugs (AHA, 2017).

Advanced Interventions for Heart Failure

Sometimes an advanced intervention is required when heart failure is in an advanced stage. An implantable cardioverter-defibrillator (ICD) may be needed in severe heart failure or if dysrhythmias are present. When a patient develops abnormal conduction of the heart's electrical system, they may require cardiac resynchronization therapy, also known as biventricular pacing. A special pacemaker is inserted during this procedure to make the ventricles contract in a regular rhythm. A left ventricular assist device (LVAD) is needed when waiting for a heart transplant. This device helps pump blood from the heart into the aorta and the body. A heart transplant may be necessary for severe heart failure (AHA, 2017).

Heart Failure Clinics

Heart failure clinics are multidisciplinary facilities that rely on physicians, nurses, home health providers, and many other clinicians to evaluate patients, provide recommendations, and treat their medical conditions. Clinicians use evidence-based interventions that improve quality of life and functional status while reducing the need for hospital admissions. Outpatient heart failure clinics focus on the chronic management of heart failure to prevent acute exacerbations that require hospitalization and readmissions to critical care facilities. The goal is to increase patient knowledge of the disease through education, prevent symptom progression through evidence-based medication, improve quality of life, and increase adherence to treatment plans (Hauptman et al., 2008).

Needs Analysis

A needs analysis was performed to identify the necessity of increased education in the identified market regarding heart failure. This analysis included a market analysis, which assisted with the identification of the population of the target area through the evaluation of key characteristics. These characteristics included sex, ethnicity, and income along with mortality statistics. A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis assisted in identifying the strengths of the DNP project, planning for addressing weaknesses, identifying opportunities, and recognizing threats to the DNP project.

Market Analysis

This DNP project focused on patients in an outpatient heart failure clinic associated with a rural hospital in northwest Georgia that The Joint Commission accredits in cardiac care of acute myocardial infarction and advanced heart failure. The population served by this facility includes patients from Rome, Floyd County, Georgia, and the surrounding counties. This area includes counties in eastern Alabama and southern Tennessee. A diverse population of patients, many of whom are uninsured and underserved, with complex medical conditions, are served by this facility.

In 2019, Floyd County maintained a population of approximately 99,000 people. The majority of the people, around 75 to 80%, were reportedly Caucasian, with an estimated 15% African American and 12% Hispanic or Latino. The median household income in 2019 was estimated as $48,336, and 18.4% of the population was considered impoverished (United States Census Bureau, 2019). In 2015, the Institute for Health Metrics and Evaluation reported that the life expectancy for persons living in Floyd County was approximately three and a half years lower than the national average for females and males. The national average life expectancy for females is 81.5 years, and for males, it is 76.7 years. The average life expectancy in Floyd County is 77.9 years for females and 73.6 years for males. All-cause mortality rates are higher than the national average in females and males. The national average all-cause mortality rate in females is 667.8 per 100,000 people. Male all-cause mortality is reportedly 930.1 per 100,000 people. In Floyd County, Georgia, the mortality rates are 869.8 for females and 1154.7 for males per 100,000 people. These deaths occur more frequently in lower socioeconomic groups in the region (Institute for Health Metrics and Evaluation, n.d.).

Strengths, Weakness, Opportunities, and Threats (SWOT) Analysis

A SWOT analysis is a tool that assists the principal investigator in identifying the strengths of the DNP project, planning for addressing weaknesses, identifying opportunities, and recognizing threats to the DNP project. Strengths and weaknesses are generally internal, and opportunities and threats are external to the project or organization (Zaccagnini & Pechacek, 2021).

Internal strengths that can help combat weaknesses include support from the nurse practitioner and director of the heart failure clinic, understanding current staff work demands, and the availability of skilled nurses and physicians who have experience with their patient population. The Heart Failure Coordinator is a tremendous asset to the project because she constantly monitors the success of the clinic and statistics about heart failure patients admitted to the hospital. The major internal weaknesses were time constrictions, resistance to change and implementation of a new program, and patient engagement.

External forces were also examined for opportunities and threats. The main threat identified is the continued presence of increased COVID-19 infections. This increase in infected persons in any clinical environment limits the engagement with new participants due to the fear of disease. Opportunities that can aid in supporting this project include the stressed importance of reducing hospital readmissions and costs and accrediting body support in enhancing patient education (see Appendix A).

Problem Statement

Patients who suffer from congestive heart failure experience an increase in comorbid conditions and have an increased mortality rate leading to poor patient outcomes. An estimated 50% of the patients with heart failure die within five years of diagnosis. Many of these patients suffer from sudden cardiac death. Approximately 30% of heart failure patients discharged from the hospital related to an exacerbation of their condition die within one year (Butler et al., 2015). Many studies have documented the value of advance directives and found them beneficial in establishing preferences before the imminent end of life. ADs in patients with congestive heart failure have been shown to decrease the utilization of aggressive treatments at the end of life and have reduced the number of admissions to intensive care units in this population.

AD compliance for congestive heart failure clinics is measured by the percentage of patients who have completed ADs once enrolled in the clinic. A needs assessment has revealed that despite the benefit of having documented end-of-life choices on record, many heart failure patients do not have an AD on file, and interventions need to be initiated to assist these patients in completing these valuable documents. By participating in this DNP project, heart failure patients will obtain access to education relative to ADs. They will have a completed document with their end-of-life preferences available for their family and medical providers. The number of participants in the congestive heart failure clinic with completed ADs will increase. The project implements and evaluates an educational program that provides access to legal documentation to ensure the patient's end-of-life wishes are known. The Five Wishes document will be provided to the patient, and education and assistance with completion will be provided.

The question that was answered through this project was: Among patients who participate in an outpatient rural heart failure clinic (P), does a program that provides the Five Wishes advance directives document with education (I) versus no education (C) increase end of life care documentation (O) for the patients enrolled over an eight-week time frame (T)?

Aims and Objectives

The overarching aims of this project were to:

1. Increase heart failure patient knowledge of advance directives and end-of-life choices after receiving a diagnosis of heart failure and enrolling in the outpatient heart failure clinic.
    a. Design an educational program specifically for heart failure patients related to advance directives to improve their understanding of the need for a completed advance directive.
2. Over eight weeks, increase the number of completed advance directives by heart failure patients enrolled in an outpatient rural heart failure clinic.
    a. Provide a free copy of the Five Wishes advance directive document and the appropriate education and assistance with completing the document to increase the percentage of heart failure patients who have a completed advance directive at the end of life.
3. Decrease the frequency of unwanted aggressive medical therapy, hospital admissions, and ICU admissions near the end of life for heart failure patients enrolled in the clinic and who have an advance directive.

a. To improve the quality of life, at the end of life, for heart failure patients by allowing them to receive the medical care that they have determined to be appropriate for them in an advance directive.

Review of Literature

A literature review was conducted regarding advance directives, heart failure, and educational interventions that may increase compliance with the completion of advance directive documents. The databases utilized were CINAHL and PubMed, using master headings and mesh headings with the following key terms: advance directives, heart failure, and education. A total of twenty potential sources were identified through different term combinations in CINAHL. The results were narrowed to ten by limiting articles to peer-reviewed academic journals using limits within the last ten years. A total of 42 sources were originally identified in PubMed and the results were narrowed using limits of ten years which reduced the total number of articles to five hits.

The literature review included critical findings from retrospective chart reviews, randomized control trials, systematic reviews, and quantitative studies. These results assisted with the development and implementation of this DNP project. Some of the significant findings identified are discussed below (see Appendix B).

Killackey et al. identified two quantitative studies in Canada revealed that very few patients with internal cardiac defibrillators or left ventricular assist devices document guidance regarding the deactivation of the device at the end of life (Killackey et al., 2019). A retrospective chart review by Butler et al. (2015) identified an increase in completed ADs on file over the years studied. Patients were more likely to possess a completed AD if they were over the age of 65, female, white, of higher socioeconomic standing, were at higher risk for adverse in-hospital outcomes, required a longer length of stay (greater than five days), received a palliative care consult, or a hospice discharge (Butler et al., 2015). A systematic review conducted by Killackey et al. (2019) revealed that educational interventions alone do not increase participation in the advance care planning process or the rate of completed ADs in patients with heart failure. Educational videos, workshops, and palliative care consultations, utilized in conjunction with discussions with healthcare providers and repeated reevaluation of goals of care, are necessary to increase compliance.

A randomized controlled trial performed by Doorendos et al. (2016) resulted in a significant increase in communication between heart failure patients and their providers after the patient received a telephone session that addressed their diagnosis, goals of care, and the Five Wishes advance directive document (Doorenbos et al., 2016). Another randomized controlled trial identified that the introduction of palliative care consultation increased patient and family caregiver knowledge of prognosis and the necessity of end-of-life care goals. The trial indicated that outpatient palliative care consults needed to be introduced early into the care of heart failure patients to increase the understanding of the disease process and the prognosis and address goals of care and advance care planning (Wells et al., 2018).

Key findings from the literature review supported implementing an educational program for heart failure patients that provided patients and family caregivers with the knowledge of the disease, prognosis, and end-of-life care decisions. Advance care planning is more effective if not approached during a crisis. The initial approach should begin with diagnosis and should be reinforced and reevaluated with each point of contact to assess changes in the patients' goals. Palliative care consultation has increased patient knowledge and compliance with advanced care planning. These findings have been reviewed and utilized in the formulation of the methodology of this project.

Theoretical Model

The theory utilized to guide this project is Lewin's Theory of Planned Change. Healthcare providers and patients alike must experience and accept change for this intervention to succeed, making this theory appropriate for this DNP project. The key components of Lewin's Theory of Planned Change are unfreezing, change, and refreezing. Unfreezing involves removing the current way of doing things to prepare for the change. Changing requires the implementation of new ways of doing things. Refreezing consists of embracing the change and incorporating the transition into everyday life (Petiprin, 2020).

The current intervention, related to advance directives and compliance in patients who participate in the heart failure clinic, involves an inquiry as to whether they have an advance directive or not. They do not receive any additional education or assistance other than a printed document to read regarding what an advance directive is. The planned intervention will require more time and attention. Healthcare providers and patients must complete all three phases of Lewin's change theory to successfully implement the intervention with positive patient outcomes.

Methodology

This project is planned to increase compliance in heart failure patients regarding completing Advance Directives. The primary intervention of this project was to implement an educational session with heart failure patients during their initial visit to the congestive heart failure clinic to increase their knowledge of the benefits of having a completed AD on file with all medical facilities where they receive care. A free copy of the 5 Wishes AD was also provided to increase the frequency of patient compliance.

Setting

The DNP project took place at an outpatient rural heart failure clinic, a part of a more extensive medical system, including a 230-bed acute care facility that serves all of northwest Georgia, Alabama, and Tennessee. The Joint Commission accredits the facility in eight different specialties and is a leader in cardiac care.

Population

This DNP project used a sample of patients newly enrolled in the heart failure clinic of a rural hospital in northwest Georgia from January 24, 2022 to March 18, 2022. This population was chosen because of the recommendations to inquire about and obtain a copy of completed ADs from patients diagnosed with heart failure. These recommendations are set upon this service line by The Joint Commission (2020) and the American Heart Association (2021). This population is at increased risk for complications related to their heart failure diagnosis and a high risk of readmission to the hospital requiring advanced medical intervention. This population is a suitable candidate for this project due to the frequent utilization of medical facilities and the likelihood of understanding the necessity of possessing a completed end-of-life document and having this document on file with the medical facilities that provide them with medical care. The heart failure team associated with the hospital and clinic was willing to partner with the primary investigator in supporting this study.

Inclusion/Exclusion Criteria for Nurses

Inclusion criteria are as follows:

- Patients over the age of 18 years of age who have been diagnosed with heart failure

  AND

- Patients who are new participants in the heart failure clinic.

Exclusion criteria are listed below:

- Minors (any patient under the age of 18)
- Patients with verified and completed ADs scanned in their chart
- Patients who lacked decisional capacity (diagnosis or dementia/delirium), and/or
- Patients with limited functional ability or the inability to physically participate in the study.

Recruitment

The participants were recruited for the study from the heart failure clinic during their initial visit to the clinic for orientation.

Consent

Informed consent was obtained from all study participants, which explained the purposes of the study, participation requirements, and the ability to refuse to participate (see Appendix C). It was emphasized that this was a student-run project to increase patient compliance regarding the completion of ADs. All subjects have been provided with the opportunity to decline participation. It was explained that confidentiality would be maintained throughout the completion and dissemination of the project.

Framework

The Plan, Do, Study, Act framework was utilized to implement and evaluate the intervention to improve compliance with completed ADs in patients who participate in treatment at the heart failure clinic (see Appendix D). A plan to increase education and assistance regarding completing an AD was developed. Once a protocol was identified, the intervention was implemented, and any problems incurred during the implementation phase were documented. After the implementation was complete and recorded, the results were analyzed and compared to the predicted outcome. Any modifications that were required to improve the outcome were identified from the data analysis. A decision had to be made to modify and implement the new intervention, adopt a successful intervention because of a positive change, or abandon the intervention and change the intervention to improve the outcome (Institute for Healthcare Improvement, 2021). The decision was made to continue the current intervention without modifications to evaluate the effectiveness with a larger population of participants.

Design

The quality improvement project utilized an educational session for newly enrolled patients in an outpatient heart failure clinic related to ADs and assistance with completing the documents. The DNP project began after Institutional Review Board (IRB) approval (see Appendix E). A pre-education questionnaire was administered to the patient, education was provided, and a post-education questionnaire was administered to the patient to verify understanding of the discussion and material (see Appendix F and Appendix G). Upon request, assistance was provided with completing the Five Wishes document. This legal document was provided free of charge by the facility.

The project outcomes were evaluated by monitoring the number of new patients enrolled in the heart failure clinic over eight weeks and the number of completed advance directives received from those patients. The previous process regarding advance directives involved only verifying the existence of a completed advance directive and obtaining a copy of that document. If the patient reported not having an advance directive, they were asked if they would like information about the different types. The hope was that compliance with returning a completed document that discusses end-of-life wishes would increase by adding an education session designed explicitly for heart failure patients and providing an easy-to-understand document recognized in 42 states.

The control group for the project is identified as the patients enrolled in the heart failure clinic during the eight weeks before the intervention, with the information being gathered through chart review. This review established the total number of patients enrolled in the program in the eight weeks before the initiation of the intervention. This number was documented along with the total number of advance directives recorded in the electronic health record for those newly enrolled patients. Other data gathered from this chart review included age, gender, estimated ejection fraction, and New York Heart Association (NYHA) Functional Classification.

This intervention was evaluated through a chart review of all patients enrolled in the program eight weeks after the intervention was launched. The number of new patients enrolled in the outpatient heart failure clinic and those patients with an advance directive were recorded and evaluated. The intervention was successful once an advance directive was documented in the patient chart.

Chart Review

After Institutional Review Board (IRB) approval was obtained, a pre-intervention chart review was performed in Meditech, which is the electronic medical record that the facility utilized. This chart review included all new patients from the previous eight weeks who used the outpatient congestive heart failure clinic. The charts were evaluated for the following information: age, gender, confirmation of a diagnosis of heart failure with an estimated ejection fraction, NYHA Functional Classification, and the presence of an advance directive on file with the facility.

A post-intervention chart review was performed to evaluate the efficacy of the intervention through the receipt of completed advance directives. This chart review began one week following the initial implementation of the intervention and continued for eight weeks after that. The final chart review was performed one week after the last patient interaction. The primary investigator and the heart failure coordinator were the only individuals involved in collecting data from the chart review. The only identifiable data recorded from the patient charts was a medical record number. After the information was retrieved, all data was securely stored during the study and de-identified and disposed of as per the facilities policy (see Appendix H).

Risks and Benefits

There was minimal risk associated with confidentiality related to this DNP project. Any risk regarding confidentiality and survey responses was mitigated by securing all data collected by the primary investigator throughout the project.

All ethical standards, including maleficence and beneficence, were maintained to protect all involved. The best interest of the participants remained the priority to minimize or prevent harm. The autonomy of all involved was honored by allowing participants to decide to participate in the project. Equality and justice were promoted by allowing participation by all, regardless of their educational background, age, sex, religion, race, medical conditions, or insurance status.

Compensation

All DNP project team participants were offered light refreshments and educational resources during the quarterly congestive heart failure meeting and other required educational opportunities about the project.

Timeline

A timeline for the DNP Project was developed to identify specific tasks that required completion. Project planning was initiated in June 2021. Proposal approval and a letter of support from the agency where the project would take place were obtained. University IRB approval was obtained at the end of 2021. Project implementation was initiated in January 2022, and data collection was completed during the months of February and March 2022. Data analysis began in the weeks following data collection and was complete by April 2022. The DNP manuscript was developed over the following two months and submitted for approval from Graduate Studies in June 2022. Dissemination of the data gathered and results of the DNP Project were presented on July 15, 2022 (see Appendix I).

Budget and Resources

A budget was developed to include the cost of all instruments and expenses that implementation of the project would require. The bulk of the cost was determined to be paid by the hospital for items such as the Five Wishes document, printing materials, and staff salaries. The principal investigator was responsible for refreshments for staff during the educational in-service (see Appendix J).

Evaluation Plan

Statistical Considerations

Descriptive statistics are used to describe and summarize data to reveal patterns. Measures of central tendency describe a data set by identifying the central position within the data set with a measurement such as the mean, median, or mode. The mean is the most common measure of central tendency and describes the average of a set of numbers (Laerd Statistics, 2018). Measures of frequency such as percentage and frequency or incidence are also descriptive statistics that can describe a data set. Assessment of the project outcome was completed utilizing simple calculations of the percentage of new heart failure patients who possess a completed AD in the control and intervention groups. A t-test was performed to evaluate the collected data by comparing the means of the two groups. This comparison focused on the key characteristics of the groups such as age and years of knowledge of the diagnosis.

Data Maintenance and Security

After the project was completed, the IRB was closed, and the final manuscript was completed. The data recording method was maintained confidentially by deidentifying all participants and maintaining results in a data entry format as interviews and questionnaires are collected from medical records in a secure, protected file format. All data was destroyed following facility guidelines. Hard copies of data, including patient medical record numbers and any data collected during the completion of the DNP project, did not leave the clinic or hospital campus and were destroyed via hospital policy.

Results

This section reviews the results of the data analysis, including quantitative results from the patient surveys, chart review, and educational sessions. Demographics are examined, and key findings are highlighted.

Results of Chart Review

During the pre-intervention chart review, 16 charts were reviewed that included patients who completed the initial heart failure clinic visit eight weeks before the educational intervention. Of the 16 patients identified, three patients (18.75%) had a documented AD on file with the clinic, and 13 (81.25%) did not. Nine patients (56.25%) were male, and seven (43.75%) were female; one male and two females had ADs on file at the initial visit to the clinic. The ages of these patients ranged from 46 to 79, with a mean age of 59.3 years with a sample standard deviation of ±8.98 years. This standard deviation describes a significant variance in the ages of the patients. The mean age of the three patients with documented ADs on file with the heart failure clinic was 60, and their last documented ejection fraction was ≤50% (see Table 1).

A post-intervention chart review was performed to evaluate the efficacy of the educational intervention through the receipt of advance directives. Of the 15 new patients identified during the eight-week study timeframe, three patients were excluded due to the presence of an AD on file. All 15 patients participated in the pre-intervention questionnaire. Of the 15 patients identified, three patients (20%) had a documented AD on file with the clinic, and 12 (80%) did not; eight (53.3%) of these patients were male, and seven were female (46.7%). One male and two females had ADs on file at the clinic at the time of their initial visit; this excluded them from the intervention. The remaining 12 patients (100%) participated in the study. The ages of these patients ranged from 38 to 79, with a mean age of 57.1 years and a sample standard deviation of ±12.7 years. This standard deviation describes a significant variance in the ages of the patients. A two-tailed t-test was performed and validated that of these 12 patients, the majority of them belong to an age group within 12 standard deviations of the mean age of the group (57.1). The mean age of the three patients with documented ADs on file with the heart failure clinic was 63.3, and their last documented ejection fraction was ≤55%. When the final chart review was complete, four (33.3%) of the 12 patients had completed and returned ADs to the heart failure clinic (see Table 2).

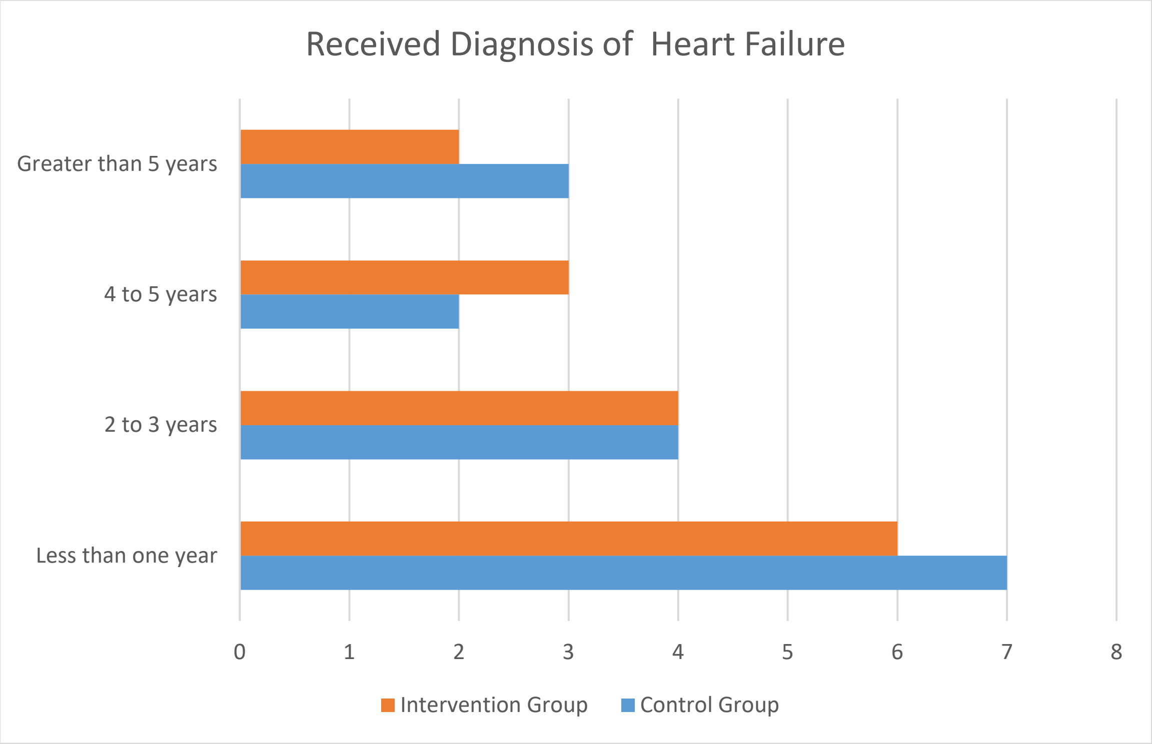
Results of Survey Responses

The pre-intervention survey was evaluated, and data was collected for the control and intervention groups. The information for the control group was collected through chart review. It included data related to 16 new patients diagnosed with heart failure who receive care at the heart failure clinic. Documentation was assessed, and data pertaining to the years since diagnosis was determined. Seven patients (43.8%) received their diagnosis within the last year; four patients (25%) received their diagnosis between two and three years ago; two patients (12.5%) have known about their diagnosis for four to five years; and three patients (18.75%) have been managing heart failure for greater than five years.

Information collected from the pre-intervention survey for the intervention group revealed the following: six patients (40%) received their diagnosis within the last year, four patients (26.6%) received their diagnosis between two and three years ago, three patients (20%) have known about their diagnosis for four to five years, and two patients (13.3%) have been managing heart failure for greater than five years (see Figure 1). When asked if they knew what an advance directive was nine patients (60%) answered yes, and six (40%) answered no. Three patients (20%) possessed a completed AD provided to the heart failure clinic. These three patients were excluded from the study, and the remaining 12 patients (80%) participated in the educational session related to heart failure and advance directives.

Figure 1

Time in Years since Diagnosis of Heart Failure



Note. Results were reported by participants in the control group and intervention group through the Pre-education Questionnaire.

After excluding three patients that possessed a completed AD, a post-education survey was completed by the 12 remaining participants in the study. Nine patients (75%) reported a better understanding of congestive heart failure, and nine patients (75%) reported a better understanding of advance directives and the benefit of possessing a completed AD. This represents an increase of three patients (25%) who understand this disease better and the benefits of having an AD to express their end-of-life choices. All 12 patients were provided with free copies of the Five Wishes advance directive document. Four patients (33.3%) planned on completing the document and returning the form on the next visit to the clinic. Three patients (25%) asked for assistance in completing the document. Four patients (33.3%) returned the completed AD to the clinic to file their medical records.

Discussion

The objectives of this project address advance directives and the lack of knowledge that patients with chronic diseases such as heart failure possess. The goal was to increase the knowledge of the disease and prognosis to increase their understanding of the benefit of having an AD on file to express their EOL choices. Quantitative data were utilized in the evaluation of the success of this project.

There are a few significant findings of this project that should be noted. During the pre-intervention chart review, 16 charts were reviewed that included patients who completed the initial heart failure clinic visit eight weeks before the educational intervention. Of the 16 patients identified, three patients (18.75%) had a documented AD on file with the clinic, and 13 (81.25%) did not. A post-intervention chart review was performed to evaluate the efficacy of the educational intervention through the receipt of advance directives. Of the 15 new patients identified during the eight-week study timeframe, three patients were excluded due to the presence of an AD on file. Of the 15 patients identified, three (20%) had a documented AD on file with the clinic, and 12 (80%) did not. When the final chart review was complete, four (33.3%) of the 12 patients had completed and returned ADs to the heart failure clinic. A 25% increase in patient understanding of heart failure and advance directives and their benefit was seen.

Implications for Clinical Practice

Many studies have documented the value of advance directives and found them beneficial in establishing preferences before the imminent end of life. Advance care planning is more effective if not approached during a crisis. ADs in patients with congestive heart failure have been shown to decrease the utilization of aggressive treatments at the end of life and have reduced the number of admissions to intensive care units in this population.

This DNP project aimed to increase the knowledge that heart failure patients possess regarding advance directives and assist them with the completion of the Five Wishes advance directive document. Patients who have an advance directive at the end-of-life are able to express their wishes related to the medical care they prefer. Advance directives also prevent unwanted aggressive medical interventions, decrease healthcare costs, prevent prolonged hospital stays and intensive care admissions.

These project aims were met by increasing the knowledge and understanding that heart failure patients possess related to their diagnosis and prognosis. The ability to express their end-of-life choices when the need arises is invaluable. The educational session also increased their knowledge regarding what an AD is and its benefits. The number of completed ADs by new patients who utilize the heart failure clinic also increased.

Implications for Healthcare Policy

Recommendations made by The Joint Commission (TJC) regarding ADs are as follows: all patients who have a diagnosis of congestive heart failure must have documentation of a discussion regarding advance care planning to improve compliance with patient wishes (TJC, 2020). The Joint Commission also recommends that patients have an AD on file with any medical facility where treatment is received. The current percentage of heart failure patients evaluated and treated by the heart failure clinic associated with a rural hospital in northwest Georgia with an AD on file is less than 30%.

The American Heart Association (AHA) makes recommendations in the Get with the Guidelines quality improvement program. These recommendations focus on education, improving medical therapy, reporting measures for hospitals, and addressing end-of-life choices with these patients due to their increased morbidity and mortality (AHA, 2021). A recommendation for policy changes at the heart failure clinic could include an educational program for patients to improve compliance and promote positive patient outcomes.

Implications for Quality/Safety

Heart failure clinics are multidisciplinary facilities that rely on physicians, nurses, home health providers, and many other clinicians to evaluate patients, provide recommendations, and treat their medical conditions through evidence-based interventions that improve quality of life and functional status while reducing the need for hospital admissions. Outpatient heart failure clinics focus on the chronic management of heart failure to prevent acute exacerbations that require hospitalization and readmissions to critical care facilities. The goal is to increase patient knowledge of the disease through education, prevent symptom progression through evidence-based medication, improve quality of life, and increase adherence to treatment plans (Hauptman et al., 2008).

Quality and safety must be considered in every patient interaction. This quality improvement project increased patient understanding of their disease process and prognosis. This knowledge led some patients to complete an advance directive to ensure that their preferences were known for care at the end of life. These actions can reduce unwanted aggressive medical therapy, decrease medical costs, and limit admissions to hospitals and ICUs, improving the quality of care.

Implications for Education

Goals of Care discussions in the heart failure population should be initiated after a diagnosis is made. The cardiology provider has the opportunity to educate the patient and family on the diagnosis and prognosis and the need for advanced care planning (Butler et al., 2015).

Studies identified in the literature review demonstrate the importance of education when attempting to increase compliance with any intervention or task. This project confirms the importance of patient education and the need for reinforcement of knowledge. Educational interventions aimed at diagnosis and prognosis can increase compliance with medical therapy and plan for future events such as end-of-life choices.

Limitations

Limitations of this study include small sample size, time constrictions, resistance to change and implementation of a new program, and patient engagement. The short duration of the study is a significant limitation. A study that follows heart failure patients over a considerable timeframe could increase the sample size and provide results that are more indicative of the benefits of ADs as they pertain to aggressive medical care, healthcare costs, and hospital and ICU admissions. Educated staff available to provide education has also been identified as a limitation in the study. Palliative care consultation may benefit the patient and staff and assist in education.

The main threat identified is the continued presence of increased COVID-19 infections. This increase in infected persons in any clinical environment limits the engagement with new participants due to the fear of infection. This fear has limited the number of patients who utilize the heart failure clinic and caused patients to receive later diagnoses of chronic diseases.

Dissemination

The findings of this research study have been disseminated through the three P's: poster, presentation, and paper. The DNP project will be presented at DNP Dissemination Day on July 15, 2022 at Jacksonville State University. The completed DNP manuscript will also be published in the Jacksonville State University Public Repository system, an educational forum, and will be available for reference in the future.

Sustainability

This DNP project was driven by the recommendations made by the American Heart Association in Get with the Guidelines (AHA, 2021) and those recommendations made by The Joint Commission (TJC, 2020). These entities encourage hospitals and heart failure clinics to obtain advance directives on heart failure patients cared for within their facilities. The rural outpatient heart failure clinic that participated in this study desires to improve patient compliance with this recommendation and was willing to participate.

Plans for Future Scholarship

The data evaluated during the literature review for this project supports the theory that increasing patient education related to advance directives and their benefit will increase the completion rates of these documents. This study was limited by many factors described above that should be addressed in future studies. A much larger population should be studied to limit the margin of error in the future.

Conclusion

The completion rates of ADs in patients diagnosed with heart failure that utilize the rural heart failure clinic that participated in this study range from less than one percent to just under twenty percent every month. This quality improvement project was multifaceted and aimed to increase knowledge regarding heart failure and advance directives in patients diagnosed with heart failure who receive care in this facility. The educational intervention initiated in this project reportedly increased the knowledge of 25% of the patients who participated in the session. The project also aimed to increase the percentage of new heart failure patients with completed ADs on file to 30%. Patients were provided with a free copy of the Five Wishes advance directive document. Assistance with the completion of the document was offered. The outcome was positive and proved a result of a 33.3% completion rate. The final aim of the project was to decrease the frequency of unwanted aggressive medical therapy, healthcare cost, hospital admissions, and ICU admissions near the end of life for heart failure patients who are enrolled in the heart failure clinic and have an AD on file. This aim requires a longer study timeframe for a complete evaluation. The assumption is that heart failure patients who have been educated on the disease and prognosis will choose to limit aggressive endeavors when near end-of-life and choose to be comfortable either at home or in the hospital utilizing comfort measures that they have independently chosen.

References

American Heart Association. (2021). *Get with the guidelines: Heart failure.* https://www.heart.org/-/media/Files/Professional/Quality-Improvement/Get-With-the-Guidelines/Get-With-The-Guidelines-HF/Educational-Materials/HF-Fact-SheetUpdated-011119V2updated-3521KM-002.pdf

American Heart Association. (2017). *Heart failure.* https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure

Butler, J., Binney, Z., Kalogeropoulos, A., Owen, M., Clevenger, C., Gunter, D., Georgiopoulou, V., & Quest, T. (2015). Advance directives among hospitalized patients with heart failure. *Journal of American College of Cardiology*, *3*(2), 113-121. https://doi.org/10.1016/j.jchf.2014.07.016

Bytyci, I. & Bajraktari, G. (2015). Mortality in heart failure patients. *The Anatolian Journal of Cardiology, 15*(1). 63-68. https://doi.org/10.5152/akd.2014.5731

Centers for Disease Control and Prevention. (September, 2020). *Heart disease: Heart failure.* https://www.cdc.gov/heartdisease/heart_failure.htm

Doorenbos, A.Z., Levy, W.C., Curtis, R., & Dougherty, C. (2016). An intervention to enhance goals-of-care communication between heart failure patients and heart failure providers. *Journal of Pain and Symptom Management, 52*(3), 353-360. https://doi.org/10.1016/j.jpainsymman.2016.03.018

Hauptman, P.J., Rich, M.W., Heidenreich, P.A., Chin, J., Cummings, N., Dunlap, M.E., Edwards, M.L., Gregory, D., O'Connor, C.M., Pezzella, S.M., & Philbin, E. (2008). The heart failure clinic: A consensus statement of the heart failure society of America.

Journal of Cardiac Failure, 14(10), 801-815. https://doi.org/10.1016/j.cardfail.2008.10.005

Institute for Health Metrics and Evaluation (IHME). (2015). *County Profile: Floyd County, Georgia.* http://www.healthdata.org/sites/default/files/files/county_profiles/US/2015/County_Report_Floyd_County_Georgia.pdf

Killackey, T., Peter, E., MacIver, J., Mohammed, S., Bloomberg, L., Munk, P. (2019). Advance care planning in heart failure: A narrative synthesis of the perspectives of patients, family members, and healthcare providers. *Canadian Journal of Cardiovascular Nursing*, *29*(3), 16-25. https://eds.s.ebscohost.com/abstract?site=eds&scope=site&authtype=crawler&jrnl=08436096&AN=140208461&h=Hn7pKCvLDvbqAlem3FeiKuGqDeJKaRthP0X48ITFyRaQGZZ%2flyi6H0Sk%2b3ZIcCKApiu5hN3xlq2idzkY59SBOQ%3d%3d&crl=c&resultLocal=ErrCrlNoResults&resultNs=Ehost&crlhas

Laerd Statistics. (2018). *Descriptive and inferential statistics.* https://statistics.laerd.com/statistical-guides/descriptive-inferential-statistics.php

Merriam-Webster Inc. (2021). *Advance directive.* https://www.merriam-webster.com/dictionary/advance%20directive

Petiprin, A. (2020). *Lewin's Change Theory.* Nursing Theory. https://nursing-theory.org/theories-and-models/Lewin-Change-Theory.php#:~:text=Lewin%27s%20Change%20Theory.%20The%20Change%20Theory%20of%20Nursing,requires%20prior%20learning%20to%20be%20rejected%20and%20replaced

The Joint Commission. (2020). Discussion of advance directives/advance care planning. *Specifications Manual for Joint Commission National Quality Measures.* https://manual.jointcommission.org/releases/TJC2020B3/DataElem0613.html

United States Census Bureau. (2019). *Quick Facts: Floyd County, Georgia.* https://www.census.gov/quickfacts/floydcountygeorgia

Wells, R., Ejem, D., Dionne-Odom, J.N., Bagcivan, G., Keebler, K., Frost, J., Azuero, A., Kono, A., Swetz, K.M., & Bakitas, M. (2018). Protocol driven palliative care consultation: Outcomes of the ENABLE CHF-PC pilot study. *Heart and Lung: The Journal of Cardiopulmonary and Acute Care, 47*(2018), 533-538. http://doi.org/10.1016/j.hrtlng.2018.06.012

Zaccagnini, M., & Pechacek, J. M. (2021). *The doctor of nursing practice essentials: A new model for advanced practice nursing.* (4th ed.). Jones & Bartlett Learning.

Table 1

Pre-Intervention Data – Control Group

16 patients identified			
CATEGORY	**OBSERVED**	**EXPECTED**	
AD on file	3	4.8	
NO AD on file	13	11.2	
Male	5		
Female	9		
Preserved EF	8		
Reduced EF	6		
Yrs since Diagnosis 0-1	5		
Yrs since Diagnosis 2-3	4		
Yrs since Diagnosis 4-5	2		
Yrs since Diagnosis >5	3		
Percentage of Completed ADs	3 complete	16 new patients	18.75%

Table 2

Pre-Intervention Data – Intervention Group

12 participants after 3 eliminations			
CATEGORY	**OBSERVED**	**EXPECTED**	
AD on file	3	4.5	
NO AD on file	12	10.5	
Eliminated Patients (AD of File)	3		
Male	7		
Female	5		
Preserved EF	8		
Reduced EF	4		
Yrs since Diagnosis 0-1	5		
Yrs since Diagnosis 2-3	3		
Yrs since Diagnosis 4-5	3		
Yrs since Diagnosis >5	1		
Percentage of Completed ADs	3 complete	15 new patients	20.00%
Age	Sample Std Deviation	Sample Mean	# of Participants
	12.11	57.1	12

Table 3

Post-Intervention Data – Intervention Group

12 participants after 3 eliminations			
CATEGORY	**OBSERVED**	**EXPECTED**	
AD on file after education/assistance	5	3.6	
NO AD on file	7	8.4	
Eliminated Patients (AD of File)	3		
Male	7		
Female	5		
	AD on File after intervention		
Preserved EF	3		
Reduced EF	2		
Yrs since Diagnosis 0-1	1		
Yrs since Diagnosis 2-3	1		
Yrs since Diagnosis 4-5	2		
Yrs since Diagnosis >5	1		
Improved Understanding of HF/AD	12	12	
Benefits of AD	12	12	
Provided Free Copy of "5 Wishes"	12	12	
Plan to Complete and Return AD	4 + 1 undecided	3.6	
Like Assistance with Completing AD	4	7	
Percentage of Completed ADs	5 complete	12 new patients	41.67%

Appendix A

SWOT Analysis: Rural Outpatient Congestive Heart Failure Clinic

Internal		External	
Strengths	Weaknesses	Opportunities	Threats
*Support from HF team to include cardiologists, palliative care NP, and HF clinic staff (NP, RNs) *Experience with treatment of HF and knowledge related to ADs and end-of-life choices	*Limited time available – primary investigator, palliative care NP, HF coordinator, educators *Patient engagement in education and completion of ADs – end-of-life discussion may be difficult and distressing	*TJC and AHA focuses on the importance of compliance with discussions with patients regarding ADs and having a completed AD on file with all facilities that provide medical treatment *Increased need to focus on reducing readmissions. *Increase in patient autonomy in treatment decisions	*New management of the hospital *Staff resistance to change

Appendix B

Table of Evidence: Advance Directives in Patients with Heart Failure

Clinical Questions:

1. Among patients who participate in an outpatient rural heart failure clinic (P), does a program that provides the Five Wishes advance directives document with education (I) versus no education (C) increase end of life care documentation (O)?

Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study findings that help answer the EBP Question	Limitations	Evidence Level & Quality
1	Butler et al., 2015	Retrospective study chart review of electronic medical records from 2 large tertiary care hospitals	**Timeframe:** September 2008 to August 2013 24,291 patients 44,768 admissions Over 5 years At 2 academic tertiary facilities	1) 44,768 admissions from 24,291 individual patients over 5 years; mean age at admission 64.8 ±15.9 years; 47.9% of the patients were female and 51.8% were black; median LOS 5 days (3 to 10 days); 12.7% of patients had a documented AD 2) older than age 65, unmarried, female sex, white race, higher socioeconomic status, higher risk for adverse in-hospital outcomes, LOS≥5 days, hospice discharge, palliative care consultation, and a DNR order were all associated with a significantly higher chance of having a documented AD. 3) ADs were more frequent when a	1) findings represent a single academic health care system and may not be applicable to other institutions 2) possible selection bias towards sicker patients considering the academic tertiary institution from which the data was derived (inpatient data)	Level II Quality: B

				palliative care consult was placed 4) increase in the number of completed ADs on file over the 5 years studied (10.1% in 2008 and 14.3% in 2013)		
2	Doorenbos et al., 2016	Randomized controlled trial	**Timeframe:** 2 years 660 patients screened for eligibility, 237 eligible, 80 enrolled and randomly assigned 2 group RCT study with 40/group that compared GoC intervention to usual care Conducted in outpatient HF clinic Telephone call to activate discussion regarding GoC Chi-square/t-tests	1) intervention – revisit patient activation-education that was telephone-based intervention and delivered by nurse 2) OUTCOMES - # of GoC convos between HF pts and HF providers; quality of communication; number of referrals to palliative care, completion of ADs 3) age average 58.15 ±11.26; significant increase in GoC conversations (73% vs 2.6%) and quality of end-of-life communication; no difference in the other outcomes	1) provider bias in a single HF clinic 2) exclusion of significant number of patients related to reduced EF 3) limited to specific region in the US, may not be generalized to other locations	Level I Quality: B
3	Killackey, T. et al., 2019	Systematic review of literature	**Databases accessed:** 7 databases accessed (CINAHL, MEDLINE, MEDLINE In Process, PsycINFO, Scopus, and Sociological Abstracts) 1,134 articles identified and 43 articles were	1) awareness of ACPs in HF patients 24 to 44% in two quantitative studies in Canada 2) prevalence of ADs in HF pts 30 to 59% 3)ICD deactivation included in less than 2% of ADs of pts with ICDs; 30-	1) most studies equivocated a discussion regarding ACP as a documented AD	Level II Quality: B

			included in the final review **Timeframe:** Previous 10 years (since 2010) **Keywords/Themes:** *advance care planning, advance directive, living will, power of attorney, heart failure* 24,291 patients 44,768 admissions Over 5 years At 2 academic tertiary facilities	60% of patients with ICDs have ADs completed 4)educational interventions alone (video, workshop presentation, palliative care consultation) do not increase participation in the ACP process or the rate of completed ADs Themes identified in interviews: *Uncertainty, timing, discomfort, relationships, and responsibilities*		
4	Wells, R. et al., 2018	Randomized controlled trial	**Timeframe:** April 1, 2014 to December 31, 2015 61 patients and 48 family caregivers 39 (64%) had an OPCC	1) Advance directive status was addressed in 33 of the 39 participants with OPCC (85%) 2) Code status – 96% vs 58% 3) GOC discussions 89% vs 41.7% 4) Prognosis understanding 85% vs 33% PC consults introduced early into HF care increases patient and caregiver understanding of the disease process and compliance with addressing end of life goals.	1) small sample size 2) homogenous sample population that does not reflect the general population	Level I Quality: B

Appendix C

Informed Consent

Informed Consent Form for Education Regarding Advance Directives Improves the End-of-life Choices Documentation in Heart Failure Patients

You are being invited to participate in a DNP project conducted by Phebe Hagins Wright, MSN, APRN, FNP-C, a graduate student at Jacksonville State University. You are invited to participate in a research study intended to increase the knowledge about Advance Directives and end-of-life care that will increase the number of completed Advance Directive documents in patients with Congestive Heart Failure. This DNP project aims to increase the knowledge that heart failure patients possess in regards to advance directives and assist them with the completion of the Five Wishes advance directive document, which will allow them to receive the medical care that they prefer at the end of life and prevent unwanted aggressive medical interventions, potential hospital stays, and intensive care admissions.

You will be asked to receive education related to Advance Directives and Congestive Heart Failure patients and the purpose of the document as related to patient goals for end-of-life care. This education will take approximately 30 minutes of your time, and an Advance Directive will be supplied for you, at no cost, to complete and return to the facility.

No expected harm can occur from participating in this study. The potential risks associated with this study include emotional responses to the discussion about Advance Directives and end-of-life care. We expect the project to benefit you by increasing your awareness of end-of-life choices and by having a completed Advance Directive in your chart at the medical facility that you receive care to prevent unwanted interventions at the end of life. There is no compensation for participation in this study.

If you have decided to participate in this project, please understand that your participation is voluntary and that you have the right to withdraw your consent or discontinue participation at any time with no penalty. Notification of withdrawal from the study should be provided to any of the Congestive Heart Failure clinic providers. You also have the right to refuse to answer any questions for any reason without penalty.

In addition, your privacy will be maintained in all publications or presentations resulting from this study. No data will be collected that includes identifying information as related to the study and your participation.
If you have any questions regarding this project, you may contact the researcher at pwright2@stu.jsu.edu or (706) 802-3852. In addition, if you have questions regarding your rights as a research participant or any concerns regarding this project, you may contact my advisor, Dr. Lori McGrath, at lmcgrath@jsu.edu, or you may report concerns – confidentially if you wish – to the JSU Chairperson of the Institutional Review Board (IRB) by emailing irb@jsu.edu.

A copy of this consent form will be provided to you.

I understand the above information and voluntarily consent to participate in the research. I further attest that I am at least 18 years of age.

Participant Signature: ______________________________ Date: ________

IRB Approval Number: 11112021 IRB Expiration Date: 11/11/2022

Appendix D

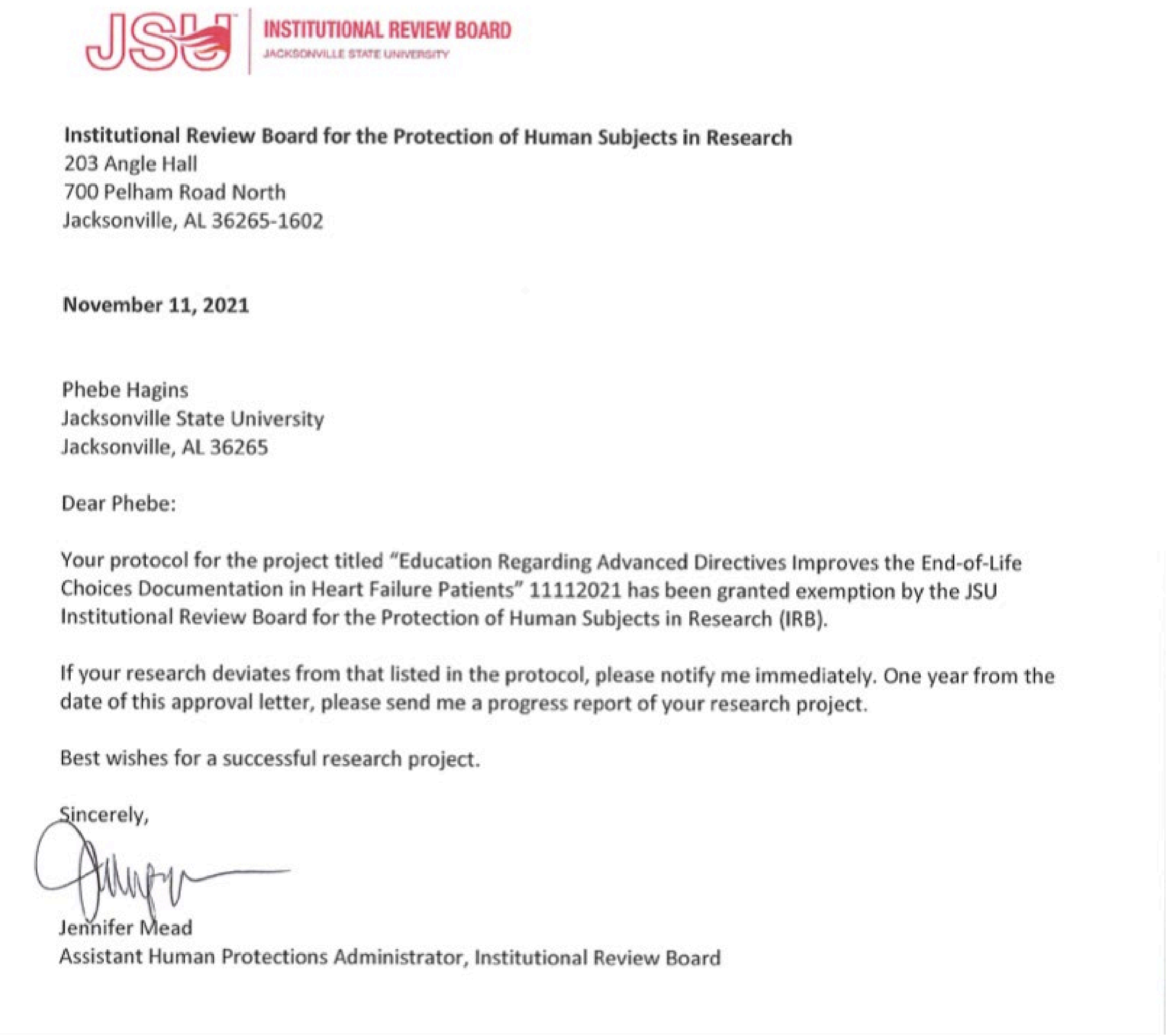
Framework: Plan, Do, Study, Act

Plan →	**Do →**	**Study →**	**Act →**
Gather current data related to completed ADs	Educate the DNP project team and staff on how the intervention will be effective and what their role in the implementation will be	Analyze the collected data	Determine the next step in the process: 1 – Adapt the intervention to be more effective 2 – Adopt the intervention as it is because it was effective 3 – Abandon the intervention due to no positive change
Determine the current protocol for discussing and presenting ADs to patients	Pick a date for implementation and begin the intervention	Compare the collected data to the prediction made during the planning phase (were the outcomes achieved)	

Develop an intervention to improve patient compliance with completing and returning ADs	Document any problems encountered	Summarize the data (what observations were made, and were the results of the intervention positive)	If appropriate, prepare a plan for the next PDSA and implement a new and improved intervention for evaluation of the effectiveness
Develop an educational program to assist patients in obtaining an understanding of the benefits of an AD and how to complete the paperwork	Collect data relevant to the implementation (i.e., number of patients enrolled in the heart failure clinic during the proposed period, number of completed ADs returned to the facility, etc.)	Reflect on the results and possible changes that need to be made	(IHI, 2021)

Appendix E

University IRB Approval



JSU | INSTITUTIONAL REVIEW BOARD
JACKSONVILLE STATE UNIVERSITY

Institutional Review Board for the Protection of Human Subjects in Research
203 Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

November 11, 2021

Phebe Hagins
Jacksonville State University
Jacksonville, AL 36265

Dear Phebe:

Your protocol for the project titled "Education Regarding Advanced Directives Improves the End-of-Life Choices Documentation in Heart Failure Patients" 11112021 has been granted exemption by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB).

If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project.

Best wishes for a successful research project.

Sincerely,

Jennifer Mead
Assistant Human Protections Administrator, Institutional Review Board

Appendix F

Pre-Education Questionnaire

Heart Failure and Advance Directives Questionnaire

1. Have you received a diagnosis of Congestive Heart Failure?
   Yes__________ No__________

2. How long have you known that you suffer from Congestive Heart Failure?
   0-1 year_____ 2-3 years_____4-5years_____>5 years_____

3. Do you participate in evaluation and treatment at the Congestive Heart Failure Clinic?
   Yes__________ No__________

4. Do you know what an Advance Directive is?
   Yes__________ No__________

5. Do you currently have an Advance Directive?
   Yes__________ No__________

6. If so, is the Advance Directive on file with the Congestive Heart Failure Clinic?
   Yes__________ No__________

Appendix G

Post-Education Questionnaire

Post-Education Questionnaire

1. Did you receive the education session related to Congestive Heart Failure and Advance Directives?
   Yes or No

2. Do you have a better understanding of your diagnosis of Congestive Heart Failure and the expected prognosis?
   Yes or No

3. Do you have a better understanding of what an Advance Directive is?
   Yes or No

4. Do you have a better understanding of the benefits of having a completed advance directive on file with facilities that provide care to you?
   Yes or No

5. Were you provided with the Five Wishes Advance Directive document?
   Yes or No

6. Do you plan on completing the Five Wishes Advance Directive document?
   Yes or No or Undecided

7. Would you like assistance with completing the Five Wishes Advance Directive document?
   Yes or No

8. Your next visit with the clinic is scheduled for _________________. Do you plan on bringing the completed document back to the CHF Clinic with you so that it can be documented in your medical record?
   Yes or No

Appendix H

Chart Review Log

Medical Record Number	Patient identified as a CHF patient on arrival to the initial visit to the CHF Clinic? Yes/No	Advance Directive on File with the CHF Clinic on initial visit? Yes/No	Education Provided related to Advance Directives? Yes/No	Advance Directive completed after education? Yes/No	Completed Advance Directive received and scanned by the CHF Clinic? Yes/No

Appendix I

DNP Project Timeline

TASK	START	DURATION
Project planning/proposal development	6/2021	Six months
Proposal Approval by PERC	10/7/2021	N/A
Obtain Agency Letter of Support	10/2021	11/4/2021
JSU IRB Submission/Approval	11/2021	11/11/2021
Implementation	01/2022	8 weeks
Data Collection	02/2022 – 03/2022	4 weeks
Data Analysis	3/2022 – 04/2022	2 weeks
Writing DNP Manuscript Results, Discussion, and Implications	4/2022 – 06/2022	10 weeks
Final Presentation and Dissemination	7/15/2022	1 Day

Appendix J

Budget

PROGRAM EXPENSE	PROJECTED COST	ACTUAL COST
Salaries, wages *(Admin support, practitioners, statistics, or writing consultation)*	Staff will be employed by the hospital	Salaries paid by the hospital
Start-up costs *(copies, charts, displays)*	Copies of Five Wishes ($5.00/copy) paid by hospital prior to initiation of project Consents, surveys, and educational materials will be copied in the education department of the hospital and all costs will be covered by the hospital. ($50.00) paper, toner	$60 for Five Wishes documents paid by the hospital $50.00 paid by the hospital
Capital costs *(hardware, equipment)*	$0.00	$0.00
Operational costs *(heat/electricity)*	$0.00	$0.00
Other:	$50.00-$100.00 for refreshments during in-services for staff	$50.00 for refreshments during CHF clinic meeting and educational in-service
Total Project Expenses	**$200**	**$50.00 – personal** **$110.00 – hospital**