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Reducing Readmissions for Patients Hospitalized with Congestive Heart Failure

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Abstract

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Chrisettia Morgan

MS, Walden University, 2016

BS, Texas Tech University, 2009

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Congestive heart failure (CHF) is the leading cause for readmission in hospitals and has a high mortality and morbidity rate, with implications for hospitals and third-party payers. Readmissions of patients with CHF are related to inadequate patient knowledge at discharge, inadequate follow-up with a health care provider, and treatment regimen nonadherence. Patients report feeling ill prepared to provide appropriate self-care during the transition from inpatient hospital stay to the home setting. One strategy to assess the patient's understanding following discharge education is through a process known as teach-back. The purpose of this quality improvement initiative guided by Knowles's theory was to determine if there would be an increase in the nurses' knowledge about using the teach-back process to assess learners' understanding after completing the education module. Thirty-two registered nurses participated in the education, and a paired *t* test was used to determine if there was a significant difference ($p < .05$) in the nurse's knowledge by comparing the pre- and posttest results. A statistically significant difference was seen in the scores between the pre- and posttest with a *p* value of 0.0002 suggesting that nurses' knowledge about teach-back increased after participating in the teach-back education module. The outcome of this project has the potential to prepare nurses to evaluate the patients' understanding of their self-care instructions before discharge. This project has the potential for positive social change by preparing patients to provide proper self-care when discharged from the hospital, thereby improving their health outcomes, decreasing the rate of 30-days readmissions, and decreasing health care costs for the hospital.

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Table of Contents

Section 1: Improving Readmissions of Heart Failure Patients 1

Introduction 1

Problem Statement 2

Purpose 4

Nature of the Doctoral Project 5

Significance 6

Summary 7

Section 2: Background and Context 9

Introduction 9

Concepts, Models, and Theories 10

Johns Hopkins Nursing Evidence-Based Practice Model 10

Theory 11

Knowles' Adult Learning Theory 11

Relevance to Nursing Practice 11

Congestive Heart Failure 11

Local Background and Context 12

Role of the Doctor of Nursing Practice Student 12

Summary 13

Section 3: Collection and Analysis of Evidence 14

Introduction 14

Practice-Focused Question 14

Sources of Evidence....15
Evidence Generated for the Doctoral Project....16
Participants....16
Procedures....17
Protections....18
Analysis and Synthesis....18
Summary....18
Section 4: Findings and Recommendations....20
Introduction....20
Findings and Implications....21
Recommendations....22
Strengths and Limitations of the Project....22
Summary....23
Section 5: Dissemination Plan....24
Analysis of Self....24
Scholarly Practitioner....25
Project Director/Project Manager....25
Summary....25
References....27
Appendix A: Teach-Back Module Pre- and Posttest....31
Appendix B: *t* Test: Paired Two Sample for Means....32

Section 1: Improving Readmissions of Heart Failure Patients

Introduction

Heart failure (HF) readmission accounts for an enormous health care expenditure in the United States (CDC, 2015). Reports from the Centers for Disease Control and Prevention (2015) identify that the health care expenditure nationally was close to $3 trillion in 2014. HF encompasses most of health care costs (Shah, 2018). HF admissions and readmissions enormously impact total health care expenditures (Shah, 2018). Many factors are related to a patient's return to the hospital within 30 days of discharge, but effective education with resultant patient comprehension of the discharge plan may decrease the likelihood of readmission by 30% (Peter et al., 2015). One of the most promising and successful evidence-based methods of patient education is the teach-back method, which is a proven method to confirm when the health care professional has explained the necessary information in a manner patient can understand (Tamura-Lis, 2013). Patient understanding is verified when patients can restate the information in their own words. The goal of teach-back is to provide effective teaching at the literacy level of the patient or the primary learner (Tamura-Lis, 2013). Using teach back will better prepare patients to understand and follow discharge instructions when they are discharged from the facility. The patients will be equipped to perform self-care at home, which will decrease their chance of readmission. The teach-back method has the potential to effect positive change by better preparing patients for discharge. In this section, I discuss the problem statement, purpose, and nature of the doctoral project, and the significance of the problem.

Problem Statement

The problem addressed in this quality improvement project was the rate of readmissions of HF patients in 30 days of discharge in the local facility in the Southeast region of the United States. According the Centers for Medicare and Medicaid Services (CMS, 2016), the benchmark set for reducing readmissions of HF patients is not being met. CMS (2016) has established core measures to help improve the rates of readmissions and patient health outcomes. There are approximately 5.7 million Americans affected by HF (Bergethon et al., 2016). According to Bergethon et al. (2016), one in four patients discharged with a diagnosis of HF are readmitted within 30 days. According to the CMS (2016), HF accounts for an estimated 25% of all readmissions for Medicare recipients. Direct costs from HF are estimated at more than $33 billion, and the burden of HF likely will increase as patient longevity improves (Barker et al., 2012).

Despite advances in the management of congestive heart failure (CHF) and multiple studies investigating the predictors of early CHF readmission, the rates remain unacceptably high. CHF remains the leading cause of hospital admission for patients over 65 years of age, and readmissions have implications for patients, hospitals, and third-party payers. According to the Quality Improvement department at the facility in the Southeast Region of the United States, from 2016-2018 there were 1,208 patients with the diagnosis of CHF readmitted to the facility after 30 days. More than 50% of readmitted patients had comorbidity diagnosis of chronic kidney disease stage 1-4. There was an average of 130 patients per quarter readmitted in the last year. The cost of the hospital stay per patient is $5,395.00.

One of the factors acknowledged as increasing a patient's risk for readmission was the lack of patient engagement and self-efficacy (Barker et al., 2012). Providing patients with comprehensive discharge instructions can contribute to keeping HF patients out of the hospital and is a valid approach to preventing future readmissions to the hospital (Bialek, 2016). Lack of communication and understanding of disease process as well as behavioral, organizational, technical, and patient factors have been associated with readmission (Hesselink et al., 2014).

The transition period from an inpatient hospital stay to the home setting is a vulnerable time, and a patient may be discharged without adequate education about medication management. The patient may feel ill-prepared to provide appropriate self-care during this transition (Cawthon et al., 2012). To address this need, many nurses and primary care providers have used the teach-back method to assess patient comprehension of discharge instructions. With this method, the patient is asked open-ended questions asking the patient to explain the information provided during the education session (Haney & Shepherd, 2014). This method of patient education has the potential to positively impact patient care and the cost of health care by increasing patient comprehension of instructions and self-care after discharge and decreasing 30-day readmissions.

Using teach-back has proven to be effective in reducing readmissions and improving patient's knowledge related to disease processes such as HF (Peter et al., 2015). According to Peter et.al. (2015), nurses and advanced practice nurses providing discharge education and hospital follow-up appointments, have an opportunity to impact

30-day readmission rates by using this method of patient education. Using the teach-back method to validate patients' understanding, especially when teaching patients about complex chronic conditions such as HF, will potentially improve patient outcomes by positively impacting compliance with and understanding of discharge instructions (Peter et al., 2015). The teach-back method is a strategy that can be used by the patient and caretaker to reduce readmission of patients with CHF and enhance the quality of care. The quality improvement project educated nurses how to teach patients about how to provide self-care after discharge and to appraise the patients' understanding. The DNP project evaluated the extent to which nurses have acquired the knowledge after participating in this quality improvement project. Nurses possessing the ability to effectively teach patients and evaluate their understanding of the discharge instructions will result in patients who are able to provide proper self-care upon discharge and decrease the incidence of readmission to the hospital.

Purpose

Patients report not having adequate knowledge of the discharge plan of care and therefore feel ill-prepared to provide self-care during transition from inpatient hospital stay to the home setting due to inadequate discharge instructions (Cawthon et al., 2012). The practice-focused question for the project addressed this gap in practice. The purpose of this DNP quality improvement project was to determine the effect of an education program to educate nurses on how to teach and assess learning using a teach-back method when discharging patients with CHF. Patients who are knowledgeable about their discharge instructions will be empowered to provide proper self-care upon discharge and

potentially decrease the incidence of readmission to the hospital. The practice-focused question for the project was the following: Will teaching nurses through a teach-back clinical program increase their understanding of teach-back when providing discharge instructions to their patients?

Nature of the Doctoral Project

HF is considered the most commonly seen diagnosis with readmissions; about 25% of HF patients will be readmitted within 30 days of discharge (Almkuist, 2018). I researched the CDC website and literature from the Walden library related to readmission of HF patients within 30 days of discharge. In the Walden library I used CINAHL and MEDLINE to search for peer reviewed evidence-based articles using keywords such as *CHF, discharge, teach back, 30-day readmission,* and *congestive heart failure*. On the CDC website, I searched using key terms *heart failure* and *readmissions*. In addition, I reviewed theories, models, and frameworks that guided the project. I collected data from the director of case manager, quality improvement department, clinical coordinator of education, the cardiac rehab nurse, and the financial officer at the facility to gain an understanding of the impact of the 30-day readmission rate of patients with CHF at this facility.

The project site offers a teach-back module for the nursing staff, but it not an educational requirement; therefore, it is underused. The clinical education coordinator (CEC) agreed that presenting this teach-back module as one of the annual competencies may increase the staff's knowledge about this approach to discharge planning.

The following approach was used to organize and analyze the evidence for the DNP project: The teach-back education program developed by the local facility education department was delivered via the intranet education software (Health Stream), which is the facility's secured website. The nursing staff can access the teach-back education program through Health Stream. The CEC assigned the module during the month of June when annual competencies are scheduled. The CEC posted dates for the competencies on the facility intranet home page; the competencies were available on the site for 60 days. The nursing staff signed into Health Stream with their secured username and password to complete the competencies within the 60 days. The nursing staff completed a pretest prior to reviewing the teach-back module and a posttest to evaluate their understanding of the-teach-back method. The difference between the nurses' scores on the pre- and posttest was statistically analyzed using a *t*-test method. Nurses who use the teach-back method to validate patients understanding of the discharge instructions will increase their patients' ability to provide proper self-care upon discharge and potentially decrease readmissions.

Significance

The stakeholders who were involved in this quality improvement project included manager, cardiac nurses, and institutional review board (IRB) and CEC. Studies have outlined the significance of CHF and determined that although high risk patients have been identified, risk admission rates are still increasing (White, Garbez, Carroll, Bronker & Howie-Esquivel, 2013). Many factors are related to a patient's return to the hospital within 30 days of discharge, but effective education with resultant patient comprehension of the discharge plan may decrease the likelihood of readmission by 30% (Peter et al.,

2015). Programs, such as the teach-back method that meld effective teaching methodology and the bedside intervention of discharge instructions offer great promise for improving outcomes and preventing readmissions (White et al., 2013). Although the project site offers a teach-back module for the nursing staff in this facility, it is underused. The DNP quality improvement project was designed to educate the nurses about the teach-back method and evaluate their understanding. The outcome of this project has the potential for positive social change for nurses, patients, and the organization. Nurses will be better prepared to evaluate the patients' understanding of their self-care instructions before discharge. Patients will be better prepared to follow through with the discharge instructions when they leave the facility. Patients who are better prepared when being discharged from the hospital will be better able to provide proper self-care. This has the potential to increase patient health outcomes, decrease 30 days readmissions, and decrease health care costs for the hospital. The facility will have less cost related readmissions when patients are better prepared for self-care at home.

Summary

The purpose of this DNP quality improvement project was to increase nurses' knowledge about how to educate and assess learning using a teach-back method when discharging patients with CHF. Congestive heart disease is the second leading reason for hospitalization in the United States. HF is considered the most commonly seen diagnosis with readmissions; about 25% of patients with HF will be readmitted within 30 days of discharge (Almkuist, 2018). In this facility, more than 50% of readmitted patients had

comorbidity diagnosis of chronic kidney disease stage 1-4. There was an average of 130 patients per quarter who were readmitted in the last year.

The rising cost of health care and changes in health care delivery have prompted a need to improve continuity from the inpatient setting to home. Many patients diagnosed with CHF who are readmitted within 30 days of discharge may have felt unprepared to care for themselves when returning home. Effective discharge teaching has the potential to decrease readmissions. The facility's quality improvement program educated the nurses about the teach-back method. The DNP quality improvement project evaluated the nurses' understanding of the teach-back method after participating in the quality improvement program. The nursing staff was assigned a computerized teach-back module through the organization's education program (Health Stream) to complete. They completed a pretest and posttest to evaluate their understanding of the teach-back method. Effective discharge teaching has the potential to decrease readmissions. In Section 2, I discuss the literature related to CHF patient education including teach-back methodology, readmissions, and concepts that support the DNP project's development and content evaluation.

Section 2: Background and Context

Introduction

CHF is the leading cause for readmission in hospitals and has a high mortality and morbidity rate. CHF is associated with high health care costs (Komanduri, Jadhao, Guduru, Cheriyath & Wert, 2017). Hospitalizations and readmissions are rising due to the presence of the disease, lack of intervention, and patient noncompliance. The estimated population in the United States with HF is over 5.8 million (Komanduri et al., 2017). Readmissions of patients with CHF are related to inadequate knowledge at discharge, inadequate follow-up with a health care provider, and treatment regimen nonadherence (Mahramus et al., 2014).

One component of patient education is to evaluate understanding of content delivered. One strategy to assess the patient's understanding following education is through a process known as teach-back. The teach-back method is used to assess learners' understanding by asking them to state in their own words what they heard or understood after education is provided. A key purpose of using teach-back is to assess the effectiveness of the educator's ability to convey concepts to the learner (Mahramus et al., 2014).

The purpose of this DNP project was to teach nurses how to educate and assess learning using a teach-back method when discharging CHF patients. Readmissions of patients with CHF are related to inadequate knowledge at discharge, inadequate follow-up with a health care provider, and treatment regimen nonadherence (Mahramus et al., 2014).

In the next section, I discuss theories, relevance to nursing practice, local background and context, and my role as DNP student.

Concepts, Models, and Theories

Johns Hopkins Nursing Evidence-Based Practice Model

The Johns Hopkins nursing evidence-based practice model is an approach utilizing problem solving in clinical decision making. It is accompanied with a guide to assist practicing nurses and uses a three-step process called PET: practice question, evidence, and translation (Dearholt & Dang, 2017). The practice step is where the problem is defined, and the evidence-based question is developed. The question step includes conducting and analyzing an evidence search. The translation step involves creating and implementing an action plan, evaluating outcomes, and disseminating findings (Dearholt, & Dang, 2017). This model guided the quality improvement project when implementing the action plan to involve stakeholders and evaluate the outcome of 30-day readmission of patients with CHF after teach-back module competencies were complete. The goal of the model is to ensure that the latest research findings and best practices are quickly and appropriately incorporated into patient care. The Johns Hopkins nursing evidence-based practice model consists of tools to aid in implementation of evidence-based practice into health care (Dearholt & Dang, 2017). The tools include analysis of the stakeholders, implementing and tracking the action plan, and the active dissemination of the evidence-based practice findings (Dearholt & Dang, 2017). These tools were utilized in the planning of this project.

Theory

Knowles' Adult Learning Theory

Knowles' theory of adult learning was utilized to guide the planning of the education program for the nurses. The theory suggests that adults are primarily willing to learn after they have knowledge about the imperativeness of why they should learn the information (Knowles, 1970). Instead of just telling learners what they should do, instructors need to take the time to explain background information. The teach-back module provides instructions and rationale of why this method is imperative when educating adult patients. When presented with the "why"of new information, most adults listen attentively in order to avoid a problem. The adult learning theory also states that most adult learners want to be actively engaged in the learning process and that teaching should occur in a comfortable and an informal setting (Miller & Stoeckel, 2016). The nurses were able to access the teach-back module from their home or wherever internet connection was available.

Relevance to Nursing Practice

Congestive Heart Failure

There are approximately 5.8 million Americans affected by CHF. CHF is an expensive, progressive, and debilitating disease and more than 678,000 people are diagnosed annually. In 2012, the CMS launched the Hospital Readmissions Reduction Program, which began to penalize hospitals with high rates of readmissions for acute myocardial infarction, HF, and pneumonia. Due to the readmission rates of patients with CHF, interventions to improve transitions of care have been a concentration of hospitals

nationwide. In about 3 weeks post discharge, approximately 20% of patients experience an adverse event, and about 75% of the events could have been avoided (Agency for Healthcare Research and Quality, 2012).

Local Background and Context

The project was implemented at a local hospital in Southwest region of the United States where the majority of patients are admitted with a new diagnosis of HF or have a history of HF. The facility is a member of an organization that is one of the largest hospitals in one of the largest health systems in the Southwest region. In addition, it is the third-largest private employer in this area, with more than 10,200 employees. Data was collected from the quality improvement team focusing on patients who are admitted with the diagnosis of CHF within 30 days of prior hospitalization.

Role of the Doctor of Nursing Practice Student

As a nurse practitioner, I have a duty to be an advocate for patients and promote social change. Identifying effective interventions to help deliver safe and quality health care and to improve patient outcomes was a personal interest. My role in the project was to implement a practice guideline to aid in reducing CHF readmissions 30- day post discharge. I chose this topic for my program to support the efforts of this acute care setting to reduce hospital readmissions and improve patient care. One of my inspirations for this doctoral project began when I was a staff nurse at the project site. I worked on the cardiac unit, and I would see the same patients very often. This became a concern, and I saw the need to identify the cause of the frequent readmissions. I wanted to see how one

readmission compared to the prevalence of the other readmissions. I wanted to know if there was a need to change the process of "from hospital to home."

Summary

The estimated population in the United States with HF is over 5.8 million (Komanduri et al., 2017). Readmissions of patients with CHF are related to inadequate knowledge at discharge, inadequate follow-up with a health care provider, and treatment regimen nonadherence (Mahramus et al., 2014). Using the teach-back method has the potential to decrease readmissions of patients with CHF within 30-days of discharge. The Johns Hopkins nursing evidence-based practice model and the Knowles' adult learning theory guided this quality improvement project. The project took place at a heart hospital in the Southwest region of the United States, and data was collected from the quality improvement department. My role as a DNP student included collaborating with the stakeholders to promote change, implementing a practice guideline that will reduce readmission of patients with CHF, and evaluating the nursing staff's knowledge regarding the teach-back method. In Section 3, I discuss the practice-focused question, sources of evidence, analysis, and synthesis.

Section 3: Collection and Analysis of Evidence

Introduction

The problem addressed in this quality improvement project is the rate of readmissions of patients with HF in 30 days of discharge in this local facility in the southeast region of the US. Congestive heart disease is the second leading reason for hospitalization in the United States. HF is considered to be the most commonly seen diagnosis with readmissions; about 25% of patients with HF will be readmitted within 30 days of discharge (Almkuist, 2018). One component of patient education is to evaluate understanding of content delivered (Mahranus et al., 2014). One strategy to assess the patient's understanding following education is through a process known as "Teach Back" which is utilized to measure learners' understanding by requesting them to repeat in their own words what they heard or understood after education is provided (Mahranus et al., 2014). The purpose of this DNP quality improvement project was to determine the effect of a quality improvement program to educate nurses how to teach and assess learning using a teach back method when discharging patients with CHF. The project was conducted at a hospital in Southwest region of the United States. The majority of patients are admitted with a diagnosis of CHF in this region. In section 3, I discuss practice-focused question, sources of evidence, analysis, and synthesis.

Practice-Focused Question

Readmissions of patients with CHF are related to inadequate patient knowledge at discharge, inadequate follow-up with a health care provider, and treatment regimen nonadherence (Mahramus et al., 2014). Patients report not having adequate knowledge of

the discharge plan of care and therefore feel ill-prepared to provide self-care during transition from inpatient hospital stay to the home setting due to inadequate discharge instructions. (Cawthon et al., 2012). The practice-focused question addressed this gap. The purpose of this DNP project was to evaluate the nurses' knowledge about the teach-back method after participating in a quality improvement program to educate nurses about using the teach-back method when discharging their patients. A teach-back module was provided through the facility Health Stream educational program. The practice-focused question for the project was the following: Will teaching nurses through a teach-back clinical program increase their understanding of teach-back when providing discharge instructions to their patients?

Sources of Evidence

I researched the CDC website and literature from the Walden library related to readmission of patients with HF within 30 days of discharge. In the Walden library I used CINAHL and MEDLINE to search for peer-reviewed evidence-based articles using keywords such as *CHF, discharge, teach-back, 30-day readmission,* and *congestive heart failure.* The above searches resulted in 239 articles. I selected twenty-five articles that specifically related to the phenomenon of concern to inform this project. These articles revealed that patients with CHF often lack the knowledge needed to be adequately prepared for discharge and that the teach-back method has the potential to reduce 30-day readmissions. The outcome of this project has the potential for positive social change for nurses, patients, and the organization. Nurses will be more knowledgeable about the teach-back method and how to evaluate their patients' understanding of the discharge

instructions provided. Patients will be better prepared to follow through with the discharge instructions when they leave the facility. Patients who are better prepared when being discharged from the hospital will be better able to provide proper self-care.

The nurses who work on this unit primarily care for patients who have been diagnosed with CHF, to whom they provide discharge instructions. The teach-back educational module provides the nursing staff with the knowledge to educate their patients about how to care for themselves once discharged from the facility. A pre- and posttest was added to the module to determine if there was an increase in the nurses' knowledge regarding the teach-back method after participating in the program. The nurse's personal information was not disclosed. The organization's IRB deemed this project exempt. Data collection began after approval from Walden University IRB (Walden approval number 07-19-19-0564655).

Evidence Generated for the Doctoral Project

Participants

The participants were registered nurses who worked on a progressive cardiac care unit in a heart hospital in the Southwest region of the United States. The nurses working on this unit are responsible for providing discharge instructions to the patients with CHF. There are approximately 60 nurses working on that unit. The nursing staff was assigned by nursing administration to participate in a quality improvement project that included a teach-back education module. The teach-back module was not mandatory, but it was the expectation of nursing administration that all nurses would participate. The nursing staff had 60 days to complete the module, from July 1-July 31, 2019.

Procedures

The teach-back module was developed by the education department of the heart hospital. The module has been available to the nursing staff but has not been fully used at the facility. The nursing administration expect that if the module is accessible, then more staff will use the teach-back module during discharge instructions. The administration developed a test to evaluate the nurses' knowledge before and after participating in the quality improvement program. They developed a 10 question pre- and posttest. The CEC provided a pre- and posttest to evaluate the nurses understanding of the teach-back module. The following procedure was implemented;

- The teach back module was provided through the facility Health Stream educational program.
- The CEC assigned the teach-back module during the month of July when annual competencies are scheduled.
- The CEC posted the dates for the competencies on the facility intranet home page; the competencies were available on the site for the month of July.
- The nursing staff signed into Health Stream with their secured username and password to complete the competencies within the 60 days.
- The nursing staff completed a pretest prior to reviewing the teach-back module and a posttest to evaluate their understanding of the teach-back method.

Protections

Data analysis took place after approval of the project by Walden University IRB. The names of participants were collected by the CEC but were not shared with me. The CEC sent me the de-identified results of the pre- and posttests. The test results were stored on my home computer that is password protected. I did not share the password with anyone. The results of the tests were reported as aggregate data. The IRB's role was to manage the research process and ensure that the benefits outweighed potential risks; the IRB's mission is to safeguard all research and ensure that research meets the institutions ethical standards (Walden University, 2018). The IRB at Walden was the only review process. The participating organization's IRB determined that the DNP project did not need their IRB approval.

Analysis and Synthesis

At the completion of the quality improvement project, the CEC e-mailed me the de-identified results of the pre- and posttests. I organized the results on an Excel spreadsheet. I analyzed the tests results to determine if there were differences between the nurses' scores on the pre- and posttest using a *t*-test statistical analysis program on Excel. The test results allowed me to determine if the nurses' knowledge about the teach-back method increased after participating in the teach-back education. The results of the analysis were shared with the CEC.

Summary

The problem addressed in this quality improvement project was the rate of readmissions of patients with HF within 30 days of discharge in this local facility in the

Southeast region of the United States. Congestive heart disease is the second leading reason for hospitalization in the United States. One strategy to assess the patient's understanding following education is through a process known as teach-back, which is used to assess learners' understanding by requesting them to repeat in their own words what they heard or understood after education is provided (Mahranus et al., 2014). The teach-back module was provided through the facility Health Stream educational program. The quality improvement project site developed an educational module for nursing staff to use when discharging patients with CHF. The CEC assigned the teach-back module during the month of July when annual competencies are scheduled. The module included a pre- and posttest composed of 10 questions. The difference between the nurses scores on the pre- and posttest was statistically analyzed using a *t*-test method. In Section 4 I focus on the findings, implications, recommendations, and strengths and limitations of the DNP project.

Section 4: Findings and Recommendations

Introduction

The quality improvement department at the facility in the Southeast region of the United States identified that 1,208 patients with the diagnosis of CHF were readmitted within 30 days of discharge from 2016-2018. Patients reported that they received inadequate knowledge of the discharge instructions and were therefore not prepared to provide self-care during transition from inpatient hospital stay to the home setting (Cawthon et al., 2012). Effective education of the patient prior to discharge and evaluation of their understanding of the discharge instructions may decrease the readmission rate in the hospital (Peter at al., 2015). The teach-back method guides nurses when evaluating the patient's understanding of their discharge instructions. The purpose of this DNP quality improvement project was to determine the effect of an education program for nurses on how to teach and assess learning using the teach-back method when discharging patients with CHF. The practice focused question for the project addressed this gap. The practice focused question for the project was the following: Will teaching nurses through a teach-back clinical program increase their understanding of teach-back when providing discharge instructions to their patients?

The teach-back educational module was produced by the project site education department. The participants of the quality improvement initiative viewed the educational module presented through the facilities intranet system. The module was presented using PowerPoint, and the nurses completed pre- and posttest questionnaires to determine

whether there was an increase in their knowledge after participating in the quality improvement initiative. The data obtained from the pre- and posttest results were transferred to a Microsoft spreadsheet and analyzed using the *t*-test statistical program.

Findings and Implications

The teach-back module was available through the facilities education website for nurses to complete using a protected username and password. The sample size included 32 participants who are registered nurses. The data belonging to five of the participants were eliminated from analysis due to incomplete data. The CEC had limited access to manipulate the pretest outline because the current education module did not include a pretest and revisions could not be made after the module was produced. The participants were not informed that the pretest was not included in the teach-back module and needed to be accessed prior to initiating the module. Therefore, this may have contributed to some participants having a posttest but no pretest score. The data from 27 nurses were included in the analysis. The pre- and posttest scores were placed on an Excel spreadsheet (Appendix A). The pretest mean score was 77, and the posttest mean was 86. The paired *t* test was conducted to determine if there was an increase in the nurses' knowledge by comparing the pre- and posttest results. The *p* value was set at $< .05$. There was statically significant difference in the scores between the pre- and posttest with a *p* value of 0.0002 (Appendix B). The results suggest that the nurses' knowledge about teach-back was increased after participating in the teach-back module.

Recommendations

The goal of this project was to determine if the quality improvement initiative increased the nursing staff's knowledge about the teach-back method. The proposed recommendation is that use of a teach-back module is needed to increase health care facility staff knowledge and awareness about the teach-back method and provide use of evidence-based practice in a clinical setting. The findings are consistent with the Knowles's theory that when individuals are informed about the purpose of the education, in this case, the use of the teach-back method, that their knowledge will be increased. I recommend that the project site include the teach-back module in their annual competencies for nursing staff. Therefore, the hope is that health care teams will consider using the teach-back method to improve patient outcomes and improve the rate of hospital readmissions.

Strengths and Limitations of the Project

The strength of the quality improvement project was the support of the nursing management and the CEC. Another strength that was noted was the ability to complete a needs assessment with the assistance of the case management staff and the quality improvement team. One unanticipated limitation of the project was that the CEC could not incorporate the pretest with the module and posttest. The pretest was a separate section from the rest of the information; some nurses did not realize this and only took the section that consisted of the teach back information and posttest. Lack of communication between the participants and the CEC played a significant role in the outcome of the project. The CEC would communicate with the staff by sending

reminders to complete the teach back module but still there were nurses who did not complete the module.

Summary

The CEC assigned the teach back education module to 60 nurses but only 32 completed both the pre- and posttest. The tests were distributed to all nurses who worked on the Progressive Care Unit. The results revealed that there was an increase in the nurses' knowledge after completing the module. The barrier identified was that the teach-back module was voluntary. Therefore, some nurses chose not to participate in the project. Recommendations include making the module mandatory and adding the teach-back module to the nurses' list of annual competencies. A strength of the project was that the stakeholders (CEC, case manager, quality improvement, and the director) were supportive and involved in making the project a success. A limitation of the project was that the project was limited to the Progressive Care Unit nurses and one facility. Further research is needed to identify other strategies to improve the readmission rate of patients with CHF.

Section 5: Dissemination Plan

The plan for dissemination related to the DNP project include a 30-minute oral presentation for the stakeholders at the project site. The stakeholders who would attend the presentation will include health care providers, managers, directors, and nursing staff. The stakeholders will have an opportunity to engage in the presentation and ask questions. The purpose of the presentation is to increase knowledge and patient outcome benefits related to the teach-back method and improvement in hospital readmission rates. A poster board in the break room and conference room will be useful to disseminate information and highlight a summary of the results of the project (Corwin, Prunuske, & Seidel, 2018). I will submit an abstract of the project to the American Association of Critical-Care Nurses (AACN) regional conference and a complete manuscript completed to the *Journal of the American Heart Association*.

Analysis of Self

The dissemination of quality improvement initiatives and projects is the driving force for informing and distributing knowledge so that health care providers, researchers, academic professionals, and policy makers can learn from one another. With increased knowledge, as scholars and practitioners, health care workers will have the necessary tools to improve patient outcomes and social change. I will be practicing as a scholarly practitioner and nurse leader, which will enable me to increase my knowledge and improve my leadership skills, empowering me to collaborate with other health professionals who are striving to improve health outcomes through use of evidence-based practice.

Scholarly Practitioner

During the DNP program, I gained knowledge in many areas. I have gained the understanding that the role of scholar and practitioner often overlap. I am more knowledgeable in the areas of critical thinking, implementation, evaluation, and dissemination for a QI project. The quality improvement project has prepared me to apply the DNP essentials when performing as scholarly practitioner to improve patient health outcomes.

Project Director/Project Manager

My managerial and leadership skills have been sharpened while developing, implementing, and evaluating my DNP project. Upon completion of the DNP program, I have a foundation that will equip me with the necessary leadership skills to disseminate quality improvement projects. The skills involved in program management have been applied to this DNP project to facilitate creating and developing an initiative to improve practice within a clinical setting (see AACN, 2006). I have acquired the skills through the DNP program to work within organizational systems to lead initiatives to improve health outcomes and patient outcomes (see AACN, 2006).

Summary

In conclusion, the DNP program has provided me with valuable tools and skills vital to my success as a DNP prepared scholarly practitioner. The focus of the DNP project was to determine the effect of a quality improvement program to educate nurses how to teach and assess learning using a teach-back method when discharging patients with CHF. A teach-back module was produced by the education department at the project

site and was utilized for this quality improvement initiative to evaluate the nursing staff knowledge related to teach-back. The participants observed a PowerPoint presentation about how to use the teach-back method. A 10-question pre- and posttest was administered electronically to evaluate their knowledge and compare the before and after test results. The data was collected by the CEC and e-mailed to me in a Microsoft Excel spreadsheet. I analyzed the data using a *t* test to determine if there was statistical difference between the mean pre- and posttest scores. There were 32 participants in the DNP project study. The results showed that there was an increase in the difference between the mean pretest and posttest scores that was statistically significant.

The results of the DNP project support that the teach-back module increases the nurses' knowledge after completion of the module. The dissemination plan will include a 30-minute poster presentation to stakeholders as well as journal publication. This DNP project will have a social impact on the readmission rates of patients with CHF and improve patient outcomes. It is recommended that the quality improvement initiative project continue to provide research and knowledge to the health care arena.

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Appendix A: Teach-Back Module Pre- and Posttest

Pretest	Posttest
80	80
70	80
80	90
80	100
80	90
80	80
70	80
80	90
90	80
70	90
90	90
70	80
100	80
80	80
70	90
80	90
80	90
80	80
70	90
80	90
50	80
90	80
80	80
90	100
40	80
70	100
80	100
80	100
60	80
80	80
80	80

Appendix B: *t* Test: Paired Two Sample for Means

	Pretest	*Posttest*
Mean	76.77419	86.45161
Variance	135.914	56.98925
Observations	31	31
Pearson correlation	0.168604	
Hypothesized mean difference	0	
df	30	
t Stat	-4.21741	
$P(T \leq t)$ one-tail	0.000105	
t Critical one-tail	1.697261	
$P(T \leq t)$ two-tail	0.000209	
t Critical two-tail	2.042272	