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Reducing Heart Failure Readmissions through Staff Education

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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,
and that any and all revisions required by
the review committee have been made.

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Walden University
2020

Abstract

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MS, Walden University, 2011

BS, Walden University, 2009

Project Submitted in Partial Fulfillment

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Abstract

Heart failure is a chronic health condition that can have devastating effects on the physical and social well-being of patients. One critical component to heart failure treatment is understanding of the disease process and daily self-management for patients. The gap in practice at an acute care facility in the northwest United States was the lack of comprehensive discharge patient teaching to patients diagnosed with heart failure. The project explored if a heart failure education session for nurses would increase knowledge and competency on heart failure education. Knowle's theory of adult learning was used to frame the project components. Thirty-one nursing staff and supervisors from one medical-surgical unit participated in the program with 25 participants (80.6% response rate) completing the post program evaluation survey rated on a Likert scale rating from 5 (excellent or strongly agree) to 1 (needs improvement or strongly disagree). The mean item scores ranged from 92% to 100%. Results noted 100% agreement (n = 25) that knowledge and competence on use of evidence-based practice strategies for patients with heart failure was increased. Areas of gain included ability to teach patients about pathophysiology, identify important patient education resources for patient teaching on self-management and tools for at home monitoring; and explore the challenges and successes in managing care among patient with heart failure. The potential and positive social change implications of this doctoral project are increased quality of life for heart failure patients and their families and lower overall cost to the health care system.

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Section 1: Nature of the Project

Introduction

Heart failure is a chronic health condition involving the pumping chamber of the heart, associated with high morbidity and mortality causing widespread physical, financial, and behavioral problems (Evilla-Cazes et al., 2018). The nature of this project was a staff education program regarding daily heart failure management techniques for patients being discharged from the hospital. Comprehensive discharge instructions are necessary for patients leaving the hospital for optimal heart failure management and avoidance of hospital readmissions. The potential and positive social change implications of this doctoral project were increased quality of life for heart failure patients and their families and lower overall cost to the health care system.

Problem Statement

The local nursing practice problem was ongoing hospital readmissions in heart failure patients. Readmissions are often due to lack of patient education and follow up after discharge (Singotani et al., 2019). Phelps (2018) summarized a heart failure pilot program focused on medication reconciliation, targeted education, follow up care, and self-management. The program resulted in lower overall heart failure readmissions among patients and found program success could be increased by providing staff nurses with additional heart failure education. Brink (2018) also discussed that many heart failure readmissions are preventable with individualized, comprehensive discharge instructions and ongoing patient education.

The need to address this problem was identified from hospital regional quality data drilled down to pinpoint specific diagnoses with readmissions within 31 days and the high cost associated with readmissions. This doctoral project held significance for the field of nursing because it empowered nurses with information to help patients increase the quality of life while improving the overall performance of the organization.

Purpose Statement

Three critical time periods for heart failure patients are predischarge, transitional, and outpatient periods (Evilla-Cazes et al., 2018). The gap in practice addressed by this project was heart failure management education for patients being discharged from the hospital. The purpose of this project was to create an education program for nurses to increase knowledge of evidence-based strategies that support patient heart failure management after hospital discharge. The practice-focused question was as follows: Will nurses participating in a staff education program for patient education on heart failure management report perceived increase in knowledge and competence?

This doctoral project had the potential to address the gap in practice by providing tools for nurses to implement at the time of discharge. For example, Frazer (2019) described medication management as a pivotal component to heart failure management and avoidance of hospital admission. Nature of the Doctoral Project

Sources of evidence that I collected to meet the purpose of this doctoral project were a comprehensive review of peer-reviewed literature outlining best practice methods for heart failure management. Information was analyzed and organized in alignment with regional quality metrics to determine relevance for staff education. An effective

literature review will use evidence-based process to summarize findings and identify a theoretical contribution to practice (Ward-Smith, 2016). Evidence was obtained through the Walden research library over the past 5 years using multiple academic database searches. Inclusion criteria included peer-reviewed evidence as well as professionally accepted guidelines. Key words included but not be limited to *heart failure, chronic heart failure, readmission with heart failure, rehospitalization with heart failure, congestive heart failure,* and *readmittance*. This project followed the guidelines set forth in the Walden University DNP Manual for Staff Education.

Significance

Stakeholders involved with this project were patients, families, direct care nurses, administrators, and executives at the health care organization. Stakeholders are potentially impacted by addressing the practice problem because heart failure education has the capacity to make a difference on quality metrics and overall financial performance of the facility.In addition, patients and families would benefit from improved quality of life. Potential contributions of the doctoral project to nursing practice were increased knowledge of chronic disease management and connecting nurses to quality improvement efforts that stretch outside of the inpatient setting. Professional nurses can help achieve high outcomes for patients with an understanding of the correlation between everyday practice and clinical outcomes (Hickey & Giardino, 2019).

Potential transferability of this doctoral project to similar practice areas could be leveraged to create education for other chronic diseases with high incidence of readmission in the future. The implications for positive social change are improving

quality of life for heart failure patients and lowering costs to health care organizations related to heart failure, which can create time to work on additional quality improvement initiatives. Many times, patients experience depression and social issues related to the disease process. By improving the clinical outcome in patients with heart failure, quality of life can also be improved Grigorivich et al., 2017).

Summary

Heart failure is a chronic, progressive disease that can have devastating effects on patients and health care systems. Section 1 introduced the practice problem hospital readmissions for heart failure patients at a hospital in the Pacific northwest. The project question was as follows: Will nurses participating in a staff education program for patient education on heart failure management report perceived increase in knowledge and competence?

The stakeholders for this project were identified. Sources of evidence and keywords were explored. Section 2 introduces the theory supporting this project, the evidence supporting this project, the local background and context for this project, and my role in planning, developing, and implementing this project.

Section 2: Background and Context

Introduction

The practice problem was ongoing hospital readmissions in heart failure patients. This is often due to lack of patient education and follow up after discharge (Phelps, 2018). The practice-focused question was *Will nurses participating in a staff education program for patient education on heart failure management report perceived increase in knowledge and competence?*

The purpose of this project was to create an education program for nurses to increase knowledge of evidence-based strategies supporting patients' heart failure management following hospital discharge. Knowle's (year) theory of adult learning was discussed as a theory to guide this doctoral project. Relevance to nursing practice was analyzed through evidence currently used to address patient and staff education in heart failure management. The professional context of this project was examined by looking at my present-day role in nursing practice and use of a project team to share ideas and expertise for curriculum development.

Concepts, Models, and Theories

Knowle's (year) theory of adult learning was used to frame this project. The learners are adults with different education styles than children and other types of learners. According to Knowles, adults have a need to (a) know, (b) be self-directed, (c) attach life experience to learning, (d) have a problem-centered orientation, and (e) use intrinsic and extrinsic factors for motivation to learn (Twaddell, 2019). The rationale for using this model to inform the doctoral project was that nurses must find heart failure

education useful to their current practice and help patients solve health problems. This theory also supported the importance of nurses to feel connected to the organization by assisting with a current regional clinical practice problem. Table 1 aligns Knowles five assumptions of adult learners with the project.

Table 1

Alignment of Adult Learning Theory with Project

Assumptions	Project
Adults have a need to know about learning	Participants will learn how the staff education directly impacts their role
Adults have a need to be self-directed	Participants can tailor heart failure education based on their assessment of the patient's knowledge
Attach life experience to learning	The learners will use their own experience with heart failure patients to provide discharge planning.
Have a problem-centered orientation	Learners will understand the problem associated with heart failure readmissions and how their actions will help solve the problem.

One term in the doctoral project that may have multiple meanings is readmission. For this doctoral project, readmissions were defined as readmit to acute facility within 31 days after discharge. Medicare readmission management, established by the Affordable Care Act (ACA) imposes fines and penalties to inpatient facilities with readmissions within 31 days or less related to specific chronic health conditions (Demiralp & Koenig, 2018). The 31-day period is used to determine readmission rates for hospital metrics and Medicare reimbursement.

Relevance to Nursing Practice

Causes of 31-day Readmissions

The causes of 31-day readmissions has been linked to inadequate patient education and lack of follow up for heart failure patients. It is important for patients to have ongoing provider follow up after being admitted to the hospital for a physical examination and medication management. Singotani et al. (2019) illustrated a study that explored the root cause of 31-day readmission rates. These researchers concluded that the main factors contributing to hospital admissions included suboptimal coordination of care and inadequate patient self-management. Coordination of care following a hospitalization is especially critical with heart failure patients to develop an effective treatment plan posthospitalization.The research demonstrated that often patients experiencing acute heart failure exacerbation were prescribed medications and treatments during a hospitalization, but then required medication adjustments in the weeks and months after going home (Singotani et al., 2019). .

Interventions to Prevent 31-day Readmissions

Clinical practice guidelines. Clinical practice **g**uidelines have been developed to aid in the treatment of heart failure. The most recent guideline published by the American College of Cardiology Foundation (2017) was the focused update on the management of heart failure developed by task force members from the American College of Cardiology, American Heart Association, and American Academy of Family Physicians. A more recent publication, the 2019 American College of Cardiology consensus decision pathway on risk assessment, management, and clinical trajectory of

patients hospitalized with heart failure (American College of Cardiology Foundation, 2019) had specific guidelines for (a) assessment of risk at discharge, (b) discharge day including recommendations for a focused discharge handoff, and (c) early post discharge follow up. This decision pathway document will be used to develop the staff education program.

Patient education. The central purpose of heart failure education is ensuring patients understand the significance of treatment and symptoms of early decompensation (Yancy et al., 2017; Oscalices, et al., 2019). With a new diagnosis of heart failure, it is especially important for patients to understand treatment of the disease to decrease progression before becoming unmanageable. Inpatient hospitalizations are an effective time to begin teaching because new treatments regimens are being introduced. Early patient education helps patients understand the importance of therapeutic heart failure treatment from the early stages of a diagnosis. Mathew and Thukha (2018) summarized a pilot study that shows printed readings given at the time of discharge are not proven as effective as patient-tailored education for heart failure. The patients were given three sessions of heart failure education during the hospitalization then a follow up after discharge to review and assess progress. The study found a significantly higher rate of understanding in patients that had been given educational sessions and follow up compared to printed materials. Add a conclusion for the paragraph.

Staff education. According to Lassnig et al. (2019), patients' misunderstanding and decreased adherence to medications, along with poor early symptom management and insufficient communication between health care providers, have affected new heart

failure disease programs and treatment regimens. History of the broader topic in nursing practice includes patients with uncontrolled heart failure related to many diverse factors. Nursing practice has focused on helping patients understand the cause of heart failure and assisting to manage symptoms at home and inpatient setting. The current state of nursing practice in this area has been focused on prevention of heart failure and decreasing advancement of the disease once identified. Devore et al. (2017) described a study called the CHAMP-HF registry which stands for Change Management of Patients with Heart Failure. The study aims to identify patients that have tried pharmacologic and non-pharmacologic approaches to treat heart failure. The study concluded the most effective approach with most optimal clinical outcomes involved a mixed approach

Many current heart failure initiatives involve medication, symptom management, and diet. As the heart function decreases, it becomes important to take scheduled medications to help strengthen pumping volume and lower excess fluid retention Recommendations to improve practice to reduce hospital readmissions focus on diet and symptom management. Symptom management is another key area of heart failure that has been a focus of current scholarship. .Stockdill, Patrician, and Bakitas (2019) described heart failure symptoms fluctuating and progressing quickly based on patients' individual disease trajectory. In relation to hospitalizations, if patients identify symptoms early on, a hospitalization can possibly be avoided. Patients are taught to look for symptoms before a heart failure exacerbation is about to occur. Strategies and standard practices that have been used previously to address this gap-in-practice have been based on patient education and communication with providers. Vaillant-Roussel et al. (2016)

studied a controlled clinical trial that followed 241 patients with heart failure among 59 general practitioners with 19 months of follow up. Positive outcomes were found in the short term first weeks and months of the program, but results were similar in patients who received routine care towards the end of the program. The present doctoral project advances nursing practice and fills at least one gap-in-practice revealed in the literature by monitoring and communicating with patients after the 31-day mark.

The 2019 American Heart Association Foundation consensus document recommends use of handoff tools that are culturally appropriate and delivered verbally and in written form. In addition, a focused discharge handoff tool and a communication tool to continuing care providers are available for adoption.

A study by Sepulveda-Pacsi (2019) discussed a prospective, quantitative, cross-sectional study of registered nurses' perceived confidence with nursing role in the discharge plan of patients with heart failure which concluded nurses feel more confident discharging patients with heart failure if provided with specific targeted guidelines. Quality of life is an area of heart failure treatment that plays importance in the overall care plan as discussed in a study by Van Kessel et al. (2017) that uses a quality of life scale to help drive heart failure treatment. Jovanić, and colleagues (2018) indicated one leading cause of non-adherence to heart failure treatment in patients is related to poor health literacy, which inhibits patients from making sound judgment regarding health care decisions.

Local Background and Context

The local evidence on the relevance of the problem was based on data analytics from the regional health care system. Hospital performance was reviewed from a quality and cost perspective every quarter for each facility. An estimated two thirds of patients with a new diagnosis of heart failure are readmitted to inpatient facilities within one year (Lesyuk, Kriza, & Kolominsky-Rabas, 2018). This facility was a 266-bed hospital located in the northwest U.S. In 2019, readmission rates related to heart failure were 52% higher than all other diagnoses. Hospital readmissions have had a heavy cost on the total expenditure throughout the region, with heart failure being the number one diagnosis associated with readmissions. The institutional context as applicable to the problem being addressed in this doctoral project is related to quality metrics connected to 31-day readmission rates. According to Benchetrit et al., (2019), hospitals are incentivized for patient centered quality of care based on multiple performance factors. Every facility receives increased reimbursement based on quality score. The scores also allow hospitals to take on different types of business (Medicare, Medicaid, commercial insurance). Operational processes relevant to understanding the doctoral project include preventing avoidable readmissions. State or federal contexts applicable to the problem in this doctoral project involve hospital payment for services and readmissions with the same diagnosis. A Medicare provider analysis performed showed patients with an ineffective discharge plan related to heart failure resulted in payments to facilities being reduced or withheld completely (Panagiotou et al., 2019). If a patient is discharged from

a facility, then readmitted with the same diagnoses, there's a chance the hospital will receive lower or zero reimbursement for the subsequent admission.

Role of the DNP Student

My professional context and relationship to the doctoral project was performing case management and utilization review for patients in the hospital. Part of my role was working with providers and other ancillary services to develop a thorough and robust discharge plan for patients leaving the hospital. My role as a case manager included speaking with patients and families with new diagnosis of heart failure.

Potential biases I identified were concerning patients choosing to be non-compliant in treatment regimens for heart failure. Steps taken to address these potential biases included thoroughly detailed conversations with patients and documenting their adversity to heart failure treatment. Jovanić et al. (2018) indicates one leading cause of non-adherence to heart failure treatment in patients is because of poor health literacy, which inhibits patients from making sound judgment regarding health care decisions. Another step to address any potential bias was to assess health literacy of patients at discharge.

Role of the Project Team

A project team was identified to review the information found for the doctoral project and formulate a plan to incorporate into discharge planning. Formulating project teams for nursing practice surrounding quality improvement efforts have been found to constructively improve care delivery (Mackinson et al., 2018). The project team was comprised of a panel of experts including representatives from nursing administration,

clinical education, and quality improvement. Nursing administration is important to the planning and outcome of the project because the time and resources needed to implement changes will come through administration. Clinical educators were responsible for embedding content from the project in daily practice. Beiler, Opper, and Weiss (2019) described an innovative quality improvement project team surrounding hospital discharges using an approach based on quality initiatives analyzing problems, challenges, and opportunities. The success of the project was attributed to a combination of departments including nursing administration and quality. Quality improvement was included on the project team because the purpose of the DNP project is directly connected to quality improvement metrics for the facility and the region.

The process by which the doctoral team members was presented with background information and evidence had three parts: preview of information, discussion, and final recommendations. Key components of a successful project team were effective preplanning, members with relevant skills, and information management (Natvig & Stark, 2016). Previewing of information occurred before the education program, outlining the findings from the doctoral project. Participants had a chance to review the information and provide input before formal discussion. Revisions to the final project were competed based on panel recommendations.

Black, Frazier, and Hadyo (2017) outlined a quality improvement project aimed at increasing blood pressure control for heart failure patients through lifestyle modifications. A project team was provided information two weeks before the discussion and one additional week for final thoughts - which yielded positive results. Final

recommendations were discussed with a plan to move forward for implementation of education. Each participant received a copy of the information two weeks before the presentation for time to familiarize themselves with the material to share their expertise and contextual insight. The timeline for team members to review and provide feedback on doctoral project results was expected to be at the time of the presentation, then up to one week after to provide ample time to prepare staff education.

Summary

Section two described the concepts, models, and theories used to support the need for an education program to increase nurses' knowledge of heart failure related to hospital discharge. Relevance to nursing practice was discussed, along with standard practice and strategies currently used to address the problem of heart failure readmissions. Evidence to support this project originates from data obtained through a regional quality dashboard. Section three provided an in-depth report of the implementation process to educate nurses in the discharge of heart failure patients.

Section 3: Collection and Analysis of Evidence

Introduction

Problem and Purpose

The problem was ongoing hospital readmissions in heart failure patients. The purpose of this project was to create an education program for nurses to increase knowledge of evidence-based strategies that support patient heart failure management after hospital discharge. Local evidence on the relevance of the problem was based on data analytics from the regional health care system. Hospital performance was reviewed from a quality and cost perspective every quarter for all facilities. An estimated two thirds of patients with a new diagnosis of heart failure were readmitted to inpatient facilities within one year (Lesyuk et al., 2018).

This facility was a 266-bed hospital located in the northwest United States. In 2019, readmission rates related to heart failure were 52% higher than all other diagnoses. Hospital readmissions have a heavy cost on the total expenditure throughout the region, with heart failure being the number one diagnosis associated with readmissions. According to Benchetrit et al. (2019), hospitals are incentivized for patient centered quality of care based on multiple performance factors. Every facility receives financial reimbursement based on quality scores.

Section 3 explores the implementation of a staff education program designed for patient education of heart failure to reduce hospital readmissions. Sources of evidence came from a thorough literature review of best practice methods which produced a wide

range of information relevant to the practice problem. Operational data was obtained from regional metrics used to monitor cost and quality throughout the facilities. Participants, procedures, and planning for the doctoral project are outlined in a step-by-step process, including methods for implementation and evaluation. Analysis and synthesis of information will be discussed through use of participant feedback and additional data analysis.

Practice-Focused Question

The practice-focused question was as follows: Will nurses participating in a staff education program for patient education on heart failure management report perceived increase in knowledge and competence? The purpose of this project was to create an education program for nurses to increase knowledge of evidence-based strategies that support patient heart failure management after hospital discharge. This approach aligns to the practice-focused question by creating education for heart failure readmissions.

Sources of Evidence

The sources of evidence for this was a literature review using CINAHL and Medline simultaneous search, Cochrane Library, ProQuest Nursing, and Allied Health. Search terms included *heart failure, chronic heart failure, readmission with heart failure, rehospitalization with heart failure, congestive heart failure,* and *readmittance.* The comprehensive search produced 109 articles with 37 pertinent to the doctoral project; date ranges of the articles were between 2016 and 2019. The American Heart Association current guidelines (2017) and consensus document (2019) were also be used to support this project. The relationship of this evidence is directly related to the purpose of this

project by collecting multiple sources of data surrounding heart failure treatment and hospital readmissions. Collection and analysis of this evidence provided the best practice guidelines used by health professionals to address heart failure readmissions. Collaboration with the Walden librarian was used to ensure the search was exhaustive and comprehensive.

Archival and Operational Data

The nature of the operational data comes from regional quality data collected on a quarterly basis throughout the region. Motz (2016) summarized a quality improvement project targeting the reduction of 31-day readmissions using a hybrid approach with statistics obtained from organizational reports along with extracted data from the electronic medical record (EMR). Data was obtained through multiple sources including quantitative date from the computer charting system and auto-populated records imported from the EMR. The information was compiled to demonstrate how the region is performing for quality metrics required for operations. The relevance of this data was directly related to the practice problem in this project because heart failure readmissions are a main quality metric measured on a quarterly basis. Gaining access to this de-identified data came from information technology (IT) with permission from the director of nursing at the facility.

Evidence Generated for the Doctoral Project

The purpose of this project was to create a staff education program for staff nurses to aid the discharge planning of patients with heart failure. Add at least two more

sentences to fully introduce this section. One sentence is not sufficient for a complete paragraph.

Participants

Participants included clinical nurse educators, staff nurses, and charge nurses on a telemetry floor. Clinical nurse educators were responsible for incorporating evidence-based findings into teaching and practice for the facility. Staff were responsible for the care of heart failure patients including discharge planning and teaching. Charge nurses oversee the staff nurses during the day- to-day operations and must be knowledgeable of heart failure discharge planning.

Planning

Plans for the project included the following:

1. Collected data surrounding 31-day readmission rates for the region over the last two years.
2. Discussed findings and confirm accuracy and validity of data with chief nursing officer (CNO)
3. Acquired guarantee of support from the CNO and other nursing leadership within the facility
4. Established learning goals and objectives for the staff learning session
5. Created the staff educational program – involving a Power Point presentation and educational laminated pamphlet used as a working resource during discharge planning with patients.

6. Appraised the program with the nursing leadership team and make modifications as recommended by the expert panel.

Implementation

Due to Covid-19, the presentation was held via Zoom during the weekly staff meeting for the Medical/Surgical/Telemetry unit.

Evaluation

Learners were invited to provide an evaluation of the program using the standard evaluation tool of the organization (Appendix B).

Protections

The facility representative signed the site approval documentation for staff education doctoral project. Participants signed the consent form for anonymous questionnaire*s*. Prior to the education program, Walden Institutional Review Board (IRB) approval (# 09-25-20-0153931) was obtained. The project followed the guidelines set forth in the Walden University DNP Manual for Staff Education.

Analysis and Synthesis

Systems used for recording, tracking, organizing, and analyzing evidence included an evaluation form used by the facility to monitor satisfaction and effectiveness of education programs. According to Brockopp (2018), procedures based on research and best practice findings can substantiate practice changes based on new findings, along with thorough evaluation of program effectiveness. Procedures used to ensure integrity of the evidence include anonymous evaluations and questions designed to assess learning of the curriculum in the class. Participants evaluated the program using a numeric scale

of 1-5. A synopsis of the results was presented to the clinical educators to review for possible changes to the curriculum.

Summary

Section three presented a thorough analysis of the DNP project including creation of the staff education program and analysis and synthesis of the information collected. A literature review was completed using multiple databases and search terms to pinpoint specific articles of interest. Regional data showed a need for education surrounding the practice problem; 31-day heart failure readmissions. The process of project team decisions and a step-by-step review of the learning education session was described, including participants, procedures, tools for design, execution, and appraisal of the DNP project. Section 4 discussed the analysis of the findings after completion of the staff education program.

Section 4: Findings and Recommendations

Introduction

The local practice problem was ongoing hospital readmissions in heart failure patients. The gap in practice was heart failure education for patients being discharged from the inpatient setting. The practice focused question was as follows: Will nurses participating in a staff education program for heart failure management report a perceived increase in knowledge and competence? The purpose of this project was to create an education program for nurses to increase knowledge of evidence-based strategies supporting patients' heart failure management following hospital discharge. Sources of evidence collected to meet the purpose of this doctoral project came from a comprehensive review of peer-reviewed literature outlining best practice methods for heart failure management. Evidence was obtained through the Walden library over the last f5 years using multiple academic database searches. Inclusion criteria included peer-reviewed evidence, as well as professionally accepted guidelines.

Findings and Implications

Findings that resulted from analysis and synthesis of the evidence that was reviewed supported the importance of heart failure management patient education, yet nurses reported a lack of this education to patients at the time of discharge. Thirty-five percent of patients with a diagnosis of heart failure reported little or no teaching at the time of discharge (Kranz, Spencer, & Polancich, 2020). Providing nurses with basic heart failure management techniques that can be presented in patients in a timely manner can assist patients achieve optimal care outcomes. An education session was held to

coach nurses on heart failure discharge instructions with individual talking points to help patients understand the importance of disease management.

Unanticipated limitations or outcomes and their potential impact on the findings is that many sources of evidence demonstrate additional follow up is required for patients after discharging from the hospital. Beckman (2019) described the challenges for staff nurses involved with quality improvement projects as time constraints and communication with patients outside of the facility after discharge. Another unanticipated limitation is patients' inability to afford heart failure medications. Staff nurses are unable assist patients with financial difficulties, however social workers can aid in this process.

A total of 31 staff members attended the Zoom education session. Twenty-five participants completed the posteducation survey (Appendix B). Responses were rated using a Likert Scale with 5 = excellent or strongly agree, 4 = very good or agree, 3 = neutral, 2 = disagree, and 1 = needs improvement or strongly disagree. The average score was 5 = excellent or strongly agree on all items except four. Question 1: Course content was useful and relevant to my needs had a mean score of 4.88. Question 2: Course materials were up-to-date, well-organized, and presented in sufficient depth had a mean score of 4.88. The other questions with lower scores included trainer asking and handling of questions. Question 13: Trainer encouraged questions and interacted with the course participants to facilitate learning had a mean score of 4.96. Question 14: Trainer able to handle Q & A session well had a mean score of 4.96. Table 2 presents the results for each item.

Table 2

Survey Results

Evaluation Criteria	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1
1. Course content was useful and relevant to my needs	*N* =23 92%	*N*= 1 4%	*N*= 1 4%	*N*=0 0%	*N*=0 0%
2. Course materials were up-to-date, well-organised and presented in sufficient depth	*N*= 23 92%	*N*= 1 4%	*N*= 1 4%	*N*=0 0%	*N*=0 0%
3. Course coverage was comprehensive	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
4. Case studies presented were useful	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
5. Course objectives were consistent with the course as advertised	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
6. Overall, I would rate the course	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
7. Would you recommend this course to others to attend?	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
8. My knowledge of caring for patients with heart failure has increased.	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
9. My competence in caring for patients with heart failure has increased.	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
10. Trainer demonstrated a comprehensive knowledge of the subject	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
11. Trainer spoke clearly and distinctly. He is able to hold my interest.	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
12. Trainer ‘s course delivery in terms of explaining the concepts and giving real life examples	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
13. Trainer encouraged questions and interact with the course participants to facilitate learning	*N*= 24 96%	*N*=1 4%	*N*=0 0%	*N*=0 0%	*N*=0 0%
14. Trainer able to handle the Q&A session well	*N*= 24 96%	*N*= 1 4%	*N*=0 0%	*N*=0 0%	*N*=0 0%
15. Trainer’s sharing of his/her practitioner’s experience is useful to my learning	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
16. Overall, I would rate the trainer	*N*= 25 100%	*N*=0 0%	*N*=0 0%	*N*=0 0%	*N*=0 0%
17. Understand how to explain the physiology of heart failure to patients.	*N*= 25 100%	*N*=0 0%	N=0 0%	N=0 0%	*N*=0 0%
18. Identify important patient education information for medication management, symptom management, and diet for heart failure patients.	*N*= 25 100%	*N*=0 0%	N=0 0%	N=0 0%	*N*=0 0%
19. Identify tools to assist patients in tracking heart failure systems at home.	*N*= 25 100%	*N*=0 0%	N=0 0%	N=0 0%	*N*=0 0%
20. Explore challenges and successes in group discussion on caring for heart failure patients.	*N*= 25 100%	*N*=0 0%	N=0 0%	N=0 0%	*N*=0 0%

The survey results depicted areas for improvement for subsequent education sessions and for overall presentation skills. Post program comments from the participants revealed that staff members would like updated heart failure sessions to be conducted regularly. Many participants felt the education was helpful to the discharge process, resulting in greater understanding of patient needs. Potential implications to positive social change are increased quality of life and confidence for heart failure patients.

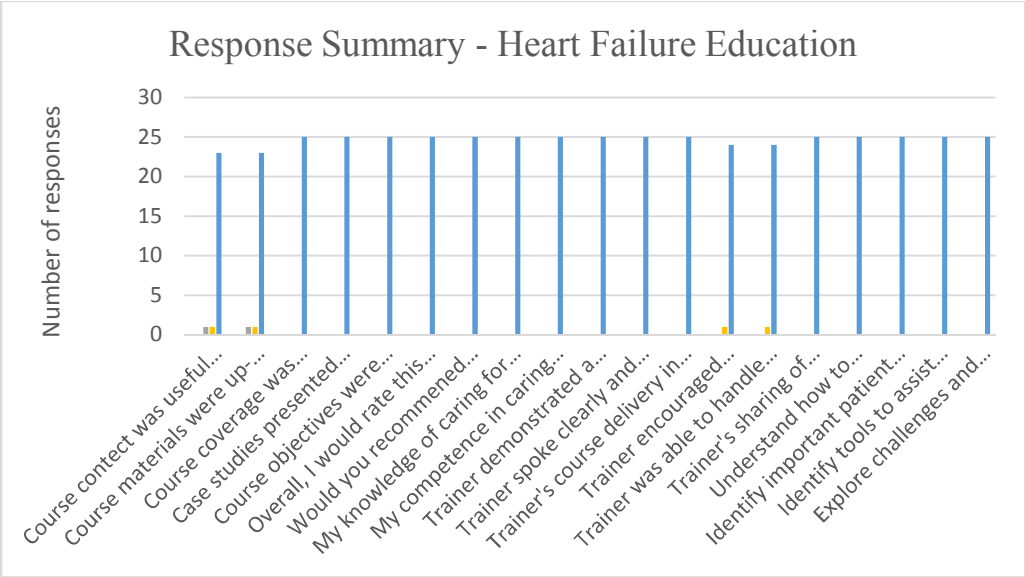

Figure 1. Survey results.

Recommendations

Additional comments on the course evaluations revealed possible opportunities going forward. Proposed and recommended solutions that will help address the gap in practice problem included updated heart failure education classes occurring on an annual basis with social work involvement for patients reporting issues affording medications. Campbell, Petrie, and McMurray (2018) outline various forms of teaching materials used for heart failure patients, with simple bullet points being an effective option. A bulleted

guide for staff to use that assists in ensuring all patients received the same information included using laminated discharge checklist for staff nurses to review. Another recommendation on an organizational level was to schedule heart failure refresher classes throughout the year. Once the cadence of education classes is determined, administrative staff can use the Teams online scheduling system to disseminate class information, along with updated education materials. An additional implementation procedure for administrative decision makers is coordinating social work involvement for patients with financial constraints. Increased cost and decrease of insurance benefits remain a top barrier to heart failure medication compliance in older adults (Marti et al., 2019). Administrative staff can assist with outreach to patients and their insurance providers to aid in supporting financial limitations. Plans to extend the project beyond the DNP doctoral project include examination of other cost driving diagnoses associated with readmissions or other quality metrics with development of staff education.

Contribution of the Doctoral Project Team

The process of working with the doctoral project team included reviewing information found for the doctoral project and formulating plans to incorporate into discharge planning. The project team was comprised of a panel of experts including representatives from nursing administration, clinical education, and quality improvement. Nursing administration was critical to the planning and outcome of the project because the time and resources required to implement changes came through administration. Clinical educators were responsible for embedding content from the project into daily practice. A quality improvement representative was included on the project team as the

purpose of the DNP project was directly connected to quality improvement metrics for the facility and the region. Results from the program evaluation and final recommendations were shared with the project team.

Strengths and Limitations of the Project

Strengths of the project included increased scrutiny on quality metrics for the region and connecting nursing staff directly into actions aimed at closing gaps in metrics. Administration routinely received feedback from nurses indicating a lack of understanding behind policy changes and decisions. This education session was able to relate nursing staff directly to overarching regional initiatives behind many of the decisions made in current practice for the facility.

Limitations of the project include staff members unable to attend the session due to time constraints and conflicting schedules. Recommendations for future projects addressing similar topics with similar methods would contain incorporation of staff members into the planning of the education. For example, one participant asked about documentation of the education in the charting, which was an area the project team members did not have the day-to-day knowledge to include. Recommendations for future projects addressing similar topics with similar methods include looking at other diagnoses related to readmissions or cost drivers that have an impact on hospital metrics. For example, sepsis is the second leading diagnosis associated with readmissions. In the future it may be advantageous to explore discharge education and planning for patients returning home with a diagnosis of sepsis.

Section 5: Dissemination Plan

Introduction

The plan for continued dissemination includes scheduling ongoing staff education sessions for heart failure in this facility and other ministries. Metric data used as the basis for this project came from regional reports including other facilities, resulting in data that would be relevant and useful for staff education. Based on the nature of the product, the audience and venues that would be appropriate for dissemination of the project to the broader nursing profession would be staff nurses and leaders from other ministries that could benefit from heart failure education.

Analysis of Self

In my role of practitioner and scholar, the experience gained from this project allowed me to examine a current practice problem and formulate a strategy to assist with meeting organizational goals and objectives. I started with a practice problem that affected all areas of the facility, then used evidence-based research and findings to devise a strategy to disseminate the information to the correct audience. As a project manager, I was able to assemble a project team based on need and expertise, then track the progress of each team member with timelines and role clarity. I learned the importance of monitoring each part of a project while linking team members to share findings and updates. My long-term goal of being a nurse leader involves examining current practice problems, like the one described in this project, and by using regional reports to identify other trends with possible practice issues.

At the completion of this project, I reflected on challenges and solutions that arose. One of the challenges that presented was restrictions for gatherings because of the Coronavirus pandemic. The solution was to use online meeting platforms for ongoing communication and team meetings. Another challenge was tailoring education to the skill levels of the staff nurses. Insight gained on this scholarly journey include the need to create a project team that can support the project from different perspectives. I believe the appropriate selection of roles on the project team contributed to the overall success.

Summary

As scholars and nurse leaders, the ability to track and monitor data is essential to promote change and optimal outcomes for patients and organizations. Heart failure education and management stretches outside the walls of the hospital. This doctoral project allowed me to examine a current practice problem within my organization, then creating a project team to implement an education program aimed at improving clinical outcomes for patients. Processes and strategies used for this project will help shape future initiatives.

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Appendix A: Staff Education Program

Learner Objectives

- Understand how to explain the physiology of heart failure to patients.
- Identify important patient education information for medication management, symptom management, and diet for heart failure patients.
- Identify tools to assist patients in tracking heart failure systems at home.
- Explore challenges and successes in group discussion on caring for heart failure patients.

What is heart failure?

- The heart is a muscle that pumps oxygen-rich blood to all parts of the body.
- When you have heart failure, the heart is not able to pump as well as it should. Blood and fluid may back up into the lungs (congestive heart failure).
- Some parts of the body don't get enough oxygen-rich blood to work normally.
- These problems lead to the symptoms of heart failure.

Why does heart failure occur?

- Heart failure can occur due to an injury to the heart or from natural processes.
- When the heart doesn't pump enough blood, body chemicals (hormones) are sent to increase the amount of work the heart does. Some hormones make the heart grow larger. Others tell the heart to pump faster. As a result, the heart may pump more blood at first, but it can't keep up with the ongoing demands. So, the heart muscle becomes even more weak.
- You can control symptoms of heart failure with some lifestyle changes and by following your doctor's advice.

What are the symptoms of heart failure?

- Shortness of breath
- Trouble breathing at night, especially when you lie down
- Swelling in the legs and feet or in the belly (abdomen)
- Becoming easily tired
- Irregular or rapid heartbeat
- Weakness or lightheadedness
- Swelling of the neck veins
- Keep track of how you feel each day. Report any changes to your healthcare provider.

Symptom management

Here's an example of a tool patients can use for monitoring heart failure from day to day:

My Symptom Chart

Use this chart to track your weight, blood pressure, and heart rate every day. Also keep track of changes in symptoms or any special notes. Bring it with you when you visit your healthcare team. (The chart contains enough space for two weeks.)

My Baselines

Weight: _____ Blood Pressure: _____ Heart Rate: _____

	Day	Weight	Blood Pressure	Heart Rate	Change In Symptoms/ Notes
Week starting:	Mon				
	Tue				
	Wed				
	Thu				
	Fri				
	Sat				
	Sun				
Week starting:	Mon				
	Tue				
	Wed				
	Thu				
	Fri				
	Sat				
	Sun				

Make extra copies of this chart before you use it the first time.

What can you do to manage heart failure?

- Lifestyle modifications are necessary to keep heart failure controlled at an optimal level.
- Lifestyle changes include:
  - Activity
  - Diet
  - Medicine
  - Weight monitoring
  - Follow up care

What can I do for activity?

- Add a little movement to things you do now.
    - Examples
        - walk to mail letters.
        - park your car at the far end of the parking lot and walk to the store.
        - walk up a flight of stairs instead of taking the elevator.
- Choose activities you enjoy.
    - walk, swim, or ride an exercise bike.
    - gardening and washing the car
    - washing dishes, walking the dog, walking around the mall, and doing aerobic activities with friends.
- Join a group exercise program at a YMCA or YWCA, a senior center, or a community center.

What dietary changes need to be made?

- Talking points for patient education:
    - Limit the salt (sodium) in your diet. Salt causes your body to hold water. This makes your heart work harder as there is more fluid for the heart to pump.
    - Limit canned, dried, packaged, and fast foods.
    - Don't add salt to your food.
    - Season foods with herbs instead of salt.
    - Watch how much liquids you drink. Drinking too much can make heart failure worse.

What dietary changes need to be made?

- *Examples*:
    - Measure drinks in a measuring cup before you drink them. This will help you meet daily goals.
    - Chill drinks to make them more refreshing.
    - Suck on frozen lemon wedges to quench thirst.
    - Only drink when you're thirsty.
    - Chew sugarless gum or suck on hard candy to keep your mouth moist.
    - Weigh yourself daily to know if your body's fluid content is rising.

Why take your medications for heart failure?

- Talking points for patient education:
    - They help you feel better. That means you can do more of the things you enjoy.

- They help your heart work better.
- They can help you stay out of the hospital.
- They can prevent shortness of breath and swelling in your feet.
- They can improve blood flow to the rest of your body and prevent other organs from being affected.
- They may even prevent heart attack or death.

Medication management tips

- Take your medicines:
  - *Exactly as directed*.
  - *At the same time or times each day*.
- Talking points for patient education:
  - Never change the dose or stop taking a medicine unless your doctor tells you to.
  - Tell your doctor if you don't understand how to take your medicines
  - Tell your doctor if you are having trouble getting your medicines.
  - If you miss too many doses, you are at risk for being admitted to the hospital for shortness of breath and worsening of heart failure symptoms.

Review question: Medication management

- Mary takes Furosemide for heart failure. She forgot to take her morning dose and it's one hour before her afternoon dose. What should she do?
- A. Take both doses
- B. Skip both and wait until the evening dose
- C. Take the afternoon dose and resume her normal schedule

Weight management

- Talking points for patient education:
  - Weigh yourself every day. A sudden weight gain can mean your heart failure is getting worse.
  - Weigh yourself at the same time of day and in the same kind of clothes.
  - Ideally, weigh yourself first thing in the morning after you empty your bladder, but before you eat breakfast. Clues to weight gain include checking your ankles for swelling, or noticing you are short of breath when you lie down.

Weight Management

Here's another example of a tool that patients can use for monitoring heart failure from day to day:

Month _____ Start Date ____						
S	**M**	**T**	**W**	**T**	**F**	**S**

Review question: Weight management

- Jim recorded his weight yesterday morning before breakfast and weighed 165 lbs. Today, he ate breakfast then went out to lunch and had Chinese food. He recorded his weight in the afternoon – which showed 170 lbs. What should Jim do?
- A. Call his doctor
- B. Take his weight over the next few days at the same time and call his doctor if he's gained 2-5 pounds.
- C. Take his weight the next day and call his doctor if he's gained 2-5 pounds

What type of follow up is necessary?

Talking points for patient education:

- Have a follow-up appointment. Depending on the type and severity of heart failure you have - you may need follow-up as early as 7 days from hospital discharge.
- Keep appointments for checkups and lab tests that are needed to check your medicines and condition.
- Recognize that your health and even survival depend on you following your medical recommendations.

When should I call a healthcare provider?

- Call your healthcare provider right away if you have:
    - Sudden weight gain (more than 2 pounds in 1 day or 5 pounds in 1 week, or whatever weight gain you were told to report by your doctor)
    - Trouble breathing not related to being active
    - New or increased swelling of your legs or ankles
    - Swelling or pain in your abdomen
    - Breathing trouble at night
    - Frequent coughing that doesn't go away
    - Feeling much more tired than usual

Discussion

- Discuss experiences with group on dealing with heart failure patients.
    - Challenges
    - Successes
    - Questions?

Additional References

- For additional information on heart failure you can visit:
    - American Heart Association
    - www.heart.org
    - American Association of Cardiovascular and Pulmonary Rehabilitation
    - www.Aacvpr.org
    - American College of Cardiology
    - www.cardiosmart.org

Appendix B: Evaluation Tool

POST COURSE EVALUATION FORM

COURSE TITLE:

COURSE DATE:

Circle the appropriate number according to the following scale: 5=Excellent or Strongly Agree. 4=Very Good or Agree. 3=Neutral. 2=Disagree. 1=Needs Improvement or Strongly Disagree

COURSE	**Rating**				
1. Course content was useful and relevant to my needs	5	4	3	2	1
2. Course materials were up-to-date, well-organised and presented in sufficient depth	5	4	3	2	1
3. Course coverage was comprehensive	5	4	3	2	1
4. Case studies presented were useful	5	4	3	2	1
5. Course objectives were consistent with the course as advertised	5	4	3	2	1
6. Overall, I would rate the course	5	4	3	2	1
7. Would you recommend this course to others to attend?		Yes		No	
8. My knowledge of caring for patients with heart failure has increased.	5	4	3	2	1
9. My competence in caring for patients with heart failure has increased.	5	4	3	2	1

TRAINER's NAME:	**Rating**				
10. Trainer demonstrated a comprehensive knowledge of the subject	5	4	3	2	1
11. Trainer spoke clearly and distinctly. He is able to hold my interest.	5	4	3	2	1
12. Trainer 's course delivery in terms of explaining the concepts and giving real life examples	5	4	3	2	1
13. Trainer encouraged questions and interact with the course participants to facilitate learning	5	4	3	2	1
14. Trainer able to handle the Q&A session well	5	4	3	2	1
15. Trainer's sharing of his/her real estate practitioner's experience is useful to my learning	5	4	3	2	1
16. Overall, I would rate the trainer	5	4	3	2	1

LEARNER ACHIEVEMENT OF OBJECTIVES	**Rating**				
Understand how to explain the physiology of heart failure to patients.	5	4	3	2	1
Identify important patient education information for medication management, symptom management, and diet for heart failure patients.	5	4	3	2	1
Identify tools to assist patients in tracking heart failure systems at home.	5	4	3	2	1
Explore challenges and successes in group discussion on caring for heart failure patients.	5	4	3	2	1