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Jainarine Ramlochan

Eastern Kentucky University, jainarine_ramloch@mymail.eku.edu

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Eastern Kentucky University

College of Health Sciences

School of Nursing

Doctor of Nursing Practice Program

DNP Project Final Report

Discharge Planning Considerations for Congestive Heart Failure

DNP Student: Jainarine Ramlochan MSN, FCN, RN-BC

Date: May 5th, 2021



DOCTOR OF NURSING PRACTICE

The DNP Project Final Report is submitted in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice (DNP) at Eastern Kentucky University (EKU).

Student Acknowledgement

“I assert that the content of this DNP Project is my original work. Proper citation, credit, and permissions have been obtained and/or given to all external sources. I retain the right to ownership of my work. I further retain the right to use the work in future publications (i.e., articles, books...) all or any part of my work.”

EKU DNP Student: Jainarine Ramlochan

Signature: 

Date: May 05, 2021

Review & Approval of DNP Project Final Report

The DNP Project Final Report has been reviewed and approved by the DNP Project Team, which includes the DNP Project Chair and the DNP Project Team Member(s). The DNP Project meets the satisfactory requirements for the DNP Project Final Report outlined in the EKU DNP Project Guidelines. The EKU DNP Project Guidelines are based on best practices outlined by the American Association of Colleges of Nursing (AACN) and external evidence-based sources. The DNP Committee develops, maintains, and monitors these standards on behalf of the Department of Baccalaureate and Graduate Nursing at Eastern Kentucky University.

“We assert that we have reviewed and approved this DNP Final Project Report.”

EKU DNP Project Chair: Dr Molly J. Bradshaw DNP, APRN, FNP-BC, WHNP-BC

Signature: 

Date: May 05, 2021

EKU DNP Team Member: Dr. Nancy G. Owens DNP, APRN, PNP-C

Signature:

Date:

EKU DNP Coordinator: (Type Name + Credentials)

Signature: 

Date: May 05, 2021

EKU School of Nursing Department Chair: Dr. Brooke Bentley PhD, APRN, FNP

Signature:

Date:

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Discharge Planning Considerations for Congestive Heart Failure: A DNP Project

DNP Project Final Report

Jainarine Ramlochan

Abstract

Clinicians are challenged to prevent readmission of patients with congestive heart failure (CHF). The purpose of this project was to: 1) prepare students to better understand the discharge process for patients with CHF; and 2) obtain the opinion of nurses that were involved in the discharge process in the presence of COVID-19 Pandemic. The Delta Care Program (DCP) was used to guide the project and may be a useful tool for discharge planning. An intervention on use of the DCP was delivered to students ($N = 83$). Findings indicated that student nurses felt confident in the application of the DCP to assist patients, family members, and caregivers to manage the disease process in the comfort of their home. The student nurses noted that the DCP intervention is an important component of the discharge process in the clinical setting, and one that will help CHF patients tremendously with self-management techniques. As an additional outcome, frontline nurses were surveyed concerning the impact of COVID-19 on the discharge process. The nurses ($N = 12$) expressed that when family members are not present in the discharge planning process it is challenging to transition care from the healthcare facility to the home setting. Collectively this work adds to an effort to utilize evidence in the discharge process and better understand new, emerging challenges with the discharge process.

Keywords: discharges, congestive heart failure, COVID-19, Delta Care Program

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Discharge Planning Considerations for Congestive Heart Failure: A DNP Project

Introduction

Congestive Heart Failure (CHF) in the United States (US) is a growing healthcare burden, including one of the leading causes of hospitalizations and readmission (Ziaeeian & Fonarow, 2016). For example, in the US, approximately 6.5 million adults are affected. The lifetime risk of CHF is estimated to be one in five at 40 years of age. As the incidence of CHF increases with age, CHF prevalence in the aging US population is projected to increase by 46% between 2012 and 2030. Total medical costs of CHF have been estimated at \$30.7 billion in 2012 and are projected to increase by an estimated 127% to \$69.7 billion by the year 2030 (Jackson et al., 2018). Preventing readmissions for patients with CHF is an increasing priority for clinicians, researchers, and stakeholders. A review of the literature identified strategies that may improve hospital performance in reducing CHF readmissions. Since evidence-based practices for CHF management have proliferated consistent implementation and development, new strategies to effectively prevent readmissions are areas for continued improvement.

The discharge process is an essential component of sharing information with the patient, caregivers, and those responsible for patient care, including nurses. A discharge plan should include data collection during hospitalization, identifying limitations of the patient, the family, the caregiver or environment, and existing resources (Andrietta, Moreira, & Alba Lucia Bottura Leite De Barros, 2011). Inadequate discharge planning and non-adherence to instructions are factors that may lead to the readmission of patients with CHF, which supports the importance of a discharge plan to improve the patient's quality of life (QOL). It is, therefore, imperative to educate new generations of nurses on the element of discharge planning to familiarize them with the concept.

In order to meet that need, the Delta Care Program (DCP) was developed to provide a transition of care for patients with CHF. In July 2012, a multidisciplinary team was formed at a local community hospital to evaluate the creation of a transition approach to address post discharge management of patients with heart failure. A total of 18 patients with a diagnosis of CHF participated in the DCP in the program, post discharge. Only two of the 18 patients were readmitted within 30 days of discharge and nine (50%) of the patients with CHF were readmitted for conditions other than CHF during the 12-month study period. A total of 72 patients with CHF that received a followed-up phone call following discharge, 43% reduction in readmissions were noted from October 2011 through March 2012 (Ephraim McDowell regional Medical center [EMRMC], 2014). Clearly the program made improvement in patient outcomes. Thus, it is imperative to share it with new, upcoming nurses.

The purpose of this project was to utilize the DCP as a resource for nurses regarding discharge planning for patients with CHF and explore the impact of the COVID-19 Pandemic on the discharge planning process of CHF patients. There was project shift in light of the pandemic. However, to collectively demonstrate the body of scholarship, both original plans and shifted content is included.

Background and Significance

Ziaeeian et al. (2016) argued that an estimated 5.7 million American adults are living with CHF with projections of an increase in the prevalence of CHF of 46% from 2012 to 2030. Re-admissions received attention from researchers and were perceived as a correctable source of poor quality of care together with excessive medical spending. The Affordable Care Act (ACA) in 2015 instituted a financial penalty for excessive readmissions for hospitals that were capped at 3% of a hospital's total Medicare payments. Ziaeeian et al. (2016) argued that the 30-day

readmission rates were an increasing focus for improving quality, interventions for preventing or reducing readmissions are not effectively agreed upon.

Acute hospital services account for the largest proportion of health care system budgets, and the older adult population is the most frequent user (Finlayson et al., 2018). As a result, elderly patients that have been recently discharged from a healthcare facility may be at greater risk of readmission. In the United States (US), comprehensive discharge planning and early follow-up interventions have demonstrated short-term reductions in readmissions of at-risk population.

Saito et al. (2016), stated that despite improvement in outcomes with medication, re-admission rates of post discharge patients with CHF continued to increase. It is now very important for clinicians to identify the patients that are at the highest risk of being readmitted. Although various strategies that have been used to limit readmissions, the process of care in those programs has varied substantially, and not all have been associated with lower readmission rates (Saito et al., 2016).

Congestive Heart Failure (CHF) has become a significant burden on the healthcare system and is one of the leading causes of hospitalization and rehospitalization, mostly in the elderly population (Tingley, Dolansky, & Walsh, 2015). CHF is the primary diagnosis for greater than one million hospitalizations per year and has a five-year mortality rate of 50 %. The estimated cost of treatment for patients with CHF has reached an approximated \$40 billion each year and is projected to rise to \$70 billion by the year 2030.

Context of the Problem

There are various contributing factors to readmissions, including complications during an inpatient stay, lack of coordinated care, decreased quality of care, and insufficient patient education and follow-up. Readmissions can be very inconvenient and costly to the patients with

inherent risks, including hospital-acquired infections, which can negatively impact patient outcomes. Many hospitals have acquired the Hospital Readmission Reduction Program (HRRP), which requires that the Centers for Medicare and Medicaid Services (CMS) reimburse reduced payments to hospitals with excess readmissions. Factors that contribute to readmissions in CHF patients also include system failures, inadequate discharge teaching, lack of social support, deficiency in health literacy, and clinical complications (Betihavas, Newton, Frost, & Macdonald, 2013).

Individuals with CHF are also frequently re-hospitalized due to a lack of knowledge relating to self-care and knowledge of relevant information that should have been reported to the healthcare provider (Stamp et al., 2014). Nurses play a crucial role in providing patients and family members with education and preparation for post discharge management of the disease process (Krówczyńska & Jankowska-Polańska, 2020). More experienced nurses are mostly concerned with the lack of time to provide adequate education and teaching to patients and family members (Betihavas, Newton, Frost, & Macdonald, 2013).

In an effort to enhance student and new graduate education, a teaching session regarding discharge planning was presented to nursing students at Eastern Kentucky University (EKU). The nursing students had the opportunity to learn more about the discharge process and information that would have been given to the patients and family prior to being discharged to home. It was also beneficial for the students to learn more about how patients with CHF can be supported and educated during hospitalization. The nursing students needed to understand the discharge planning process for patients with CHF, and management of the disease after discharge. Post-discharge education is one of the most effective interventions to improve self-management abilities and behaviors among CHF patients and has the potential to improve the

prognosis and reduce hospital readmission rates (Zamanzadeh, Valizadeh, Howard, & Jamshidi, 2013).

Consequences of the Problem

The survival of patients with CHF diagnosis has improved over time, but the death rate remains at more than 50% of people with CHF. Hospitalization of people with CHF accounts for more than 50% of the annual cost that is usually spent to treat patients with CHF. Readmission rates are particularly high for patients with CHF, with 30-day rates reaching as much as 25% and a 6-month re-admission rate increasing to approximately 50%. It was estimated that the total cost of CHF care would equal \$44 billion in the year 2015 and twice that amount by the year 2030 (Butler, Marti, Pina, & Defilippi, 2012).

There are significant opportunities that exist to improve outcomes for patients with CHF, including individuals that have been hospitalized. These efforts are of great importance considering quality and reimbursement implications related to readmission rates for CHF. As nurses and healthcare providers continue to research evidence-based practices to educate current and future nurses relating to CHF discharge processes, there is no current information to support the impact of COVID-19 on short-term or long-term effects on these elements.

Infection with COVID-19 is associated with increased death rates in patients with CHF. Patients with CHF should be classified as high risk considering the COVID-19 Pandemic, because it is thought that patients with CHF to be more susceptible to the virus, according to one study. The risk of death in CHF patients hospitalized with COVID-19 is higher than previously noted. This may be due to the high prevalence of CHF patients with comorbidities and frailty having an established link with poorer outcomes from COVID-19 infection (Chatrath et al., 2020).

The Heart Failure Society of America (HFSA) wants to ensure that patients with CHF are informed that during the COVID-19 Pandemic, it is important to educate patients to practice good hand hygiene, social distancing, and staying at home as much as possible (Heart Failure Society of America, 2020). There is a great deal to learn about COVID-19 and currently, there are several ongoing clinical trials to discover therapies that might help treat the infection and vaccines that can prevent the infection. The HFSA and other scientific institutions are working hard, with our patients in mind, to get through this pandemic as quickly as possible.

Proposed Evidence-Based Intervention

Many complications are associated with CHF and post-hospital discharge instructions. Various reviews support the need for adequate discharge teaching for patients with CHF that focuses on readmission prevention. A proposed evidence-based intervention was presented to assist nursing students in learning appropriate discharge information, so that patients may benefit from implementing self-management practices and reduce chances of hospital readmission. The DCP was introduced as a resource for nurses regarding discharge planning for patients with CHF and will be used as tool to explore the impact of the COVID-19 Pandemic on the discharge planning process of CHF patients.

Nursing students at ECU were introduced to the DCP that is implemented to assist patients with CHF to a program that would allow for self-management of the disease process upon discharge. The DCP provided patients with specific discharge medications and instructions prior to discharge. The patients received supportive tools which include water bottles, pedometers, salt substitutes, scales, peak flow meters, recipes, a free 30-day supply of protocol rescue medications, discounted prices on smoking cessation products (EMRMC, 2014).

Giving students the opportunity to experience this is key. The students' clinical sites had been negatively impacted by COVID-19. Also, little is known about the impact of COVID-19 on

the discharge planning process at all healthcare facilities in the US and across the globe. Quality Improvement programs will focus primarily on providing evidence-based practice to individuals, engage patients as well as family members to participate and create a process that would ensure high-quality hand-off to the caregivers that will provide any follow-up care. The purpose of this project was to educate nursing students to learn how to best educate CHF patients and family members to practice self-management techniques upon discharge from a healthcare facility.

Theoretical Framework

Pender's Health Promotion Model (HPM) is a widely used model that identifies background factors that influence changing unhealthy behaviors to achieve a healthy lifestyle (Pender, 1982). The HPM defines health as a positive dynamic state and not just the absence of disease and is directed at increasing a client's level of well-being. The purpose of the HPM is to assist nurses including student-nurses in understanding that major determinants of health behaviors include promoting the well-being and healthy lifestyle of the patients (Pender, 1982). Various studies have highlighted the efficiency of the health promotional model to control unhealthy behaviors (Khodaveisi, Omidi, Farokhi & Soltanian, 2017). Key concepts of the HPM include self-care maintenance, monitoring self-care, and self-care management, which focuses on individual characteristics, behavior-specific effects, and behavior outcomes (Petiprin, 2016).

The HPM states that everyone has unique personal characteristics and experiences that affect subsequent actions (Petiprin, 2016). Pender's model focuses mainly on the following three areas, which include individual characteristics and experiences, behavior-specific cognitions and affect, and behavioral outcomes (Pender, 2011). The theory states that everyone has a unique set of personal characteristics and life-experiences that can affect future actions (Pender, 2011).

A great deal of nursing students learns about the theoretical basis of the nursing profession before beginning to practice clinically. Pender's Health Promotion Model provides an

understanding of how nursing knowledge is built. The same could be said of patient education. It is important to understand theories in healthcare education to be an effective patient educator. It is also imperative that nurses understand the theoretical basis of patient education to reach the greatest potential and implement the most effective teaching strategies. The greater the knowledge of the theoretical basis of patient education, the more tools nurses could have to provide effective education (Syx, 2008).

Review of Literature

A review of literature was performed to examine the discharge processes that were implemented by healthcare facilities to reduce 30-day post-discharge readmission rates. The search for relevant articles were completed by using databases including Up to Date, Cumulative Index of Nursing and Allied health Literature (CINAHL), PubMed, Medline, ProQuest, and the Cochrane collaboration. Key terms included discharge instructions, reducing 30-day readmission rates, CHF self-management monitoring, nurses' education relating to the discharge process, and patient and caregiver education. Inclusion criteria were adult patients over the age of 18 years old, patients of inpatient and outpatient facilities that will be discharged to home, patients with caregivers that were willing and able to participate in care management, and patients that were willing to participate in a telemonitoring program. Exclusion criteria were children and adolescents under the age of 18 years old, patients that were unwilling to participate in a self-management program, and patients and caregivers that did not wish to participate in a telemonitoring program. A total of 415 articles were found using the keywords, and five articles were selected for review. The articles were then categorized by level one (I) through level five (V) of the hierarchy level of evidence as outlined in Melnyk and Fineout-Overholt (2019).

Saito et al. (2016) sought the risk factors for short-term readmission in patients with CHF. The study searched electronic databases that reported hospital re-admission that were less

than 90 days post-discharge of patients with CHF. Clinical characteristics, study design, type, and incidence of the outcome, univariable effect sizes for each risk factor, and its associated 95% confidence intervals were extracted. Significant associations of primary outcomes included chronic lung disease, chronic kidney disease, atherosclerotic vascular disease diabetes, anemia, lower systolic blood pressure, previous admission, and multidisciplinary treatment. The study revealed that the risk of 90-day readmission or death in patients with CHF tends to be the greatest in patients with non-cardiovascular comorbidities.

Saito et al. (2016), revealed that despite improvement in outcomes with medication, readmission rates of post-discharge patients with CHF continued to increase. It is important for clinicians to identify the patients that are at the highest risk of being readmitted. Although various strategies have been used to limit readmissions, the process of care in these programs have varied substantially and not all have been associated with lower readmission rates.

Stamp et al. (2014) conducted an integrated review on the quality of life and re-admission rates of individuals with CHF that are re-hospitalized due to a lack of knowledge regarding management of self-care and when to inform the healthcare providers of worsening symptoms. This integrative review of literature examined and summed up previous research by drawing conclusions from various studies that were believed to address similarly related topics.

This study critically examined interventions, the cost-effectiveness of nurse-led transitional care programs. The results of this study $n = 20$ articles reviewed showed that transitional care programs for individuals with CHF increased the patient's quality of life, decreased the number of readmissions, and decreased the overall cost of care. Of the $n = 20$ studies, sixteen of the studies were randomized control trials, two were quasi-experimental, one was a retrospective observational trial, and one was a prospective study design. Improvement of QOL=5 out of 6 studies showed significant improvement. QOL at 6 weeks = ($p = .002$), and at

12 weeks ($P < .001$). It was found that hospital readmissions were reduced by 62% in the intervention group. Another research showed a significant reduction in readmissions by 16% (95% CI, 4% Y28%; $P = .004$) according to (Stamp et al., 2014).

The interventions used in this study and that were most successful in reducing readmission rates include frequent home visits as well as follow-up telephone calls. Keywords used in the search included heart failure, nurse led interventions, readmissions, self-care, and transitional care. Discharge planning was the initial step of the care transition process that was demonstrated in this project to the students. Nurses are the frontline caregivers that are most often responsible for providing proper discharge education to the patients. Nurse educators can effectively prepare student nurses to achieve competency in educating patients and family members through discharge education and teaching (Sherman, 2016).

Torisson et al. (2013) examined whether a multidisciplinary intervention targeting drug-related problems, discharge miscommunication, and cognitive impairment could reduce readmissions in a general hospital population. This prospective non-randomized intervention study was done at the department of general internal medicine at a tertiary university hospital, in which 200 medical inpatients ages 60 years and older were included. Ninety-nine patients received interventions, and 101 received standard care. Intervention allocation was determined by geographic selection. Interventions consisted of a comprehensive medication review, improved discharge planning, post-discharge telephone follow-up, and liaison with the patient's general practitioner.

Results revealed that after 12 months, the surviving patients in the control group had 125 total readmissions, with 58 patients in the intervention group (Mann–Whitney U test, $P = 0.02$). Results for hospital nights, revealed 1,228 and 492, respectively ($P = 0.009$). Annual admissions increased from the previous year in the control group from 77 to 125 (Wilcoxon signed-rank test,

$P = 0.002$) and decreased from 75 to 58 in the intervention group [$P = 0.25$] (Torisson et al., 2013).

Ziaeeian et al. (2016) performed a systematic review search that discussed interventions that would reduce re-admissions for patients and improve hospital performance on the 30-day re-admission process measure. $N = 30$ studies with 26 models found that prediction models had poor discrimination. Review of the research articles highlighted strategies to prevent CHF re-admissions. Mini cognitive exams were administered to evaluate health literacy, functional and cognitive status, and used as traditional markers to measure the participant's educational status.

Therapies that reduce hospitalizations were also expected to reduce re-admissions. The review also found that prediction models generally had poor discrimination with statistics ranging from 0.55 to 0.65 for models using administrative data alone, while other models used smaller populations that require further validation. According to Sherman (2016), nurses can educate patients about the need and importance of self-management at home. Nurse educators must continue to make a great effort to educate nurses and student nurses through in-service programs, continuing education, and staff development to excel in teaching abilities (Sherman, 2016).

Lee et al. (2016) examined whether timing and type of post-discharge follow-up impact risk of 30-day re-admission in adults hospitalized for CHF discharge follow-up using a case-control study. Outpatient visits, telephone calls, general practitioners in the non-emergency department, and non-urgent care settings were counted as follow-up care. Statistical adjustments were made for differences in patient social and clinical characteristics, severity of illness, hospitalization characteristics, and post-discharge medication changes and laboratory testing was a part of the measurements (Appendix A).

Synthesis of Literature

Of the five articles evaluated, the level of evidence was found to be Level I, Level II, Level III, level IV, and Level V (Melnyk & Fineout-Overholt, 2019). There was one meta-analysis of observational studies (Saito et al., 2016), one integrative literature review (Stamp et al., 2014), one non-randomized intervention study (Torisson et al., 2013), one systematic review intervention (Ziaecian et al., 2016), and one case-control study (Lee et al., 2016). The various settings in these studies had no impact on the results but varied for articles reviewed to general practicing healthcare facilities (Appendix B).

The five articles that were reviewed for this DNP project presented several different ways to reduce the readmission rates of patients that were discharged from healthcare facilities after being treated for CHF. The articles revealed that the quality of life is an important aspect in preventing readmission to healthcare facilities for complications of CHF. Additional articles also focused on a pretest to gauge the level of education that should be presented to patients upon discharge from healthcare facilities. One of the articles concluded that adults discharged home after hospitalization for CHF, outpatient follow-up with cardiology or a general provider within seven days was associated with a lower chance of 30-day readmission.

Application to Evidence Based Practice

Although many hospitals have implemented transitional care interventions targeting older adults, the penalties have raised hospital interest in identifying additional mechanisms to further reduce re-admissions. Prior to hospital discharge, the staff would have initiated and coordinated all relevant post-discharge services, including follow-up appointments with the primary caregiver. The hospital staff would have obtained information from community care, patients, and relatives to determine if a significant loss of function had occurred before or during hospitalization. If additional support at home was desirable or necessary, a multidisciplinary conference would have been held at the ward, including assessing specific needs. The handover

of medical responsibility to the general practitioner would have included the main diagnosis, current medication list, follow-up arrangements, and would have been sent to the general practitioner on the day of discharge (Torisson et al., 2016).

Concluding Statement of Evidential Support

The purpose of this proposed intervention review was to critically examine each of the five studies, including a meta-analysis, a randomized study, a quasi-experimental study, a case control, and a systematic review. The various studies revealed strategies using evidenced-based research to inform of the risk factors and interventions to prevent re-admission rates within a 30-day post-discharge period from a healthcare facility. The five articles that were selected for this project also described information that was beneficial to the student nurses. It is proven that educating caregivers including nurses and student nurses with evidence-based discharge information, early recognition of worsening of conditions, and teaching patients and family members to self-manage the disease process, will decrease the rates of readmission in patients with CHF (Boyde et al., 2018).

Agency Description

Original Project Agency

Originally, this DNP project was planned to be carried out in the medical-surgical unit at a very well-known healthcare facility. The original agency of choice was a very well respected regional medical center that is a locally controlled not-for-profit 222-bed hospital in south-Central Kentucky. The original setting for the project was the medical-surgical unit and included a committee consisting of a pharmacist, physician, case manager, registered nurse, and dietician was formed to oversee the discharge process for all patients that were admitted with CHF as the admitting diagnosis. The goal of forming that committee was to reduce the readmission rate of patients that were discharged from the hospital after being treated for CHF. To accomplish that

effort, the patient would have received proper discharge instructions and literature to self-manage the disease process at home.

The original intent was to re-introduce a discharge plan known as the DCP that was once initiated to assist patients with CHF to monitor and self-manage the disease process at home. The DCP consisted of a packet with discharge instructions that were specific to managing CHF. The packet included a sample of Mrs. Dash® salt substitute, a bathroom scale, a ten-day supply of a diuretic, a tape measure, a sample of beta blockers if indicated, nicotine patches if required, a water bottle, a pedometer, and in some instances a cell phone with limited minutes.

Unfortunately, COVID-19 impacted the ability to implement the project as planned. Therefore, the project was shifted to a new agency and setting to a focus on nursing students and a needs-assessment. A needs assessment was implemented to determine if students would benefit from learning the importance of discharging patients with CHF with the proper tools that would prevent re-admission.

Impact of COVID-19 On Discharges

On March 19, 2020, the Department of Health issued guidance for managing Hospital discharges during the COVID-19 pandemic. The discharge guidance laid out four pathways on how healthcare systems should change the discharging arrangements and provide community support during the emergency period. During that time, healthcare facilities needed to ensure they had the capacity to support people with acute healthcare needs upon discharge. To do so effectively, safe, and rapid discharge of those patients who no longer need to be in a hospital bed would have been arranged. The guidance sets out actions that must be taken immediately to ensure that bed capacity is created through faster rates of appropriate discharge from healthcare facilities. The patient's status would have been reviewed twice daily to identify patients that can be discharged on that day.

All patients who were suitable for discharge would have been added to the discharge list and allocated to a discharge pathway. Discharge to home should be the default pathway, which is pathway zero. An executive lead would have been identified to oversee the discharge process to assess and release staff from their current roles. Staff that were released from normal roles would have helped to co-ordinate and manage the discharge arrangements for all patients from the community and acute bed units. A multi-disciplinary team would have been used on the day of discharge from the hospital to assess and arrange discharge packages for those patients under pathway numbers two, three, and four and to ensure provision of resources to support discharge.

The New Project Agency

A new project partner was identified. Eastern Kentucky University (EKU) is a public university in Richmond, Kentucky. It is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). EKU is a regional, coeducational, public institution of higher education offering general and liberal arts programs, pre-professional and professional training in education, and various other fields at both the undergraduate and graduate levels. EKU has a distinguished record of more than a century of educational service to the Commonwealth of Kentucky.

The nursing program at EKU is a preparatory program for the professional practice of nursing. Graduates of the nursing program upon successful completion of the National Council Licensure Examination (NCLEX) are prepared to practice in clinical arenas including hospitals, community health nursing, industrial health centers, nursing homes, family planning centers, crisis care centers, and careers in professional nursing practice. The undergraduate nursing program at EKU has 94 students with 67 students that will be graduating in May 2021, and 30 students that are currently enrolled in the associate in the science of nursing (ASN) program. Successful nurses of the nursing program will be equipped to participate in a variety of

opportunities including direct care, leadership, patient advocacy, and discharge planning (Eastern Kentucky University [EKU], n.d.).

Eastern Kentucky University seeks to provide intellectual and cultural opportunities that will develop habits of scholarship and intellectual curiosity, provide a deep sense of understanding in maintaining its strength and vitality, impart an understanding of human aspirations, enable efficient communication, and prepare productive and responsible citizens. ECU offers high-quality instruction at a variety of degree levels in general education. Instructional courses at ECU include arts, sciences, business, education, pre-professional, and professional areas, and applied and technical disciplines (EKU, n.d.).

Congruence of Project to Organization. ECU's DNP Program is about organizational leadership. Due to COVID-19 Pandemic, ECU has a need for practice related experiences for students. This project meets that need by helping them understand the discharge planning process. The mission provides the intellectual foundation, programs, and experiences to prepare graduates to be engaged ethical leaders through its commitment to liberal education, academic excellence, and the advancement of knowledge. The vision is to be recognized for academic quality through student engagement and innovative faculty, attaining success through creativity, collaboration, and critical thinking (Eastern Kentucky University [EKU], n.d.). The importance of the needs survey is a simple feedback-based survey to better understand the impact of COVID-19 on the discharge planning process.

Description of Stakeholders

Intervention Population

The intervention population included the nursing students in a baccalaureate undergraduate nursing program at ECU. A group of nursing students currently enrolled in a baccalaureate nursing program (BSN) at ECU participated in the learning session of the project.

The nursing students were in the second academic year of the nursing program and were covering curriculum material that was directly related to the care of patients with CHF. The learning session comprised a teaching lesson plan that discussed the discharge planning considerations for patients with CHF. The students were introduced to a program known as DCP, that is given to patients at the time of discharge from a healthcare facility.

A needs assessment was conducted to target any nurse that was involved in the discharge process of CHF patients. The goal was to document the current challenges and nursing perspectives for feedback. The needs assessment was conducted via Facebook social media platform, colleagues of the primary investigator, and through emails. Target nurses include the population of nurses that were directly involved with patients' discharge procedures during the COVID-19 Pandemic.

Project Design

The project design was a Quality Improvement (QI) initiative that included a needs assessment and a program evaluation. The DNP project consisted of two aims. The first aim was to create a practice-based learning opportunity for students in a baccalaureate undergraduate nursing program at ECU to improve their knowledge and skills related to discharge planning for heart failure patients. The specific objectives included:

1. Development of a short, 15 min session for ECU nursing students to demonstrate an understanding of the information presented throughout the learning session.
2. Implementation of the learning session in the fall 2020 semester. A live session and a pre-recorded version of the learning session was developed to accommodate the organization and state of COVID-19 Pandemic as well as provide for future sustainability.
3. Evaluation of the impact of the session on nursing student knowledge and confidence.

The quality of the learning experience was evaluated upon completion.

The second aim included a short needs assessment documenting the experiences and challenges nurses are experiencing during discharge planning in the COVID-19 Pandemic. The goals for this included the development, implementation, and evaluation of a needs assessment simply as a learning experience for the primary investigator (PI) and for the purpose of sustainability/expansion of the project post COVID-19. The specific aims included:

1. Development a needs assessment in the form of a questionnaire survey.
2. Implementation of the needs-assessment that was released on social media, email to nursing colleagues over a two-week period.
3. Evaluation of the information received and dissemination of the findings.

Project Methods

Revised Project Method

To review, the revised project method included the DCP information but was modified to a different audience and purpose. The purpose was to identify best practices for undergraduate nursing students to learn how to best engage in the discharge planning process with CHF. The session lasted 15 minutes and developed as both a live session and a recorded session. The teaching /learning session presented to the students comprised the lesson plan, lesson objective, DCP care objectives, DCP treatment plan, elements of the discharge process, the DCP patient survey (Appendix C). The data collection consists of baseline information, Pretest and a Posttest, and Program Evaluation of the learning experience. There was a short debriefing session following the teaching/learning process.

The use of a new, simple, and inexpensive checklist was used as part of the educational opportunity for the nurse students' participants. The checklist appeared to have drastically lowered the likelihood of heart failure patient readmission and improve the quality of care when

used before patients leave the hospital (Appendix D). Second, a Needs Assessment was developed and circulated to a voluntary convenience sample of nurses actively engaged in the discharge planning process during the COVID-19 Pandemic.

Implementation Framework

Model for Improvement for ECU Students. The adoption of a Quality Improvement (QI) measure for teaching students at ECU on educating patients with CHF on discharge techniques to reduce readmission and promote self-management at home is imperative in this project. To achieve this measure the Model for Improvement also referred to as the Plan-Do-Study-Act (PDSA cycle) was necessary to address the need for educating student nurses to provide CHF discharge education to patients and family members.

The first step in the four-step cycle from the Model for Improvement was to *Plan* the change and observation. In the *Plan* phase, the students participated in a teaching plan that included the necessary steps that were involved in discharging patients with CHF. The second step or the *Do* step included trying out the change on a small scale which consisted of a simulation process using a simulation mannequin as the patient. The third part which is the *Study* phase, analyzed the outcome of the data that was collected to determine the content that was learned. The fourth or the *Act* phase consisted of refining changes that were based on what was learned and to repeat the testing if necessary (Melnik & Fineout-Overholt, 2019).

Model for Improvement for Frontline Nurses. A Model for Improvement from the Institute for Health Improvement (IHI) which is also referred to as the Plan-Do-Study-Act cycle (PDSA cycle) was also initiated for a Needs Assessment. A questionnaire survey was conducted to obtain baseline data and to present evidence from seasoned nurses and caregivers that are familiar and experienced with CHF discharge processes. The survey was sent out over a two-week period and attempted to capture input from all nurses that were actively involved in the

discharge process during COVID-19, and the impact of COVID-19 on the discharge process.

Seasoned nurses answered the questions in the survey to the best of their abilities. The data was then analyzed to determine what was learned so that evidence-based information could be presented to the students. Based on the results and the amount of data collected, the information was then presented to the students to engage in the teaching plan.

IRB Submission Process

Institutional Review Boards (IRBs) are committees charged by the federal government with protecting the rights and welfare of human subjects involved in the research. The project investigator obtained permission from Eastern Kentucky University (EKU) Institutional Review Board (IRB) representatives. The primary investigator submitted a Limited Review Application for Exempt Determination (LRAED) to the IRB for approval to conduct the proposed study. The LRAED form was used in the teaching plan for the nursing student's engagement in the study because this is routine teaching, and the primary investigator did not perform any type of instructional teaching that would not have ordinarily been done in the classroom. Approval for the LRAED to conduct the proposed study was granted by the IRB from EKU (Appendix E).

A grade was not associated or assigned to the students with the teaching lesson, and feedback was given for participation in a post-test quiz. The students were not students of the primary investigator, and the faculty member was present to guide the discussion. The LRAED form for the need's assessment was also the form that was submitted to the IRB, because it was a voluntary convenience sample, anonymous, and used only for the purpose of learning. The purpose and intent of the survey was specifically for the use of gathering information and the learning process of implementing a survey.

Ethical Considerations

Using any patient information of the patient in research or education should be with permission of the patient, and results must be presented without mentioning any identifying information (Zahedi et al., 2013). Student nurses were the only participants in this project and the right to no harm was protected. One of the most difficult principles to uphold is Non-maleficence, which requires the nurses to avoid causing harm to patients. The principle of Nonmaleficence is an obligation of not inflicting harm on other human-beings and is closely associated with *first do no harm* (Jahn, 2011). The student nurses were not graded on the teaching session, participation was voluntary, the teaching session was for informational purposes only, and provided an example of a discharge process regarding patients with CHF. Nursing professors and educators made every effort to improve students' knowledge and skills and promote ethical and professional performance. One strategy to improve healthcare services including the quality of nursing training courses, existing guidelines, and standards must be revised and reviewed continuously (Haddad & Geiger, 2020).

The participants in the need's assessments survey were nurses that were involved in the discharge process of patients with CHF, and only discharges that were during the COVID-19 Pandemic. There was no additional information required from the participants of the survey, except for the questions on the survey questionnaire. The ethical principle of *beneficence* was observed in the nurses' willingness to participate in the need's assessment questionnaire survey. The principle of beneficence is a moral obligation to act for the benefit of others (Jahn, 2011).

Recruitment

An announcement was made to the nursing students by the course faculty Dr. Catherine Edwards of the nursing program at ECU School of Nursing. The nursing students could participate per the faculty's announcement. The nursing students participated in a

teaching/learning session that was presented by the primary investigator. There were 83 students out of total 94 students in the nursing class (88 %) that participated in the teaching/learning session.

The survey for the need's assessment targeted nurses that were involved in the discharge process of patients with CHF during the COVID-19 Pandemic. A minimum of ten participants and a maximum of 100 participants will participate in the survey. The survey was posted on a personal account on social media platforms and shared with fellow nurses to share on their social media, nurse colleagues were also encouraged to share the survey with fellow nurses. The survey was posted for a duration of two weeks and a reminder was sent out in week-two of the survey.

Measures and Instruments

The data collected included results from the Demographics, Pretests, Posttests, and Needs Assessment questionnaire survey. Demographics were collected prior to the teaching/learning session. Participating students rated the level of confidence of the Pretest and Posttest on a five-point Likert-type scale ranging from 1 representing strongly disagree to 5 representing strongly agree.

Demographics. Participants' demographic information includes the student's age, gender, and ethnicity. Demographic information allowed the primary investigator to better understand background information of the audience (Appendix F). Data collected from the demographics were analyzed using measures of central tendency. Demographic data was an important factor since the teaching and learning session was also viewed by 50 % of the students via Zoom, which is a cloud-based video communication platform that allows for virtual audio and video conferencing for networking due to the current COVID-19 Pandemic.

Pretest/Posttest. A Pretest and Posttest were administered on the day of the teaching/learning session to assess retention of the information presented and the impact of the

lesson. The level of confidence was also measured at the end of the teaching/learning session. The participating student nurses were already enrolled in the nursing program at the School of Nursing. It was confident that participation in the project would be at least 10 percent of the Needs Assessment survey and at least 95 % students' participation. Data was analyzed using a paired *t*-test to calculate mean knowledge scores from Pretest and Posttest and to perform a combination graph (Appendix G).

Program Evaluation. The program was evaluated with the participation and completion of a Posttest and an evaluation of the impact of the teaching session of the participants. There was a mixed method of qualitative and quantitative questions. Data was analyzed using measures of central tendency (Appendix H).

Needs Assessment. A Needs Assessment was conducted to gather information to assess the impact of COVID -19 on the discharge process of patients with CHF. These Needs Assessment included only the nurses that were currently involved in the discharge process at healthcare facilities that were treating patients with CHF. The discharge process included the current practices since the onset of COVID-19. Data was analyzed using measures of central tendency (Appendix I).

Outcome Measures Plan

Data Analysis Plan

Analysis of the data collected from the Demographic, Pretest, and Posttest were utilized in the Microsoft® Excel Data Analysis program. Data was collected from the student nurses who attend the live teaching/learning session, as well as from the Zoom session. Due to the event of restrictions due to COVID-19 Pandemic, both groups participated in the live session. Data was analyzed using measures of central tendency.

Data Security

The data is accessible only by the primary investigator, the project chair, and the faculty member. The security of data will be stored in the office of Dr. Bradshaw, the project chair for three years. Dr. Bradshaw's office is in 214 in the Rowlett building. The data will then be destroyed after three years.

Timeline of Project Phases

The project took place as scheduled in Fall 2020 in line with the course curriculum and IRB approval, including the readiness of the project's team members. The project is expected to be completed at the end of eight weeks from start to finish. IRB applications were submitted for approval during the fall semester of 2020. The project team met three weeks prior to the start of the project and then again in one week before the start of the project.

Results

The results of this DNP project are presented in the order described in the methodology as follows: 1) the results of the Demographics Surveys; 2) the results of the Pretest/Posttest; 3) the Program Evaluation results; and 4) results of the Needs Assessment Survey. The data for the pretest, Posttest, and Program Evaluation was collected from September 8th, 2020 beginning with the Pretest and ending on September 11, 2020 with the Posttest and Program Evaluation. The Needs Assessment Survey was available from September 27, 2020 through October 09, 2020.

Demographic Survey

The demographics of the student group indicate a total population of $N = 83$. The total population of the student group was $N = 83$ and $n = 83$ students participated. This was 100 % of the total population. The majority were female ($n = 79, 87.5 \%$), and males $n = 4 (12.5 \%)$. The average age group was with a range of 18 to 30 years old $n = 81 (97.5 \%)$, and ages of 31 to 40 years old ($n = 2, 2.5 \%$).

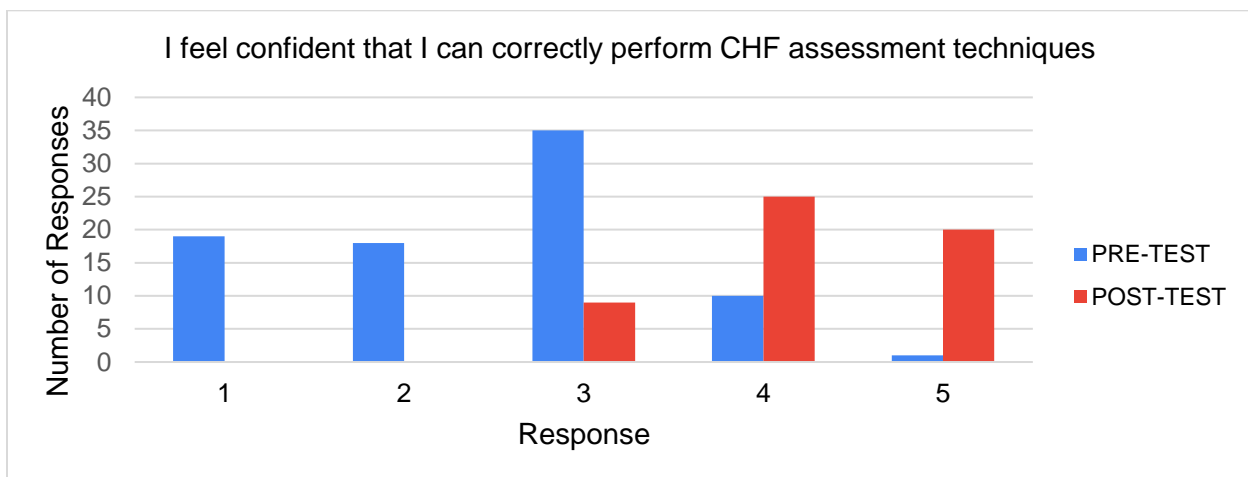
Pretest and Posttest

The pre/post-test was primarily to assess learner confidence. Five questions in the Posttest asked the students to evaluate the impact of the session. Participating students rated the level of confidence of the Program Evaluation on a five-point Likert-type scale ranging from the number 1 representing “strongly disagree” to the number 5 representing “strongly agree”. There were $n = 54$ participants out of a population of $N = 83$ that responded in the Posttest learner confidence, and Program Evaluation. The participation rate fell on the Posttest to 65 % ($n = 54$).

When asked about the correctly performing CHF assessment techniques on the Pretest, the majority of students indicated ($n = 72, 67.8\%$) that they did not feel confident. In the Posttest, $n = 54$ (100 %) said that they felt confident performing the CHF assessment techniques (Figure 1).

Figure 1

Learner’s Confidence of Correctly Performing CHF Assessment Techniques



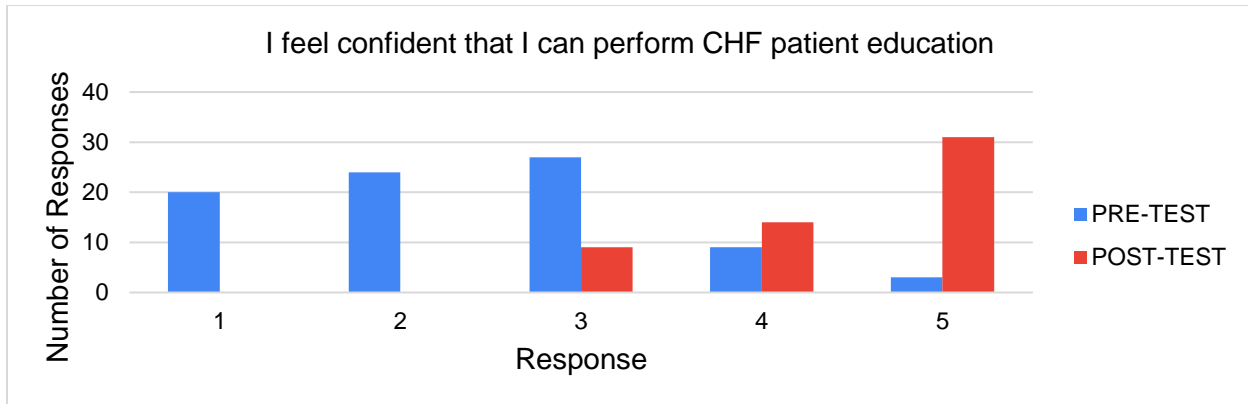
Note. The Likert scale is 1 representing “strongly disagree” and 5 representing “strongly agree”.

The students were asked to rate their level of confidence in performing patient education in the Pretest and Posttest. In the Pretest, $n = 71$ (85.5 %) reported they did not feel confident in

performing patient education. In the Posttest, $n = 47$ (87 %) reported they felt confident in performing patient education (Figure 2).

Figure 2

Learner's Confidence of Performing CHF Patient Education

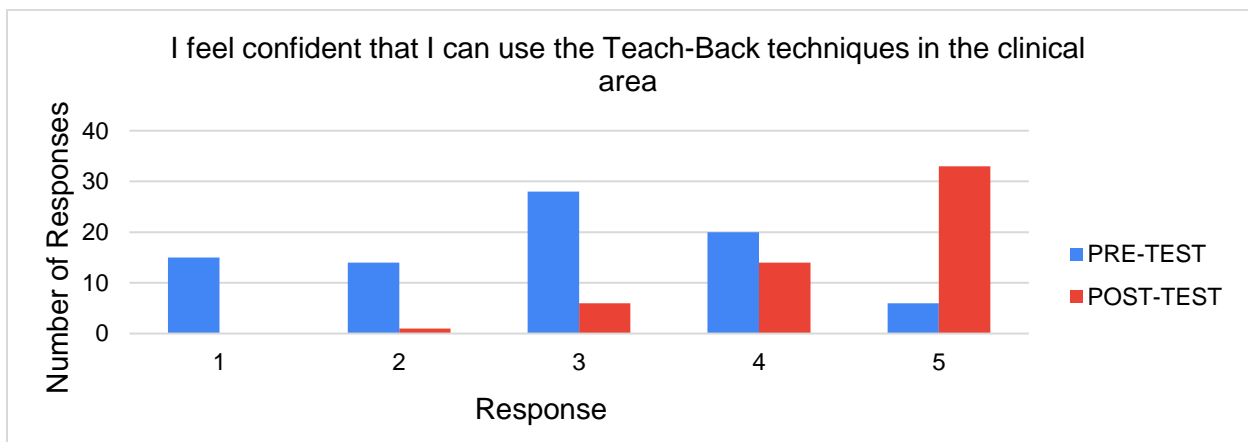


Note. The Likert scale is 1 representing “strongly disagree” and 5 representing “strongly agree”.

When asked to rate their confidence level in the Pretest, $n = 57$ (68.7 %) indicated they were not confident in using the Teach-Back technique in the clinical area. In the Posttest, $n = 47$ (87 %) of the students reported they felt confident in using the Teach-Back in the clinical area (Figure 3). The total number of participants in the Pretest $N = 83$, and $N = 54$ in the Posttest.

Figure 3

Learner's Confidence of Using the Teach-Back Techniques in The Clinical Area



Note. The Likert scale is 1 representing strongly disagree and 5 representing strongly agree.

Program Evaluation

The majority of students $n = 54$ (100 %) felt like the program contained material that is relevant to material and coursework taught in the classroom. The participants ($n = 54$, 100 %) indicated the session was interesting, motivating, presented in an easy-to-understand format, and were satisfied with the presentation. Students ($n = 53$, 98.2 %) also reported the material covered will be beneficial for future use.

Needs Assessment Survey

A Needs Assessment survey questionnaire was conducted via Facebook social media platform nurses to gather information to assess the impact of COVID-19 Pandemic on the discharge process of patients with CHF. Nurses ($N = 39$) responded indicating that they were involved in the discharge process of patients with CHF. The survey consisted of questions relating to challenges with patients, family members, and caregivers, and to describe their involvement during the discharge planning process. A total of $n = 12$ respondents from the survey indicated the discharge process became challenging when family members and caregivers could not be present to receive discharge instruction. Additional themes of issues that impacted the discharge process during the COVID-19 Pandemic included difficulty in communicating effectively over the phone, not being able to observe the teach-back method, and family members who may also have personal health issues.

The majority of respondents individually identified that the family member not being present is the biggest challenge. They also identified quarantine instructions and comprehension of instructions as important challenges during the discharge planning process. It confirmed the suspicion that their absence would have an impact. The responses include that family members and caregivers are not present and that puts the patients at risk for a lack of comprehension of

instructions. There is likely a lower level of family and caregiver's involvement ($n = 6$, 50 %) in the discharge planning process.

More than 50 % of the nurses that responded ($n = 12$) in the survey believed that they were getting the instructions on language interpreters. Respondents ($n = 5$, 41.7 %) indicated more could be done to improve on offering community resources such as financial resources, respites services, and caregiver support to family and caregivers. However, 50 % ($n = 6$) agrees that family members and caregivers are not given adequate time to make decisions prior to being discharged.

An analysis of the Needs Assessment Survey indicated that nurses that are involved in the discharge planning process for patients with CHF during the COVID-19 Pandemic identified the lack of presence of family members as a big challenge. There is difficulty in comprehension of instructions, comprehension of quarantine instructions, comprehension of instructions because they are sick, elderly, and other limitations. The nurses felt that it seemed that information was provided to the family adequately. The one that was identified for improvement was community resources ($n = 5$, 41.7 %). Collectively, the family members and caregivers are not being present, there are concerns regarding the comprehension of instructions, and although information was offered, there can be a significant improvement in caregiver support.

Discussion

The results of the five studies synthesized from the literature review revealed various ways that readmissions and rehospitalizations can be reduced. In the early planning phases of this project, the Delta Care Program (DCP) was one such evidence-based example. It is important for clinicians to recognize that a lack of knowledge regarding self-management and worsening of symptoms, educating nurses as well as patients and caregivers about adequate discharge planning and self-management at home, can reduce rehospitalization (Saito et al.,

2016; Stamp, et al., 2014; Sherman, et al., 2016). Patients with CHF can be enabled to participate and improve in self-management care with the help and actions of nurses and caregivers (Andrietta, Moreira, & Alba Lucia Bottura Leite De Barros, 2011). This self-care process begins with discharge planning. To improve self-care the need for evidence-based discharge planning is of utmost importance. This process may look different pre and post COVID-19 Pandemic.

Patient and caregiver discharge planning education have primarily been the responsibility of nursing. Discharge planning education provides patients and caregivers optimal skills for self-management of the disease process for transition from the hospital to community (Luther, Wilson, Kranz, & Krahulec, 2019). Students who graduate and join the nursing workforce need to have fundamental knowledge and confidence. Students are the future of nursing that may be involved in the discharge planning process. These students may not have full access to all the relevant components in the classroom due to COVID-19 restrictions. The COVID-19 Pandemic had severely impacted higher education as universities closed and countries shut their borders in response to lockdown measures (Schleicher, 2020). For the most part, education institutions quickly incorporated online learning with face-to-face lectures. This transition affected the learning process (Schleicher, 2020).

To enhance learning, the teaching/learning intervention session was an attempt to streamline and offer evidence-based discharge planning for CHF as part of the curriculum. Results of the student's assessment from the Pretest, Posttest, and Program Evaluation indicated that the teaching/learning session was very helpful, and confidence was improved. The student nurses indicated they understood the importance and implication of the discharge process for CHF patients and felt that incorporating the DCP will have great impact on the lives of patients and caregivers. The teaching session was delivered and received as expected with positive

students input and feedback that would pave the way for future students through mock discharge process in the classroom setting.

Nurses on the front line have a unique vantage point to offer regarding discharge planning during the COVID-19 Pandemic. The discharge planning process includes transitioning a patient from one level of care to the next. Ideally, the discharge planning should be individualized with instructions provided to the patient and/or family members (Patel & Bechmann, 2020). According to the perspectives of the survey participants, the challenge is the lack of presence of family members.

In the Needs Assessment survey ($n = 1$, 8.3%) of the respondents stated that “it is believed that they do their best, but many families rely on their significant other and close relatives to help make decisions, so without family involvement no amount of time is going to improve decision making.” It would most likely be beneficial to continuously ask the frontline nurses their perspectives, inquire about resources they may need to help the patients and family members to be involved in the midst of restrictions in the COVID-19 Pandemic. The consistency of the responses from the nurses regarding the families not being present could give the organizations a great starting point. This could direct the institutions and organizations to focus on the family members being present during discharge planning. It is consistent with the findings of Alper, et al., (2020).

Limitations

There were several limitations noted during the implementation of this project. There was a lack of time for the teaching session to be presented to the students. The teaching session was limited to 15 minutes. The student population $n = 83$ was a convenience sample. Time restraint was one of the limitation factors that prevented the students from participating in a better skill

check-off. A practice session of a patient's discharge planning would have validated skill acquisition.

Another set of limitations include the implementation of the Needs Assessment survey that was sent to the frontline nurses that were involved in patients' discharge planning at their place of practice. The implementation of the survey time was quick and meant to provide feedback from the frontline nurses regarding the discharge planning process of patients with CHF during the COVID-19 Pandemic. Another limitation was the questions presented in the Needs Assessments were self-developed, not validated, and due to time constraints, the survey was done over six separate days in a two-week period.

Implications

Practice

It is important that patients are provided with discharge documents that include language and literacy-appropriate instructions and patient education materials to help in a successful transition from the hospital. Use of evidence-based programs to guide practice, like DCP, is advisable. The discharge planning phase is an important factor in developing individualized discharge plans for patients, to ensure that the discharge process is timely, appropriate, and with provision of adequate post-discharge services (Alper et al., 2020). Nurses that participated in the Needs Assessment survey indicated the importance of individualizing and tailoring the discharge planning process to accommodate for language barriers and differences in patients' culture and lifestyle. Discharge documents should be brief, focused on critical information, and directed to the patients' needs for easy understanding and managing their condition after discharge (Alper et al., 2020).

Systems

To determine the most effective and suitable discharge planning process, hospital policy needs to be adjusted to ensure that family members are present. Input from multiple sources can help the discharge planning process to be more successful. The discharge planning process should be partnership-driven between physicians, patients, and the patient's family including the participation of patients in decision-making. Utilization of information technology to support optimal patient care, performance measurement, patient education, and enhanced communication (Cene` et al., 2016).

The interdisciplinary team should include the patient, family members, case manager, nurse, physician, physical and occupational therapist, dietician, social worker, and insurer (Alper et al., 2020). One of the most important criteria in ascertaining that patients are deemed safe and ready for discharge would be for the organization and healthcare institutions to focus on getting the family members to be present during the discharge planning process. Patient and family engagement (PFE) in care is an essential component for optimal health outcomes and a key component of the Patient-Centered Medical Home (PCMH) model. The Patient-Centered Medical Home (PCMH) is a care delivery model that coordinates patient treatment in an easily understood manner (American College of Physicians [ACP], n.d.).

Education

Discharge education contributes to patients' management of post-discharge recovery. An understanding of the nurses' role in discharge education informs the policies and practice to improve the patients' well-being and reduce the potential for rehospitalization (Kang et al., 2020). Nurse educators must prepare clinical nurses through continuing education, in-service programs, and staff development to improve and maintain their teaching abilities (Sherman, 2016; Bastable, 2014). The need to support healthcare staff in confidence and satisfaction with

the delivery of patient education increases, as patient-centered education becomes more widespread, (Lau-Walker, Landy, & Murrells, 2016).

Policy

Patient and family engagement can offer promising pathways towards improved healthcare with better quality and more-efficiency. Patient engagement is a crucial part of a continuously learning health system. At the policy-making level, engagement focuses on developing, implementing, and evaluating national, state, and local health care policy and programs. Patients' engagement in policy, will help ensure that the health care system is oriented and responsive to patients' perspectives (Carman et al., 2013).

Sustainability

The discharge planning process is the development of discharge plan individualized for the patient, before leaving the hospital. This is done to ensure that patients are discharged appropriately, timely, and with adequate post-discharge services. This process should be done at every inpatient healthcare facility and should be made mandatory to include the teach-back technique prior to the patient leaving the facility (Alper et al., 2020).

At the time of discharge, the patient should be provided with a document that includes language and literacy-appropriate instructions and patient education materials to help in a successful transition from the hospital (Alper et al., 2020). The discharge documents should be brief, information that is relevant to the patient, and directed at the patient's needs for self-management. The information should be written and verbal, be reviewed with the patient/family caregivers, and contain a teach-back component. Preparing patients/family caregivers to be knowledgeable and ready to perform the post-discharge tasks should be started at least prior to the day of discharge (Alper et al., 2020).

Future Scholarship

As an educator involved in teaching nursing student nurses, the primary investigator will be working with other faculty members to incorporate the material into the nursing student curriculum that is related to the discharge process and the application of a program that will prevent readmission of CHF patients. Student nurses will be presented with educational content about the prevention of CHF readmissions utilizing the DCP model. Objectives of the content will include the main reasons for assisting patients and caregivers to participate in the DCP which includes self-management of CHF, living a healthier lifestyle in the comfort of their homes, and preventing rehospitalization.

The ongoing student curriculum of preventing rehospitalization of CHF patients is an ongoing effort to educate nursing students with tools to help patients with CHF self-manage the disease process. Educating patients on self-management has been associated with reducing readmission rates in CHF patients. Evidence from a prospective study revealed that patients with CHF exhibit more engagement in self-management and are found to have fewer rehospitalizations (Shaw et al., 2014). A randomized controlled trial found that CHF patients and caregivers that received a nurse-led self-management program demonstrated better symptom management and self-care behaviors (Smeulders et al., 2010).

Conclusion

Clinicians are continually challenged to prevent readmission of patients with CHF. Patients that are hospitalized for CHF or re-admission of CHF within 30 days after discharge have complex care management needs are at risk for worsening of the disease process. Preparing the new generation of nursing students how to apply knowledge, skills, attitudes, evidence-based practice, and standardized tools while including all the stakeholders will improve the discharge process for patients with CHF. Covid-19 Pandemic created a situation that provided an

opportunity for nurses to adapt to the ever-changing policies and evidence-based practices being implemented from the ongoing research of improving patient outcomes through a standardized discharge process utilizing the DCP. Teaching the new nursing profession, the importance of being dedicated to lifelong learning and adaptable to diverse situations that arise will equip the nurses to be resilient in the midst of emergent situations, research solutions to barriers and challenges all while not wavering in providing excellent patient care.

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Appendix A

Evidence Synthesis Table

Intervention/Outcomes: Synthesis Table

	A (#1)	B (#2)	C (#3)	D (#4)	E (#5)
Outcomes	Saito et al. 2016	Stamp et al. 2014	Torisson et al. 2013	Ziaecian et al. 2016	Lee et al. 2016
1.Risk factors of readmission < 90 days post discharge (D/C)	Sought risk factors to predict < 90-day readmission	Pending risk factors post D/C	Increase risks for readmission before 90 days post D/C		Weighted mean for 30-day readmission was 26 % improvement
2.Quality of life (QOL) for patient with congestive heart failure (CHF)		Monitor QOL and readmission rates		Improved QOL scores	Significant improvement in QOL after 3 months, reduce cost due to transitional care
3.Education/ Teaching/Knowledge			Education is a factor in control and intervention groups	Provide comprehensive to patient and family	A multidisciplinary approach lowered readmissions and hospital cost
4.Decrease hospital 30-day readmission rate		Measured readmission rates within 30 days post D/C	Hospital readmission most common in elderly patients	Reduce readmissions rate and improve hospital performance on the 30-day measure	Education, medication, follow-up care reduced readmissions by 56.2% including quality of life
5.Increase follow up (F/U) with phone post D/C	F/U phone calls after hospital D/C	Post D/C F/U phone call and possible home visit	Improve D/C planning post D/C phone F/U	F/U reduced readmission by 56.2 %	Out-patients visits and F/U phone calls

Appendix B

Level of Evidence

	Level of Evidence	I	II	III	IV	V	VI	VII
Article Author & Date.								
1) Meta-analysis of risks for short-term readmission in patients with heart failure. Saito et al., 2016.		X						
2) Transitional care programs improve outcomes for heart failure patients Stamp et al., 2014.			X					
3) Multidisciplinary intervention reducing readmissions in medical inpatients: a prospective, non-randomized study Torisson et al., 2013				X				
4) The prevention of hospital readmissions in heart failure. Ziaecian et al., 2016					X			
5) Post-discharge follow-up characteristics associated with 30-day readmission after heart failure hospitalization Lee et al., 2016						X		

Appendix C

The Lesson Plan

Lesson Plan for Discharge Planning Consideration for Patients With CHF

Lesson Objectives

After completing this teaching session, the students will be able to:

- a. Apply knowledge from lecture to the discharge process.
- b. Understand the elements discharge process for Patients with CHF.
- c. Appreciate key elements of the DELTA program.
- d. Observe the Teach-Back method
- e. Discuss best practices for the future discharge process.

Introduction to Heart Failure

Congestive heart failure (CHF) is a life-threatening condition in which the heart can no longer pump enough blood to meet the metabolic needs of the body. Currently, there is no cure for CHF. Current treatment relies on early recognition and management of this life-threatening condition.

DELTA CARE PROAGRAM (DCP) Care Objectives

1. Patients will be seen by primary care providers within 5-7 days post-discharge.
2. Patients will be able to obtain and comply with the prescribed medication post-discharge.
3. Patients will be able to meet clinical goals for self-management such as daily weight, sodium intake and urinary output.
4. Patients will be to recognize and seek the appropriate level of care if condition their worsen and avoid re-hospitalization.
5. Patients will be able to identify and implement at least one of the recommended dietary changes.

DCP Treatment Plan

1. Activity
2. Diet
3. Daily Weight
4. Discharge Medication
5. Worsening of symptoms
6. Follow-up Appointments

Elements of The Discharge Process

Discharge planning — development of an individualized discharge plan for the patient

Discharge summary — communication between the hospital care team and aftercare providers

Patient instructions — patient education materials to help transition from the hospital to home

Teach back — Teach back is a technique by which the provider asks the patient or caregiver to explain the recently taught concept in the patient's own words.

This technique allows the provider to identify and correct any misunderstandings in real time, Educating and preparing patients/family caregivers to be adequately knowledgeable and ready to perform care tasks required after discharge should be started prior to the day of discharge.

Teach back may be used iteratively, starting early in the hospitalization, to build knowledge, attitudes, and skills more effectively.

Discharge checklist - Checklists provide an effective mechanism for ensuring that discharge communications reliably incorporate all key elements.

DELTA CARE PROGRAM Patient Survey

Scale 1-5 with 1 being the Least helpful, and 5 being the Most helpful.

Data	1	2	3	4	5
Do you think The DELTA program helped you to understand your disease?					
Do you think the DELTA program helped you to understand your medications?					
Do you think the DELTA program helped you to recognize symptoms of your condition?					
Do you think the DELTA program helped you to understand you diet and exercise plans?					

Appendix D

Discharge Criteria Checklist Prior to Discharge from Healthcare Facility

- Patient's cognitive status.
- Patient activity level and functional status.
- The nature of the patient's current home and suitability for the patient's conditions.
- Patient and family education completed.
- Availability of family or companion support.
- Ability to obtain medications and services.
- Need for medication adherence understood by patient/family.
- Dietary sodium restriction and understands rationale for adherence.
- Need for weight-monitoring of daily weights.
- Patient/Family knowledge of when to contact their healthcare provider.
- Availability of services in the community to assist the patient with ongoing care.
- Availability of transportation from hospital to home and for follow-up visit
- Follow-up clinic visit scheduled within 5-7 days post discharge is documented.

Appendix E

IRB Approval Granted to Conduct Study



Application
Management

Hello Jainarine Ramlochan,

Congratulations! Using a limited review process, the Institutional Review Board at Eastern Kentucky University (FWA00003332) has approved your request for an exemption determination for your study entitled, "Discharge Planning Considerations for Congestive Heart Failure: A DNP Project" This status is effective immediately and is valid for a period of three years as long as no changes are made to the study as outlined in your limited review application. If your study will continue beyond three years, you are required to reapply for exemption and receive approval from the IRB prior to continuing the study.

As the principal investigator for this study, it is your responsibility to ensure that all investigators and staff associated with this study meet the training requirements for conducting research involving human subjects and comply with applicable University policies and state and federal regulations. Please read through the remainder of this notification for specific details on these requirements.

Adverse Events: Any adverse or unexpected events that occur in conjunction with this study should reported to the IRB immediately and must be reported within ten calendar days of the occurrence.

Changes to Approved Research Protocol: If changes to the approved research protocol become necessary, a Protocol Revision Request must be submitted for IRB review, and approval must be granted prior to the implementation of changes. If the proposed changes result in a change in your project's exempt status, you will be required to submit an application for expedited or full review and receive approval from the IRB prior to implementing changes to the study. Changes include, but are not limited to, those

involving study personnel, subjects, recruitment materials and procedures, and data collection instruments and procedures.

Registration at ClinicalTrials.gov: If your study is classified as a clinical trial, you may be required by the terms of an externally-sponsored award to register it at ClinicalTrials.gov. In addition, some medical journals require registration as a condition for publication. In the case of journals with membership in the International Committee of Medical Journal Editors, clinical trials must be registered prior to enrolling subjects. It is important that investigators understand the requirements for specific journals in which they intend to publish. In the case of sponsored project awards, timeline requirements will vary for awards that require registration. Approved consent forms must be uploaded in the system for all Federally-funded clinical trials after subject enrollment has closed, but earlier registration is not required for all agencies. If you have questions about whether a sponsored project award requires registration and on what timeline, please send an email to tiffany.hamblin@eku.edu before beginning recruitment so that the specific terms of the award can be reviewed. If you have a need to register your study and do not have an account in the system, please send an email to lisa.royalty@eku.edu and request to have a user account created.

If you have questions about this approval or reporting requirements, contact the IRB administrator at lisa.royalty@eku.edu or 859-622-3636.

For your reference, comments that were submitted during the review process are included below. Any comments that do not accompany an "I approve" response have been provided to you previously and were addressed prior to the review process being completed.

[View Application](#)

Faculty Advisor Approval

Reviewer 1

Comments

Response

Reviewer Input: :

I Approve

I approve	
Reviewer 2	
Comments	Response
Reviewer Input: : I approve the submission	I Approve

Department Chair Approval

Reviewer 1	
Comments	Response
Reviewer Input: : Approve	I Approve

IRB Review - Round 1

Reviewer 1	
Comments	Response
Reviewer Input: : I approve	I Approve

Appendix F

Needs Assessment to Implement A Teaching Plan To Nursing Students



Primary Investigator
Jai Ramlochan DNP student
Eastern Kentucky university
jainarine_ramloch@mymail.eku.edu

EKU 521 Lancaster Ave, Richmond, KY 40475
Phone: (859) 622-1000

606-875-4779 | jainarine_ramloch@mymail.eku.edu

Appendix G**Participant's (students) Demographics**

Category	Ethnicity	Percentage of Participants
Gender	Male	
	Female	
Age	18 -30	
	31-40	
	41-50	
	51-60	
	61-70	
	71-80	
	81-90	
	91-100	

From “Anonymity in Bitcoin? The Users’ Perspective” by B. Fabian and M. Lischke, 2016, Research Gate. CC BY 4.0

Demographics: How do you identify your gender?

- Female.
- Male.
- Prefer not to answer.
- Other.

Appendix H

Learner's Level of Confidence in Pretest

Questions	Strongly Disagree 1	Disagree 2	Neither agree nor Disagree 3	Agree 4	Strongly Agree 5
1. I feel confident that I can correctly perform CHF assessment techniques.					
2. I feel confident that I can correctly perform CHF patient education.					
3. I feel confident that I can use Teach-Back techniques in the clinical area.					

Appendix I

Post-test: Learners' Confidence & Program Evaluation

The participants confidence in response to three statements both before and after training:

Questions	Strongly Disagree	Disagree	Neither agree nor Disagree	Agree	Strongly Agree
1. I feel confident that I can correctly perform CHF assessment techniques.					
2. I feel confident that I can correctly perform CHF patient education.					
3. I feel confident that I can use Teach-Back techniques in the clinical area.					
4. Program Evaluation: The session contained material that is relevant to course work.					
5. Program Evaluation: The session was interesting and motivating.					
6. Program Evaluation: the content presented in the session was easily understood.					
7. Program Evaluation: The material covered in the session will be beneficial for future use.					
8. Program Evaluation: Rate your satisfaction of the session presented.					

Appendix J

Needs Assessment for Nurses Actively Engaged in the Discharge Planning Process during COVID-19 Pandemic



Primary Investigator
Jai Ramlochan DNP student
Eastern Kentucky university
jainarine_ramloch@mymail.eku.edu

EKU 521 Lancaster Ave, Richmond, KY 40475
Phone: (859) 622-1000

606-875-4779 | jainarine_ramloch@mymail.eku.edu

Appendix K

Needs Assessment Survey for Nurses Directly Involved in CHF Discharges During COVID-19 Pandemic

The purpose of this survey is to assess the impact of COVID–19 on the discharge process in patients with:

CHF in healthcare facilities. The intended audience includes nurses that are currently involved in the discharge process at their healthcare facility.

- The survey is voluntary, anonymous, and should only take five (5) minutes of your time.
- The survey is being used as a component of a DNP Project at Eastern Kentucky University.

Instructions

- Please rate each question on the scale and respond to the open-ended questions.
- All questions pertain specifically to the discharge planning process since the COVID-19 Pandemic.

Thank you in advance for your time!

1. Since COVID-19, what challenges have occurred for you as a nurse during the discharge planning process?

Short answer text _____

2. Since COVID-19, what challenges have occurred for patients and family members/caregivers during the discharge planning process?

Short answer text _____

3.

Since COVID-19, what best describes the involvement of families and caregivers in the discharge planning process?	Not at all involved	Somewhat involved	Neither involved nor uninvolved	Involved	Very Involved
Choices	1	2	3	4	5

4. Since COVID-19, have patient/family members been given adequate time to make decisions prior to discharge?

- Yes
- No
- Maybe
- Other

3. Since COVID -19, have the patient/ family members been provided with adequate discharge information including the appeal process?
4. Yes
 5. No
 6. Maybe
 7. Other
6. Since COVID -19, have the patient/ family members been given information about all available care options, such as home care, and adult day care services?
- Yes
 - No
 - Maybe
 - Other
7. Since COVID - 19, have the patient/ family members been advised about the costs of the different care options following discharge?
- Yes
 - No
 - Maybe
 - Other
8. Since COVID - 19, have the patient/ family members been informed about essential services and equipment needed at the time of discharge (e.g., transportation, hospital beds, walkers, etc.) and how to obtain them?
- Yes
 - No
 - Maybe
 - Other
9. Since COVID - 19, have the patient/ family members been given information about community resources available to the caregiver, such as caregiver support groups, financial assistance, respite services, etc.?
- Yes
 - No
 - Maybe

- Other
10. Since COVID - 19, have the patient/ family members been provided with printed materials in different languages, when needed?
- Yes
 - No
 - Maybe
 - Other
11. Since COVID -19, have the patient/ family members been allowed to use professional interpreters (Language Line, staff who speak the language), when needed?
- Yes
 - No
 - Maybe
 - Other
12. Is there anything else that you want to add to the current discharge practices that would make patient-friendly, including discharge instructions, follow-up appointments, to enhance patient satisfaction?
- Yes
 - No
 - Maybe
 - Other