Improving Readmissions for Heart Failure Patients Utilizing a Standardized Discharge Protocol

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Abstract

Heart Failure (HF) is an acute disorder which occurs when the heart has difficulty pumping enough blood and oxygen to the heart and other organs. Heart failure is the cause of more than 20% of all readmissions in acute care hospitals, and more than 50% of HF patients will be readmitted within six-months. The cost of 30-day all-cause readmission is associated with $41.3 billion in hospital costs and affects approximately 3.3 million adults. HF has a high rate of morbidity and mortality, which imposes a burden on patients/families and health systems. It is estimated that by 2030 there will be approximately eight million people diagnosed with HF in the US annually. Poor discharge processes can cause higher readmissions rates and unfortunate patient outcomes. When nurses utilize a standardized discharge process, patients are 30 percent less likely to be readmitted within 30 days of discharge compared to a patient who did not receive a standardized discharge process. The purpose of this project was to create a HF discharge protocol (HFDP) and evaluate the 30-day readmission rates after implementation. This project was implemented on a Medical/Surgical/Telemetry unit in an acute care setting. The project design was a quality improvement project of all patients admitted to this unit with a diagnosis of HF. The Donabedian Theory provided theoretical foundation for the project. Results showed a strong positive correlation between HFDP and a decrease in 30-day HF readmissions.

Key words: heart failure, 30-day heart failure readmissions, discharge process, medical/surgical/telemetry units

Improving Readmissions for Heart Failure Patients Utilizing a Standardized Discharge

The Center for Disease Control and Prevention [CDC] (2019) describes the prevalence of Heart Failure (HF) in the United States (US) is more than 6.5 million people contributing to one in eight deaths in 2017. According to Ryan et al. (2019) more than one million hospitalizations occur every year due to HF. Hospital readmissions are common and costly; therefore, the Center for Medicare and Medicaid Services (CMS) has applied penalties under the Hospital Readmission Reduction Program (HRRP) for hospitals who have a high rate of readmissions. CMS (2020) refers to six conditions that are specific to the HRRP 30-day unplanned readmissions, and HF is one of these conditions. Chava et al. (2019) describe the cost of readmissions in America is approximately 2.7 billion dollars annually. According to Chava et al. (2019), HF is the principal cause of readmissions and it is shown to have an increase length of stay, can cause an increase in morbidity and mortality, and poor patient outcomes.

Peter et al. (2015) explains that hospital readmissions are often avoidable. Variances in transitions of care from hospital to home often exist placing patients at risk of readmissions, which may result in poor patient outcomes (Peter et al., 2015). Improving the discharge process and reducing hospital readmissions utilizing a standardized discharge protocol and a Transition of Care (TOC) Model can reduce readmissions and improve patient care.

Background

The CDC (2019) describes HF as an acute disorder which occurs when the heart has difficulty pumping enough blood and oxygen to the heart and other organs. HF is often associated with other diseases such as coronary artery disease, diabetes, high blood pressure, obesity and other conditions related to heart disorder and/or valvular heart disease (CDC,2019).

Indications of HF are difficulty breathing during daily activities or when laying down, with a possible weight gain and swelling in feet, ankles, legs or stomach and/or a general feeling of tiredness and or weakness (CDC, 2019). Roger (2013) describes HF as a chronic disease that is distinguished by acute exacerbation, which may be a gradual or rapid change in symptoms resulting in urgent treatment, hospitalizations, and often related to 30 day-readmissions. O'Connor (2017) describes the prevalence of HF in the US is more than 20% of all readmissions in acute care hospitals, and more than 50% of HF patients will be readmitted within six-months. Hines et al. (2014) describes that in 2011, the cost of 30-day all-cause readmission is associated to $41.3 billion in hospital costs and affected approximately 3.3 million adults. Sevilla-Cazes et al. (2018) describes that HF has a high risk of morbidity and mortality rate and this imposes burden on patients/families and health systems. It is estimated that by 2030 there will be approximately eight million people with HF in the US (Sevilla-Cazes et al., 2018). The Affordable Care Act (ACA) implemented the HRRP though a Medicare value-based purchasing program that reduces payments to hospitals with increased rates of readmissions. This program was implemented to improve healthcare for Americans by linking payment to quality hospital care (CMS, 2020). Evidence-based practices have shown to decrease readmissions by increasing the length of stay, implementing transitions of care, and access to a provider within seven days of discharge (O'Connor, 2017).

CMS identifies the readmissions rate of HF to be at 15.3% or less (CMS, 2020). Healthcare systems need to reduce HF readmissions in order to not be penalized, however the major focus is to decrease readmissions and financial burden to hospitals, improve quality of care, clinical outcomes and patient's quality of life (Roger, 2013). O'Connor (2017) describes that implementation of initiatives and coordination of care can reduce HF readmissions. Dizon &

Reinking (2017) discusses the need for an interdisciplinary nursing managed approach in which there must be executive support and a focus on collaboration with community partners. Community partners can be skilled nursing facilities, hospice and home health agencies that can assist hospitals in preventing readmissions (Dizon & Reinking, 2017).

Hines et al. (2014) states that HF is one of the major 30-day readmissions for Medicare patients with approximately 134,500 readmissions and a readmission rate of 24.5%. Health care transformation has specifically focused on reducing readmissions as an area to improve patient care, coordination, transitions of care and improving patient outcomes (Hines et al., 2014). Kamermayer, Leasure & Anderson (2017) define transitions of care interventions are founded on evidence-based protocols to improve the discharge planning process, engage patient and family in their care, and reduce preventable readmissions. Hesselink et al. (2014) describes that incomplete transitions of care and incorrect information between hospital care providers and receiving agencies may lead to unplanned readmissions and a systematic approach based on evidence- based standardized discharge protocol would reduce 30-readmissions and improve patient care.

Messerli & Deutsch (2020) describe that a poor discharge process can cause higher readmissions rates and unfortunate patient outcomes. A well implemented discharge process includes patient education on: disease process, discussion of any tests performed during hospitalization, teach back education on new medications, and follow- up appointments (Messerli & Deutsch, 2020). The Agency for Healthcare Research and Quality [AHRQ] (2013) implemented a Re-Engineered Discharge (RED) toolkit in 2013, which provides a discharge checklist of 12 recommended actions that hospitals can implement to make sure patients are discharged utilizing a standardized discharge protocol through a TOC model. AHRQ (2013)

explains that when nurses utilize the RED standardized discharge tool kit, patients are 30 percent less likely to be readmitted within 30 days of discharge compare to a patient who did not receive a standardized discharge protocol.

Problem Identification

The practice site has no policy or procedure at this time that addresses a standardized discharge protocol. Nurses do not have a structured process on when to start patient education or the discharge process. Robeznieks (2017) discusses that discharge education needs to start when the patient is admitted, which includes getting to know the patient, his/her support system and building trust with the patient and family. Robeznieks (2017) describes interventions that can improve discharge process are: 1) identifying patients at risk of readmission, 2) educating patients about their disease process, medications and signs and symptoms to watch for, and 3) improving interdisciplinary communication. Implementation of a standardized discharge protocol utilizing a TOC Model may improve the discharge process, quality of care, decrease treatment variability and reduce hospital readmissions (Messerli &Deutsch, 2020).

Project Question

Will nurses implementing a standardized discharge protocol on a Medical/Surgical/Telemetry unit improve the HF readmission rates compared to current practice within a four-week period?

P= Population = Nurses on a Medical/Surgical/Telemetry unit as well as case managers assigned to this specific unit.

P= Problem = Increase in 30-day HF readmissions.

I= Intervention = Implementation of a standardized discharge protocol for HF patients

C= Comparison = No standardized discharge protocol

O= Outcomes = Reduced hospital readmissions for HF patients

T= Time = Four weeks

Search Methods

An exhaustive literature review was performed using keywords: heart failure, 30-day readmission, discharge process and medical/surgical/telemetry units. The review of study methods included Cochrane Library, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and ProQuest Nursing and Allied Health Sources databases were searched. Inclusion criteria were articles from the past five years written in English, full text peer review journals, Boolean phrase, with articles consisting of randomized control trials, systematic reviews, meta-analyses, national and clinical practice guidelines with the Agency of Healthcare Research and Quality (AHRQ). These study methods are pertinent to the objectives of this project because they are a credible source of information and all reflect a decrease in readmissions with a standardized discharge process. Some articles were found that did not show a reduction in readmission rates after using a standardized protocol due to challenges and limitations to translate evidence-based practices into daily discharge plans, lack of engagement of all stakeholders and/or not having a dedicated person such as a patient navigator. There were no existing facility policy or protocols that could be used in this project. Exclusion criteria included duplicate articles and articles that did not include solutions to 30-day readmissions and or not in relation to the PICOT question.

The initial literature search for heart failure resulted in 194, 087 articles, but when 30-day heart failure readmission was added to the search, it resulted in 6,791 articles. Implementation of a discharged protocol for heart failure than resulted in 2,773 articles and when included medical surgical telemetry units it decreased to 34 articles. For the purpose of this project, 34 articles were reviewed in relation to the PICOT question. The literature review included four main themes: heart failure, 30-day readmissions, discharge process and Medical Surgical Telemetry

units.

Review of Synthesis

By employing the literature search on reducing HF readmissions, considerable research was found with recommendations on utilizing a standardized discharge protocol, which can possibly reduce readmissions. According to the CDC (2019) there are more than 6.5 million people in the US diagnosed with HF, who account for more than one million hospitalizations a year (Ryan et al., 2019). Heart failure is the major cause of readmissions and is related to increase morbidity, mortality and poor patient outcomes (Chava et al., 2019). The types of studies reviewed and chosen were randomized control trials, which described that discharge planning associated with transitions of care were effective in reducing readmissions (Diplock et al., 2017; Loop et al., 2016; Vedel & Khanassov, 2015). Two randomized control trial studies showed that using a patient navigator was necessary to improve transitions of care (Balaban et al., 2017; Galbraith et al., 2017).

Literature Theme Development

Impact of the Problem

There are over one million hospitalizations per year in the US in relation to HF (Ryan et al., 2019). This literature review has identified trends that a HF diagnosis is the leading cause of readmissions in patients aged 65 years and older (Gupta & Fonarow, 2018; Qaddoura et al., 2015). Heart failure readmissions are often due to poor transitions of care associated with a lack of patient's understanding of the treatment plan, symptom exacerbation, as well as non-adherence to medical therapy (Wang et al., 2016). All of these reasons are related to a lack of coordination in the discharge processes. Multiple gaps exist in the coordination of care with discharge process, including the transfer of patient information between different healthcare

levels, inadequate preparation of patient/family and poor care transitions (Vedel & Khanassov, 2015; Van Melle et al., 2018; Diplock et al., 2017). HRRP a Medicare value-based purchasing program urges hospitals to improve coordination of care with better patient/family engagement with the discharge process to reduce avoidable readmissions (O'Connor, 2017). Hospitals are now penalized for 30-day readmissions by CMS withholding reimbursement for the readmitted diagnosis (CMS, 2020). This HRRP program was implemented to improve patient care by connecting payment to the quality of hospital care (CMS, 2020).

Heart Failure occurs when the heart is not pumping as well as it should be (AHA,2020). The American Heart Association (AHA), American College of Cardiology (ACC) and Heart Failure Society of America (HFSA) developed evidence-based guidelines for the management of HF in 2017 (Yancy et al., 2017). The HF management guidelines included clinical evidence for medication management, discharge education, and follow-up appointments with providers. These guidelines are meant to improve patient's quality of life and are aligned with meeting patients' needs and reducing readmissions. A review of study from Yancy et al. (2017) showed how a task force was implemented to update the 2013 ACC/AHA Guideline for the management of HF with new evidence since its first publication which included: new therapies, updates on HF with preserved ejection fraction, comorbidities, sleep apnea, anemia and hypertension. The ACC, AHA and HFSA guidelines for the management of HF offers evidence-based guidelines for the treatment of HF (Yancy et al., 2017). The writing committee used evidence-based methodologies with a literature search focused on randomized controlled trials and also included nonrandomized comparative and descriptive studies, case studies, cohort studies, systematic reviews and expert opinions (Yancy et al., 2017). An independent Evidence Review Committee (ERC) was commissioned when there was more than one questions from the team which needed a formal

systematic review and 2017 ACC/AHA Guideline for management of HF was updated (Yancy et al., 2017). The 2017 HF practice guideline from the ACC/AHA and HFSA offers recommendations applicable to patients with a HF diagnosis. This guideline will be compared with the practice site HF management documentation guideline in the data abstraction at the practice site.

Relevant Background

Thousands of articles on HF and 30 -day readmissions were found during the literature search. Hospitals in the US have focused on reducing 30-day readmission rates in order to reduce costs and improve patient care; however, hospitals continue to struggle with the 30-day readmission rates of patients diagnosed with HF (Sevilla-Cazes et al., 2018). According to the CDC (2019), heart failure continues to increase annually with a current rate of 6.5 million Americans. The CDC (2019) further explains that one in eight people diagnosed with HF will die and more than one million hospitalizations are due to a diagnosis of HF. Acute care hospitals are tasked with reducing these rates with evidence-based practices Multiple research articles have presented that HF 30-day readmissions can be reduced if hospitals improve transitions of care by utilizing a discharge standardized protocol (Diplock, 2017, Dizon & Reinking, 2017; Kang et al., 2018; Peter et al., 2015).

A review of study from Balaban et al. (2017) utilized a randomized control trial within an academic center with a patient navigator to implement standardized practices to reduce HF readmissions with a maximum load of 30 to 35 patients at a time and compared this to a control group with no patient navigator. Galbraith et al., 2017 reviewed readmissions data over a period of 1.5 years with a patient navigator. Both studies were reliable with the number of patients reviewed. Balaban et al. (2107) showed the need for a patient navigator to improve transitions of

care with patients over 60 years old with a complex discharge home routine order versus the study by Galbraith et al. (2017), who did not show a difference with a patient navigator unless it was a very complicated discharge. The limitations in regard to these two studies where the authors did not review the cost of hiring a patient navigator and lacked access of data claims to define the actual cost of HF readmissions at these facilities. However, adding a patient navigator at the practice site is not a solution to reduce 30-day HF readmission rates due to the extra cost related to creating a new full-time position and no real data to show the improvements of reducing HF readmissions.

Currently Understood

Common themes identified were related to coordination of care with an organized process to improve transitions of care from hospital to home and decrease readmissions (Mennuni et al., 2017; Kamermayer et al., 2017; Murtaugh et al.; 2017, Sevilla-Cazes et al.; 2018, Dizon & Reinking, 2017; Van Melle et al., 2018). Sommer et al. (2018) describes how patients who are hospitalized do not necessarily know their admissions diagnoses, planned tests and procedures, the medications they are receiving and the names and roles of hospital team members. Patients understanding their care is crucial to improve patient care outcomes and nursing teams need to implement targeted interventions that aim in improving knowledge, explaining factors that can improve patients' behaviors and outcomes (Sommer et al., 2018). Challenges do exist with transparency of the data, interdisciplinary care and team work to link patients with home health agencies and improve the transition of care (Gupta & Fonarow, 2018; Samal et al., 2016; Kang et al., 2018)

A review of study from Hesselink et al. (2014) utilized random controlled trials along with a review of studies and applied the PRECEDE-PROCEED model from L.W. Green 1974

that can help health care administrators, policy makers to analyze a situation and design a health care program. The guiding framework utilized was Intervention Mapping (IM) which is a systematic, six-step process in identifying, assessing and priorizing evidence-based interventions prior to implementing a new project. The six-step process includes: 1) problem analysis, 2) identifying interventions outcomes, performance objectives and change objectives, 3) selection of theory-based methods and strategies, 4) developing an intervention, 5) implementation and 6) evaluation (Hesselink et al., 2014). The study was valid and theory based with a guiding framework according to Hesselink et al. (2014) the authors recommended more policies and procedures are required to improve hospital readmissions by reviewing charts and focusing on why readmissions are occurring.

Thirty-Day HF Readmissions

A systemic review was completed on 30-day HF readmissions, which showed trends and patterns in the review of literature (Balaban et al., 2017; Galbraith et al., 2017, Diplock et al., 2017 and Vedel & Khanassov, 2015). Murtaugh et al. (2017) describes that among Medicare beneficiary's HF hospitalizations have the highest 30-day all cause readmission rate with the greatest number of readmissions of 134,500 patients and the largest estimated costs of $1.7 billion dollars. Rosa et al. (2109), describes patients who are very elderly, with elevated risks of renal failure, living alone, or having inadequate social support present with higher risks for readmissions. Completion of a post discharged follow-up phone call may not be sufficient to prevent a hospital readmission (Qaddoura et al., 2015; Wang et al., 2016; Murtaugh et al., 2017). Over the past ten years, hospitals have implemented interventions to reduce HF readmissions; however, HF diagnosis is still the highest readmission diagnosis for Medicare patients. Therefore, hospitals need to review their discharge process and interventions (Murtaugh et al.,

2017, Rosa et al., 2019).

Loop et al. (2016) conducted a retrospective study with a review of five percent national sample of Medicare patients who had an inpatient claim for an overnight hospital stay with a primary discharge diagnosis of HF between 2007 and 2011 who lived in the US for at least one year before the index claim admission date. A random sample of 76,555 HF patients met inclusion criteria, the authors found that after adjusting the HF severity, co-morbidity, age of patient, preserved ejection fraction and living at home or in a nursing home, there was no difference between the patient hospital length of stay and 30- day readmissions. The study showed limitations in regard to co-morbidities, HF diagnosis, and preserved ejection fraction and recommended that providers should look at implementing national guidelines in regard to new therapeutic medication strategies to reduce HF readmissions (Loop et al., 2016).

Discharge Process

Many studies such as Peter et al. (2015); Kang et al. (2018); and Wang et al. (2016) describes strategies to address 30-day HF readmissions by improving transition of care and specific interventions that include: patient/family education in self-management, discharge planning, structured follow-up discharge appointment, and coordination of care with the primary care provider. Peter et al. (2015) describes how teach-back methods can be beneficial with patient/family education and when using the learning domains of knowledge, behaviors and attitude it can improve patient adherence and understanding in regards to medications, signs and symptoms and when to call the provider to prevent a readmission to the hospital. The review of literature also suggested the need for further validation of risk predictive models, which focused on general medical conditions in relation to unplanned readmissions by using clinical guidelines with transitions of care (Kang, et al., 2018; Rosa et al., 2019; Zhou et al., 2016; Vedel &

Khanassov, 2015).

A review of study from Kamermayer et al. (2017) utilized PRISMA; Preferred Reporting Items of Systematic Reviews and Meta-Analyses by focusing on the reporting of reviews evaluating randomized control trials. Kamermayer et al. (2017) reviewed transitions of care guidelines interventions aimed at reducing readmissions. The authors found that by utilizing tailored planning intervention the HF patients had a reduction in readmissions; however, there were limitations found when authors did not include the emergency department visit, the cost of care, and/or percent of mortality. The national guidelines in relation to transition of care interventions by AHRQ RED toolkit (2013), consists of a set of 12 actions that hospitals can implement for transition at discharge which includes: 1) need to obtain language assistance, 2) follow-up appointments with provider, 3) follow-up results from tests or labs pending at discharge, 4) organize post-discharge outpatient services, 5) identify the correct medication and how patient will obtain prescription, 6) medication reconciliation, 7) teach written discharge plan with teach-back, 8) educate patient on diagnosis and medications, 9) review with patient what to do if problem arises, 10) assesses degree of the patient's understanding of the discharge plan, 11) expedite transmission of the discharge summary to clinicians accepting care of the patient and 12) implement a discharge call back. The systematic review showed the importance of a standardized discharge process with education, teach-back method and assessing patient's preparedness and participation in the discharge process which would be beneficial in this project (AHRQ,2013).

Medical Surgical Telemetry Units

A systematic review of the literature demonstrated the importance in patient's comprehension of their medications, their medical diagnosis, and the signs and symptoms to

watch for when discharged home to reduce readmissions and complications of care (Sommer et al., 2018; Diplock et al., 2017). Nurses on Medical Surgical Telemetry units need to understand the comprehension level among patients may be lower due to advanced age and lower education level, in addition to the patient being sick at the time education interventions are completed. Multiple studies recommend implementation of targeted teaching interventions in relation to disease process, medications, signs and symptoms to watch for by utilizing teach-back methods, discharge checklist, follow up appointment and discharge call-back (Sommer et al., 2018; Balaban et al., 2018; Peter et al., 2015).

A review of studies from Balaban et al. (2017), Galbraith et al. (2017), and Diplock et al. (2017) describe the use of randomized control trials with nurse-led multidisciplinary teams and patient navigators to provide assistance to the nursing care team in decreasing 30 days readmissions especially with older patients. These authors have seen a statistically significant reduction in 180-day readmissions with a smaller decrease in 30-day readmissions. The limitations found in these studies were that it was performed in one health system and there needed to be more collaboration with case managers and nursing staff to implement transitions of care. Mennuni et al. (2017) review of study showed a lack of design in their study, the authors reviewed discharge data with the use of LACE index score, which reviews Length of stay, Acute (emergent) admission, and Charlson comorbidity index number of ED visits within six months. Mennuni et al. (2017) have found the structure of the LACE index score programs varied between hospitals and sometimes between different units. Limitations found were there was no random control trials performed and may not have been as reliable as other studies.

Murtaugh et al. (2016) conducted a review of 2009 and 2010 Medicare administrative claims to identify all HF hospitalizations with discharge to home health care and examined

health care use and mortality for 30 days after hospital discharge. Murtaugh et al. (2016) used the Outcome and Assessment Information Set (OASIS), which is a comprehensive assessment tool to collect nearly 100 items related to a home care patient's functional and clinical status. HF patients are increasing every year due to our aging population and coordination of care is difficult to manage, readmissions continue to occur and HF Medicare beneficiaries have the highest 30-day all cause readmission rate of 24.5% which remains a serious health care quality and cost issue (Murtaugh et al., 2016). The review of this study showed a 95 percent confidence interval around nurse-led standardized discharge protocol and at least one outpatient physician visit within a week of hospital discharge would reduce the risk of 30-day readmissions and improve patient care (Murtaugh et al., 2016). There needs to be better coordination in care with increased communication between hospital and community: home health agency, nursing home, and or primary care provider to reduce fragmentation of care across the continuum, discharge planning needs to start early; preferably on the day of admission and include the patient family whenever possible, these measures can reduce readmissions and improve patient care (Murtaugh et al., 2016).

National Guidelines Relevant to Quality Gap

National and clinical practice guidelines showed evidence-based practice utilizing a standardized discharge protocol reduces readmissions (Yancey et al., 2017; Hines et al. 2014; Messerli & Deutsch, 2020; AHRQ, 2013). AHRQ (2013) RED toolkit was effective in reducing readmissions and decreasing visits to the emergency department post-discharge. The RED toolkit includes a set of 12 actions that hospitals can implement during and after the patient's hospital stay to safeguard an efficient discharge process promoting a successful transition of care. The RED toolkit is the product of a collaboration with AHRQ and the National Heart, Lung, and

Blood Institute (NHLBI). Implementation of the RED toolkit has demonstrated a decrease in 30-day readmission rates of 30% compared to patients receiving usual discharge care (AHRQ, 2013; Hines et al., 2014).

Contextual Information

Contextual information that negatively impact's quality at the practice site is that there is no standardized discharge protocol. There are no facility policy and or protocols for discharge education or a discharge process found at the practice site. There are also no nurse-led multidisciplinary team and no patient navigators at the practice site. Nurses do not have a structured process on when and how to begin patient education and or discharge process. Xiao et al. (2018) describes how hospitals have implemented multiple interventions such as discharge follow-up appointments with the patient's primary care provider, targeted patient education, and/or referral to home health agencies; however, it still remains difficult for hospitals to really understand or predict if a patient will be readmitted. Implementing a standardized discharge protocol for HF patients would help to reduce readmissions since no HF patients are exactly the same, for example some patients have a support system at home, others may need assistance with activities of daily living and have no support system (Xiao et al.,2018).

Evidence Gaps and Controversies

The review of the literature exposed that readmissions of HF patients is still prevalent and more patients are diagnosed with HF each year. Evidence in the literature showed a gap in coordination of care in the discharged process of HF patients, with readmissions often seen between seven and ten days of discharge. Patients do not always understand their medications, the disease process, and the signs and symptoms to watch for to elicit a response to mitigate further complications. In many cases, this is probably due to patients' level of literacy, the age of

the patient, and the level of acuteness with the disease process.

Peter et al. (2015) describes how a nurse-led standardized discharge protocol can improve patient's understanding of their disease, improve compliance in regard to diet, medications and follow-up appointments, and decrease readmission rates for patients with HF. Common patterns discovered were interdisciplinary teams, nurse driven protocol, patient engagement, patient education and standardized discharge process. Brennan (2018) states that with the rising prevalence rate of HF diagnosis and readmissions, hospitals need to assist and educate nurses and interdisciplinary team members with an integrated approach to improve patient outcomes and reduce readmissions. The review of literature highlighted the project question: Will nurses implementing a standardized discharge protocol on a Medical/Surgical/Telemetry unit improve the HF readmission rates compared to current practice within a four-week period? This comes at a perfect time to assist the facility in reducing HF readmissions.

Aims of the Project

The aim of this quality improvement project is to reduce 30-day HF readmissions via the implementation of a nurse-led standardized discharge protocol from the AHRQ Re-engineering Discharge [Project RED] (AHRQ, 2013) toolkit within the timeframe of four weeks. Mitchell et al. (2016) completed a systematic review of discharge instructions given correlated with readmissions and noticed that routine discharge instructions may not reduce 30-day readmissions however, the authors recommend implementing a standardized discharge protocol to reduce readmissions. The RED toolkit from AHRQ (2013) is a nationally recognized evidence-based practice tool focused on delivering a patient centered hospital discharge plan, which can reduce all cause 30-day readmissions (Mitchell et al., 2016). Patel & Dickerson (2015) defines that

implementation of a nurse-led standardized discharge protocol can improve coordination of care, reduce readmissions, and improve patient outcomes.

Project Objectives

In the timeframe of this DNP Project, the host site will obtain a peer reviewed standardized discharge protocol:

1. Create and implement a nurse-led standardized HF discharge protocol.

2. Conduct an in-service education for nurses and case managers employed on the medical-surgical telemetry unit to train in the nurse-led standardized discharge protocol.

3. Measure education learned with the aid of a pre and posttest.

4. Perform a chart audit on the nurse-led standardized discharge protocol to verify participation compliance of 90 percent or greater.

5. Compare pre- and post-HF readmission rates for level of significance after completing the four-week DNP project.

Theoretical Framework

The Donabedian model provides a conceptual framework to guide the DNP project implementation of a standardized discharge protocol to reduce 30-day HF readmissions. The Donabedian model (1966) has been used in quality improvement projects to measure quality of health services performed along with reviewing processes to improve outcomes (Ayanian & Markel, 2016; Berwick &Fox, 2016). The Donabedian model remains the dominant paradigm of assessing and improving the quality of care in the US (Donabedian, 1986). The Donabedian model highlights the importance of assessing how quality is to be defined with more thorough

information and linkage around three major tenants 1) structure describes the context in which care happens, 2) process states the relationships of the care between patient and providers and the 3) outcomes relates to the results of the care the patient received (Donabedian, 1997). A diagram of the Donabedian model is found in Appendix A.

Historical Development of the Theory

The Donabedian framework was created by Doctor Avedis Donabedian in 1966, who came to the US after living in Lebanon. He was a non-practicing physician, a professor of medical care organization and a health services researcher at the University of Michigan (Ayanian & Markle, 2016). Medicare and Medicaid programs had just been implemented and the Health Services Research Section of the U.S. Public Health Service had assembled a meeting in Chicago of leaders from many health-related fields (Ayanian & Markel, 2016). Donabedian was requested to appraise the research on quality assessment for that meeting, since he had published an article in 1963 on administrative controls in medical care (Ayanian & Markel, 2016). Donabedian published an article in1966 called “Evaluating the Quality of Medical Care” which then became the starting point of his model of linking a “triad of structure, process, and outcomes to evaluate the quality of health care” (Donabedian, 1966). The Donabedian model has been utilized in health care quality improvement projects to assess outcomes of care and provide a conceptual framework that can be applied to most situations in healthcare settings for example in emergency departments, pharmacy and/or trauma (Liu et al., 2011; Rupp, 2018; Moore et al., 2015).

Donabedian (1986) represents the model by a linear chain of three boxes containing structure, process and outcomes linked by unidirectional arrows. The boxes represent the three types of information required to be collected in order to correlate findings about the quality of

care. During the remainder of his career Donabedian continued his work on defining and developing methods to measure the quality of health care. Donabedian evaluated how clinical decision-making influenced quality, and he analyzed how the management of resources and health care systems had on patient outcomes (Ayanian & Markle, 2016).

Major Tenets

The three major tenets of the Donabedian model, structure, process, and outcomes continue to be the foundation of the quality assessment as seen in today's care (Ayanian & Markle, 2016; Hassan, 2019). The DNP project of improving readmissions with HF patients utilizing a standardized discharge protocol will be guided by the Donabedian model, which provides a framework for assessing quality of care by linking the tenets of structure, process and outcomes.

Structure

Structure defines the setting, who is involved, qualifications of provider, and administrative systems in which the care takes place (Donabedian, 1966). Structure is also defined by the environment, the human resources involved, the organization, the policies, the materials needed, and equipment used in the provision of care (Ayanian & Markle, 2016). To illustrate how this framework will be applied is as follows: the structure for the implementation of a standardized discharge protocol is the setting for this project, which is a suburban acute care facility. The DNP project will be hosted on a medical surgical telemetry unit and will involve staff nurses and case managers. The senior leadership of the practice site along with nurses and nursing director of this unit recognizes the importance of this quality improvement project of reducing HF readmissions and embrace this project implementation.

Process

The process states the components of the care delivered with the interactions between the provider and the patient (Donabedian, 1966). At the practice site, there are no policies in place for a standardized discharge protocol and the nurses do not have a clear standardized discharge process. The nurses do not receive a detailed report regarding 30-day HF readmissions on their unit, so they are not aware of their performance with this hospital matrix. Discharge dashboard information are useful tools to share with nursing staff in relation to the outcomes of readmission status on their respective units (AHRQ, 2015). Process measures indicate how the interactions happen between nurses and patients, including how nurses deliver information and how patients receive the information given (Rupp, 2018).

Project application of the process component of the Donabedian model entails the implementation of a national evidence-based standardized discharge protocol, educating nurses on this specific unit about the tool, collecting appropriate data, and employing statistical testing to determine outcomes.

Outcome

Outcomes describe what happened, the recovery, the restoration of functions and the survival. This tenet reviews mortality, patient's functional status, readmissions and or complications. According to AHRQ (2015) the outcome measures represent the care the patient received and how it compares to the "gold standard" in measuring quality of care. The practice site will need to review patient records to verify how the patients are being educated utilizing a nurse-led standardized discharge protocol and review any potential 30-day HF readmissions. The results seen at the practice site at this time, is that 30-day HF readmissions are higher than the national average and needs improvements.

The project lead will analyze the results of the data collected using appropriate statistical

testing to determine if the DNP project intervention proved to be a statistically significant improvement in 30-day HF readmissions.

Setting

This project will be conducted in a suburban 170 beds for-profit acute care hospital located southeastern of Nevada. The facility admitted 13,525 patients in 2019 with 62,900 visits in the Emergency Department [ED] (Henderson Hospital, 2020). This facility serves communities with a population of 330,084 and has had an increase in population size of 28.07% over the past few years (World Population Review, 2020). According to the Department of Health and Human Services Nevada Division of Public and Behavioral Health (2019) all seventeen counties in the state are considered as underserved populations due to a very high ratio of population to providers. The facility sees a high number of insured and Medicare patients due to being in an affluent area with master planned communities catering to younger families and senior neighborhoods. However, the hospital also has provided care for an underinsured group of patients as many providers do not accept Medicaid or patients who have no insurance. This results in a portion of patients who do not have a Primary Care Physician (PCP). According to Bazargan et al. (2019) the ED then becomes a point of entry for healthcare services for older adults and uninsured individuals.

The hospital provides the community with the following services: medical-surgical-telemetry units, an intensive care unit, intermediate care unit, emergency department, observation unit, surgical services, and a women's services department which includes labor and delivery, nursery, neonatal intensive care unit level II and III, and a post-partum unit. The project site will specifically be on one of the medical/surgical/telemetry units of this hospital. There are

over 1,000 employees at the practice site with more than 500 registered nurses, 125 Certified Nursing Assistants (CNA), seven case managers, along with other disciplines such as cardiopulmonary, pharmacy, radiology, and laboratory. There are a few physicians employed at this facility through an Independent Physician Management (IPM) program and all other physicians are privately contracted with the hospital. The hospital is part of a larger health system with other acute care facilities located in the USA.

The DNP project will be implemented on a medical/surgical/telemetry unit of 32 beds at this practice site, which employs 50 registered nurses (RN), 25 CNAs, one charge nurse per shift, one hospital unit coordinator (HUC), one registered nurse case manager (RNCM), one director of case management, one director and manager of the medical/surgical/telemetry unit and the facilities educator. The types of patient admitted to this unit are patients diagnosed with chronic diseases such as HF, chronic obstructive pulmonary disease, end stage renal disease, diabetes, pneumonia, acute coronary syndrome, and cellulitis/infection. The daily census is 32 patients per day with seven to twelve discharges per day. The practice site utilizes the Cerner electronic documentation system for patient care, assessment, progress notes, computerized order entry, and prescriptions services. The Electronic Health Record (EHR) supports documentation for all interdisciplinary team members.

Population of Interest

The direct population of interest are the RNs employed on the medical/surgical/ telemetry unit, who provide primary care to all patients. The nursing staff has a ratio of one nurse to six patients. There is a charge nurse present on every shift along with one assigned CNA per two RNs. The experience of the nursing staff ranges from new graduate to approximately five years of experience. Welch & Carter (2018) describes how healthcare settings have changed over the

past years with reduced orientation times and an increase in new graduates entering the workforce who lack confidence to work on their own and require verbal directions to successfully manage difficult patient situations. Nursing staff on this unit will receive structured training with scenarios on the nurse-led HF discharge protocol to gain practical experience which will develop their skill acquisitions, critical thinking skills, problem solving and improve their competence in regards to HF (Welch & Carter, 2018).

The project site also consists of one RNCM, six charge nurses focused on organizing work flow for the shift they cover, the director of case management along with the director and manager of the medical/surgical/telemetry unit. The director of case management will be considered as a direct population of interest since the case management staff is involved in complicated discharge planning.

Indirect Population of Interest

Patients admitted with a diagnosis of HF to the medical/surgical/telemetry unit are part of the indirect population of interest. There are approximately 45 patients admitted every day at the practice site with a diagnosis of HF, with approximately 12 HF patients admitted per day to this medical/surgical/telemetry unit. HF patients can be admitted to other units depending on the patient's condition. They can be admitted to the intermediate care unit, the intensive care unit, the observation unit, or the other medical/surgical/telemetry unit. Payer sources for the patients diagnosed with HF at the practice site are 64.10% Medicare, 18.21% Medicaid, 15.64% insured patients and 2.05% self-pay and or charity (Henderson Hospital, 2020).

Inclusion Criteria

Only RNs licensed through the Nevada State Board of Nursing, employed on the

medical/surgical/telemetry unit and completed orientation will be included to participate in this DNP project. Inclusion will also consist of those RNs who work full-time, part-time and or per diem on both day and night shifts who provide direct patient care including discharge planning. Seventy- five percent of the RN's on this unit have a Baccalaureate of Science in Nursing (BSN) degree, twenty three percent have an Associate Degree in Nursing and two percent have a Master's of Science in Nursing (Henderson Hospital, 2020). The unit director, manager, facilities clinical educator and the director of case management will also be included in this project. All RN's at the practice site speak English and understand the need to utilize the language line for any patients who do not speak English or English is not their primary language. Other inclusion criteria for this DNP project are all patients admitted with a HF diagnosis on the medical/surgical/telemetry unit utilizing the nurse-led HF discharge protocol during the implementation period.

Exclusion Criteria

Agency staff, hospital unit coordinators, CNAs, registered nurses who are employed on other units than the project site, and administrative nurses who do not provide direct patient care will be excluded from this project. The exclusion criterion are HF patients who are admitted on other inpatient units, patients who are not diagnosed with HF and patients who are not admitted during the implementation period where the nurse-led HF discharge protocol is used.

Stakeholders

Moran, Burson & Conrad (2017) describes stakeholders as persons or parties of people who are affected by the project in some way or may be affected with patient outcomes. Identifying key stakeholders early on in the project is very important because they can assist with the implementation and adoption of evidence-based recommendations and can positively impact

the success of a DNP project (Reavy, 2016). The key stakeholders are more likely to support a project if the project goals align with the facilities purpose, mission and vision (Moran, Burson & Conrad, 2017). Key stakeholders for this project include RN's and RNCM at the project site because they are influential to the interventions implemented and have a common interest in ongoing quality of patient care (Reavy, 2016). It is important to communicate the vision and the objectives of the project to the RN's and RNCM by asking them their suggestions and identifying what their barriers are. Early on discussion with RN's and RNCM on this unit will improve communication, provide engagement and a belief of being part of the project (Bemker & Schreiner, 2016). Moran, Burson and Conrad (2017) describes the importance in establishing a relationship of trust with the nurses employed on the medical/surgical/telemetry unit in order to obtain buy in and to understand how their participation in this project will improve patient care and decrease readmissions. Other key stakeholders include hospital administration, unit manager, director, facilities educator, Chief Nursing Officer (CNO) and the Chief Executive Officer (CEO) because without their support the DNP project will not be implemented. They will ensure there is buy-in from the participants as they have mandated the practice change. The project practicum mentor will guide the project lead and the corporate readmissions team will assist as content experts in the subject matter of the project.

The patients admitted with a diagnosis of HF on the medical/surgical/telemetry unit are indirect stakeholders as they are impacted by the practice change this project is proposing. The success of the DNP project implementation will focus on providing a safe discharge and strategies to reduce readmissions. All stakeholders are important to the success of this project because of a common interest in the ongoing quality of the patient care at this project site. Hoyer et al. (2018) describes how CMS has tied hospital reimbursement to performance in relation to

30-day readmission rates. These rates are publicly reported and included in the CMS star ratings to assist patients in making an informed decision about where to go for healthcare. In 2019, the facility reported an increase in HF readmissions at a rate of 18.65% which can lead to Medicare penalties attributed to 30-day readmissions (Appendix B). The stakeholders are invested in this nurse-led HF discharge protocol because they want to improve quality of care for our patients, decrease 30-day readmissions and reduce penalties with CMS.

The DNP project required permission and authorization from the university and the practice site. An affiliation agreement with the project site was completed and obtained on July 30th, 2020 (Appendix C). The project lead presented an overview of the DNP project with interventions associated with the project to the director of the medical/surgical/telemetry unit of the practice site and approval of the project was received on August 5th, 2020 (Appendix D).

Interventions

The intent for this quality improvement project will be focused on developing a nurse-led standardized discharge protocol and educating RN's and RNCM with structured training to improve their competence in regards to HF disease and discharges. The interventions developed for this quality improvement project are to create and implement a nurse-led standardized HF discharge protocol, conduct an in-service, measure the education learned with the aid of a pre and post-test, perform chart audits to verify compliance with the protocol and compare pre- and post-implementation readmissions. The creation of a nurse-led standardized discharge protocol for patients diagnosed with HF was sent to AHRQ for permission to reuse part of the material published by them prior to utilization. A PowerPoint presentation will be developed to educate the participants on how to use the protocol to reduce HF readmissions. A pre and post-test will be created by the project lead utilizing a Content Validity Index (CVI) for validation. This test

will be used before the training session and after the training session to assess RN's and RNCM knowledge. An audit tool will be created to review nurse compliance with completion of the discharge protocol and data will be collected to analyze any HF readmissions after utilizing the standardized discharge protocol.

The timeframe for this QI project is four weeks. The implementation period will include a pre-test administered immediately prior to the educational session on how to use the protocol. The educational session will follow the pre-test for a duration of 60 minutes. A post-test will be administered directly after education to measure the knowledge learned. The educational sessions will be offered during the first week of the implementation timeframe with groups of 12 participants at a time for a duration of 60 minutes. Once the education is completed the Go-live for the protocol implementation will begin with all patients admitted with a diagnosis and/or a history of HF. A daily review of the patient census will be performed by the project lead to identify patients admitted with a diagnosis and/or a history of HF on this unit. This list will be compiled by the project lead to verify that patient met criteria for the HF discharge protocol (HFDP). The project lead will review completion of the protocol and identify if any patients have been missed. The completed HFDP will be collected every day by the project lead. An analysis of the HFDP form will be performed to determine compliance with the form. In addition, a review of all HF admission will be compared to the HFDP form to assess if any patients were missed and HFDP form was not utilized. An assessment will be performed by the project lead prior to implementation to review the HF readmission rate to this unit and or history of HF patients readmitted within 30 days. This data will be utilized to compare data collected after implementation of the HFDP. Every patient that will be admitted to this unit with a diagnosis and/or history of HF will be followed for readmission during this four-week period of HFDP

implementation. The project leader will be updating the stakeholders on a weekly basis on the progression of the project.

Tools

These tools were attained with permission months prior to the project implementation. Experts included in the development of the tools were the project mentor, the content expert with the readmissions committee corporate office team, the project instructor, the CNO of the facility along with the director of the unit and the director of case management. Some of these experts will participate in validating the pre and post-test utilizing a Content Validity Index (CVI) on a four-point scale of relevance. L'Ecuyer et al. (2020) describes how CVI is an important phase for the content validity of tools, which are reviewed by subject matter experts and are appraised prior to being implemented.

Nurse-Led Standardized Discharge Protocol

A nurse-led standardized HF discharge protocol (HFDP) will be created by utilizing the 2013 AHRQ RED toolkit, which covers 12 necessary actions to reduce readmissions and ensure a smooth transition at discharge. The HFDP will be utilized on all patients admitted to the medical/surgical/telemetry unit with a diagnosis or a known history of HF. The protocol will be placed on the white board in the patient room with a patient label. At the time of admission, the admitting nurse will explain to the patient that this protocol will be completed during the patient's stay. The HFDP contains 10 items. As each item on this list is completed, the nurse will date, time and sign the protocol. The items on this protocol are: 1) the admitting nurse will ascertain the need to obtain language assistance and use of Globo for translation services. 2) The HUC will make a follow-up appointment for patient prior to discharge by adding the provider

name, date, time and address of provider in the electronic documentation system. The nurse will educate the patient in the importance of this appointment and will include the appointment information in the discharge packet. 3) The patient will be educated if any test results or labs are pending at discharge. The test result mainly seen pending is the cardiac echocardiogram result. 4) The patient will be assessed for any post-discharge outpatient services and/or medical equipment needed at discharge. The nurse will also assess if the patient has a scale to weigh themselves at home and educate the patient on weight gain of three pounds or more in one day to call their PCP. 5) A teach-back of new medications will be completed and practice site medication cards will be placed on the patient's white board after the education is completed. The medication names will be included in the protocol and all nurses assigned to care for the patient will be able to continue the education using the teach-back method for these medications to re-enforce the education given. The nurse educating the patient will list the medications taught and will sign their name and date of education completed. 6) A teach-back on HF disease including signs and symptoms will be performed by utilizing the practice site's HF booklet and the HF teach-back form. Both of these education tools have already been developed by the practice site to assist nursing staff in educating patients on HF and have been in place for over a year. Permission from the practice site was given to the project lead to utilize these tools. After nurse's educate utilizing these tools they will document a yes and sign off with date and time. 7) The patient will be educated in regards to what to do if a problem arises. The patient will first call their PCP. If unable to reach, the patient can call Dispatch Health, which is a service that can come to the patient's house if needed and/or patient will call 911 for assistance for severe symptoms. 8) The nurse will document the patient's level of comprehension if it is good or patient is not understanding by asking patients to explain in their own words the detail of the plan (AHRQ,

2013). The nurse will continue instructions until the patient correctly teaches-back the plan. If the patient is unable to repeat the plan then the nurse will see if the patient agrees to a family member/friend being called who will share the caregiving responsibility (AHRQ, 2013). 9) The nurse will inform the patient that a discharge phone call will be placed within a few days of discharge from the facility. The discharge nurse will ask for the preferred phone number and document this on the protocol. 10) The nurse will document in the electronic health system that HF education has been completed and HF booklet was given to patient (Appendix E).

When the patient is discharged, the completed HFDP will be submitted to the clinical supervisor of the unit. The discharge nurse will date and sign the document as well as the clinical supervisor. The created HFDP was submitted to project mentor and academic mentor for review. After review from mentors an email was sent to AHRQ by the project lead prior to implementation to request permission to use the RED discharge twelve questions toolkit and adjust it to meet the culture and the needs of the nursing staff at the practice site. Permission from AHRQ was received prior to implementation to adapt the information in the 12-point table of the Re- Engineered Discharge (RED) components and discharge educator responsibilities for use in this quality improvement project. AHRQ noted that the HFDP form gave adequate credit to the AHRQ RED toolkit. (Appendix F).

Nurse Education

An educational program with a handout was developed by the project lead utilizing a PowerPoint presentation. The educational program will be offered three times in the first week to day and night shift staff for a total of six in-services. The educational program will include pre-test prior to education and a post-test immediately after education to assess the participants' knowledge on HF, readmission's and how to utilize the HFDP to improve discharges. The in-

service will provide education on heart failure including its prevalence in the USA as defined by the American Heart Association and the Center for Disease Control and Prevention. The education reviews how the Center for Medicare and Medicaid services (CMS) defines readmissions, how penalties to hospitals have been implemented and how readmissions affect patient care and outcomes with increase morbidity and mortality (Chava et al., 2019; Messerli & Deutsch, 2020 & Hesselink et al., 2014). The education reviews the importance of utilizing the HFDP to reduce HF readmissions (AHRQ, 2013). A description of how to utilize the HFDP is the main focus of this education by providing step-by-step instructions. The process described will be to utilize the HFDP for all patients admitted to medical/surgical/telemetry unit with a diagnosis and/or a history of HF. The protocol will be placed on the white communication board in the patient's room. The admitting nurse will explain to the patient that this protocol will be completed during the patient stay. The education and protocol will start on day one of admission. The nurses will enter the date and time with signature when items are completed. Items do not need to be completed in a specific order and day and nights shift RN's are to educate and complete the protocol. Four clinical scenarios are included at the end of the education. The clinical scenarios will be presented on how to problem-solve situations often seen with real life cases. The training will take 60 minutes and will be completed within the first week of the implementation time frame with groups of 12 employees at a time (Appendix G).

Pre and Post Tests

A pre and post-test was designed by the project lead with a total of 10 multiple-choice questions. These multiple-choice questions have a selection of answers that the participant will choose one or more answers from a limited list of choices that applies to the question based on clinical experience scenarios. The pre and post-test are the same, the participants will be given a

number to keep anonymity among co-workers and a separate answer sheet will be used to develop a computer-generated item analysis report. The pre-test will be given prior to the education and will be collected prior to starting the education. The same test will be given after the education to assess the knowledge learned using the same confidential number format for each participant. The questions developed on the pre and post-test are to measure understanding of HF, HF readmissions, cost of readmissions for hospitals, identify the steps in reducing HF readmissions, and determine utilization of the HFDP. A passing grade of seven out of ten will be required on the post-test and a remediation will be completed with the project lead and the participant who scored lower than seven out of ten by reviewing questions missed.

The purpose of this test is to assess the knowledge of the participants prior to the in-service and evaluate the knowledge learned after education was completed. The tests questions were developed utilizing 10 clinical experience scenarios to assess the nurse's ability to apply new concepts learned and measure the reliability and the validity of the education taught (Bristol & Brett, 2015). The test is offered as a continued education of a new process; therefore, the questions developed were low level to moderately difficult. The blue print of the test will include the level of cognitive skills for each question in relation to knowledge, comprehension, application and analysis. The pre and post-test include three multiple-choice questions on knowledge of what is HF diagnosis, what is the cost of readmissions for hospitals and the US and when to utilize the protocol. Two multiple-choice question were designed utilizing clinical scenarios in relation to comprehension of how to reduce HF readmissions and how the protocol can assist in improving discharges. Three multiple choice questions describe clinical scenarios in relation to application of when to educate on HF, how to reduce readmissions by improving coordination of care and how to utilize the HFDP. Two multiple-choice questions with clinical

scenarios were developed in relation to analysis of when to identify a patient at risk of readmission and understanding when to utilize the HFDP. A rationale was provided for each question on the pre and post-test. The pre and post-test is found in Appendix H.

Content Validity Index

The content of the pre and post-test was reviewed for validity by rating all questions on a four-point scale of relevance prior to being submitted to participants by utilizing a Content Validity Index (CVI). Experts included project mentor and two academic mentors. Each expert sent in their rating for each question to the project lead. The CVI was then computed as the number of experts giving a rating of 3 or 4 about the relevance of the question. A mean was calculated for each question by adding all scores and dividing by the number of experts- the proportion agreement about the relevance. The CVI was calculated using the following formula: CVR= [(E- (N/2)) /(N/2)] with E representing the number of judges who rated the item as moderately relevant (3) to highly relevant (4) and N being the total number of judges. The mean total of the means was 3.67 indicating that all of the questions were moderately to highly relevant which means that the questions were essential. The calculation showed a score of 4 on questions items 1, 2, 3, 6, 7, 8, 9, 10 and calculation showed a 3.67 on questions 4 and 5. CVR = [(3-(3/2)) / (3/2)], CVR = [(3-1.5) /1.5], CVR = 1.5/1.5. Content validity study revealed that this instrument provides an appropriate level of content validity (Appendix I).

Chart Audit Tool/Compliance

A chart audit tool was created by the project lead to identify patients admitted to the medical/surgical/telemetry unit with a diagnosis/history of HF and assess the nurse compliance with the protocol. An excel spreadsheet was created with the following information:

identification with a numerical number assigned for all patients admitted with a diagnosis or history of HF, admissions and discharge dates, identification of HFDP form with completion date and identification of readmission to the facility within the four-week period of implementation. The HFDP form will be collected Monday through Friday on the medical/surgical/telemetry unit by the project lead (Appendix J).

SPSS Software

A Statistical Package for Social Science (SPSS) software will be used to perform statistical operations and data analysis for this quality improvement project. SPSS assist in analyzing data by importing the data into a statistical software to create a final analysis data set (Sylvia & Terhaar, 2018). It is important to maintain high quality data sets in which errors can be identified and managed. SPSS software can provide graphic displays and identify any missing values, out-of-range values and/or erroneous values. The goal will be to utilize syntax which is a text file that documents actions taken on the data and communicating results from actions taken.

Study of Interventions/Data Collection

The approach chosen for assessing the impact of this quality improvement project will be to observe if there is a reduction in HF readmissions by the initiation of the HFDP. The data collected will include an analysis of the rates of HF readmissions on the medical/ surgical/ telemetry unit prior to implementing the project. Additional data that will be collected are the knowledge learned after education, the compliance with the HFDP form, and the rate of HF patient admissions and 30-day readmissions to the hospital during this quality improvement project. This information will be appraised and compared between pre-implementation and post implementation of the HFDP. It is important to assess if the interventions implemented are

related to the observed outcomes. This DNP project's hypothesis will be to assess the increase in knowledge and the use of the standardized discharge protocol; therefore, reducing HF readmissions.

Pre and Post-test Data Collection

The project lead will educate fifty RN's and one RNCM on the HFDP to improve the discharge process and measure the knowledge learned after education by utilizing a pre and post-test of ten questions. The education will be offered the first week of implementation in five different classes to allow day and night shift staff flexibility in attendance. The pre-test will be administered just prior to the initiation of the educational session and the post-test will be submitted immediately following the educational session. The data will be collected by the project lead and each participant will be given a number for confidentiality among co-workers. A separate answer sheet will be developed to report a computer-generated item analysis report. This information will be kept locked in the project lead office. The staff who performed less than seven out of ten on the post-test will be privately re-educated on questions missed by the project lead.

Chart Review

The practice site currently collects routine data from the EHR on all hospital admissions including the International Classification of Disease (ICD) codes with primary and secondary diagnosis at discharge. A retrospective chart review will be performed utilizing the ICD code of HF and admission data will be extracted specifically pertaining to the medical/surgical/ telemetry unit prior to the implementation process for baseline data on HF admissions and 30- day readmissions. Patients data, those admitted with an inclusive criteria diagnosis of HF and/or

history of HF, will be collected during the implementation phase utilizing this EHR report. Exclusion criterion consists of patients' charts having no primary or secondary ICD code of HF and patients from other nursing units. This data will be accessed using an individual access code specific to the project lead. Electronic data will be stored in a password-protected document kept confidential during this process in a locked location. The project lead will be the only person to enter the data. There will be no collection of protected health information (PHI) identifying data on the spreadsheet. A chart review spreadsheet will be utilized for data collection. The data collected will include numerical numbers assigned for all patients admitted with primary and/or secondary ICD code of HF, admission and discharge dates, identification of HFDP form with completion date, completion of the form will be noted with a yes or a no for compliance and identification of 30- day readmission will be entered.

This data collection aligns with the project aim of reducing 30-day HF readmissions via the implementation of a nurse-led standardized discharge protocol. Objectives described for this project are to measure education learned with the aid of a pre and post-test, perform a chart audit on the HFDP to verify compliance of 90 percent or greater and to compare pre- and post-HF readmission rates for level of significance after completing the four-week DNP project. The project leader will be updating the stakeholders on a weekly basis to ensure adherence to the practice standards.

Ethics/Human Subject Protection

DNP projects require maintaining the highest ethical practice values, including confidentiality and privacy (American Nurses Association [ANA], 2015). An online training and certification on social and behavioral research basic course were completed by the project lead to understand the Institutional Review Board (IRB) process prior to implementation of the quality

improvement project. The goal of the training was to understand and abide by the rules, regulations and ethical principles governing research involving human subjects with general responsible conduct of research and defining if any conflicts of interest exist (CITI Program, ND).

Institutional Review Board (IRB)

The IRB of the facility assessed the need for approval of the quality improvement project at the practice site. Since this is a quality improvement project and no human subjects will be placed in harm's way for this DNP project, the facility did not require an IRB (Appendix K). This quality improvement project was also assessed for IRB utilizing a determination form adapted from The Hastings Center, 2006 by Nosowksy (ND). The form determines if the project is a quality improvement project versus a research project requiring IRB approval determination. The form includes six questions related to the project's issues, and guidance and the weight of the answers tended towards "no" so the project was defined as a quality improvement, and no IRB oversight was needed.

Actions to ensure ethical project implementation, confidentiality and protection of human subject will include the following items: ensuring Health Insurance Portability and Accountability Act (HIPAA) rules are respected, all data abstracted from the patient charts will only pertain to the project, privacy will be maintained by not collecting protected patient information, data collected will be stored in a locked area that ensures anonymity, and all information collected will be kept strictly confidential. The data from the pre and post-test will be kept confidential by utilizing a number versus employee names and all data will be store in a secured locked area by the project lead.

Benefits/Risks for Participants

The RN's and RNCM that work full time, part-time and per diem on the medical/surgical/telemetry unit will be required to attend one educational training and to participate in the utilization of the HFDP form. There is no associated risk for RN's and RNCM in participating in this quality improvement project since the participation in this project is not a condition of employment. The HFDP is considered a mandatory practice change; therefore, participation is mandated. Participants will receive an hour of pay for attending the educational presentation. No monetary or special consideration will be provided for participating in the implementation of this project. The benefits associated with participating in this quality improvement project for RN's and RNCM are the improved knowledge in HF disease process, teamwork, communication with other nurses related to the patient's learning needs and interprofessional collaboration with other disciplines, which will ultimately lead to an improvement of the discharge process by utilizing the HFDP.

Measures/Plan for Analysis

The project leader will complete basic statistical methods using SPSS to perform statistical operations and data analysis of the outcomes data. The project leader consulted a statistician to ensure appropriate statistical testing will be utilized to measure the outcomes. The project lead will develop a data codebook to assess knowledge learned with pre and post-test with ten questions utilizing a Paired t-test. This statistical procedure tests the difference between two related or same group means, usually at two points in time (Sylvia & Terhaar, 2018). This paired t-test will be used to determine the mean difference between the two sets of observations and whether the education increased or decreased the staff knowledge. The paired variables are "pre-test score" and "post-test score". The assumptions related to the paired t-test are: 1) the

dependent variable is measured at the interval or ratio level, 2) the independent variable will consist of two categorical or related groups, the same subject will be present in both groups, 3) there should be no significant outliers in the differences between the two related groups and 4) the distribution of the differences in the dependent variable between the two related groups should be approximately normally distributed (Sylvia & Terhaar, 2018). In this case, the independent variable is the staff training and the dependent variable will be the change in staff knowledge. A paired t-test will be used to look at whether it resulted in an increase in knowledge and will report any magnitude of improvement.

The project lead will create a second data codebook to determine compliance with the HFDP. This will be a simple binary result of compliance with the protocol with a yes or a no variable. The code book will include a number for the HFDP used and a 0 for no and a 1 for yes on the compliance of the HFDP form. The SPSS statistical operation use for this analysis will be a simple binary result of the dependent variable of yes or no answer and the HFDP form utilized. The assumptions related to this simple binary result are: 1) the outcome is a binary or dichotomous variable like a yes versus no, 2) there is a linear relationship between the probability of the outcome and each predictor variables, 3) there is no influential values or outliers in the continuous predictor and 4) there is no high intercorrelation among the predictors (Sylvia & Terhaar, 2018). This simple binary result will determine the compliance of the protocol.

The project lead will develop a third data codebook to determine the reduction in HF readmissions using the protocol. The SPSS statistical operation use for this analysis will be the Pearson's product-moment correlation coefficient test. The assumptions related to the Pearson's correlation are: 1) the two variables should be measured at the interval or ratio level, they are

continuous, 2) there is a linear relationship between the two variables, 3) there should be no significant outliers and 4) the variables should be approximately normally distributed (Sylvia & Terhaar, 2018). The Pearson's correlation will test the existence of a relationship between the two variables of the HFDP and the HF readmissions and the strength of the association between these two variables to verify if utilizing the HFDP will decrease HF readmissions.

As stated, this quality improvement project intends to educate nurses on the HFDP and decrease HF readmissions by utilizing this tool. At the conclusion of this project, the statistical significance is expected to show a noticeable difference between pre-intervention and post-intervention in HF readmissions. Tables and graphs will be provided to communicate and display the results of the project.

Analysis of Results

Pre and Post Score Test Results:

A paired-sample t-test was conducted to evaluate the impact of the training of nurses' in HF readmission and the use of the HFDP. There was a statistically significant increase in knowledge from pre- test to post-test. The mean of the pre-test scores was 6.24 and a standard deviation of 1.353 to a post -test mean of 8.61 to standard deviation of .829 with a p value of less than .001(two-tailed). The mean increase in training scores was 2.370 with a 95% confidence interval ranging from -2.809 to -1.930. The eta squared statistic (.067) indicated a moderate effect size.

Table 1

Paired Samples Statistics

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre test	6.24	46	1.353	.199

	posttest	8.61	46	.829	.122

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pre test & posttest	46	.145	.337

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	pre test - posttest	-2.370	1.481	.218	-2.809	-1.930	-10.851	45	<.001

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Interval Lower	Upper
Pair 1	pre test - posttest	Cohen's d	1.481	-1.600	-2.034	-1.158
		Hedges' correction	1.494	-1.586	-2.017	-1.148

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation of the mean difference.

Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

The first assumptions for paired t-test showed a total of 46 RN's completed a pre and a post -test with zero outliers for failed samples. The second assumption is related to the independent variable of the staff training and consisted of two categorical or related groups. The same subject was present in both groups. The third assumption showed no significant outliers in the differences between the two related groups with a P value of less than .001. The fourth assumption showed a distribution of the differences in the dependent variable between the two related groups which was normally distributed. In this case, the independent variable of the staff training and the dependent variable of the change in staff knowledge showed an increase in knowledge with training with a mean difference of 2.37 points.

Compliance with HFDP

A simple binary logistic result was performed to investigate the completion of the HFDP form. The model contained one independent variable of HFDP form and a dychotomous

dependent variable of two groups of “yes” and “no”. The model showed one HFDP form was incomplete for a total of 94.1% compliance with the HFDP form.

Table 2

Simple Binary Logistic

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	17	100.0
	Missing Cases	0	.0
	Total	17	100.0
Unselected Cases		0	.0
Total		17	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
1	1

Classification Table[a,b]

			Predicted		
			Compliance		Percentage
	Observed		0	1	Correct
Step 0	Compliance	0	0	1	.0
		1	0	16	100.0
	Overall Percentage				94.1

a. Constant is included in the model.

b. The cut value is .500

The first assumption related to this simple binary result showed the outcome was a dichotomous variable with a zero for a yes versus a one for a no. The second assumption showed a linear relationship between the probability of the outcome and each predictor variables. The third assumption showed no influential values or outliers in the continuous predictor and the

fourth assumption showed that there is no high inter correlation among the predictors. This simple binary result shows the compliance of the protocol at 94.1%.

Reduction in HF Readmission using the HFDP

The relationship between HF readmissions and the use of the HFDP was investigated using a Pearson product-moment correlation coefficient. A total of 17 HF patients were admitted to the medical/surgical/telemetry unit and discharged with the HFDP. Seventeen patients have met the post discharge criteria of 30-days and one patient has been readmitted after 26 days of discharged home. The data shows a positive correlation between the two variables, r =.1.00, n =17, p is less than .001 with a strong linear positive correlation between reduction in HF readmissions and the use of the HFDP.

Table 3

Pearson's Product-Moment Coefficient Test

Descriptive Statistics

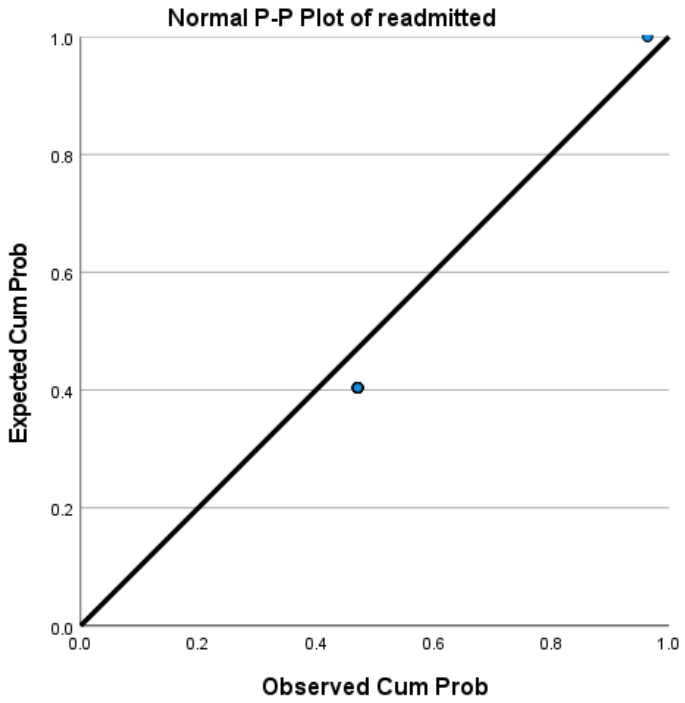
	N	Minimum	Maximum	Mean	Std. Deviation
HF protocol	17	.05882	15.05882	.9411765	3.63803438
readmitted	17	0	1	.06	.243
Valid N (listwise)	17				

orrelations

		HF protocol	readmitted
HF protocol	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.000
	N	17	17
readmitted	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.000	
	N	17	17

**. Correlation is significant at the 0.01 level (2-tailed).

Normal Probability Plot Test



Preliminary analyses were performed to ensure no violations of the assumptions of normality, linearity and homoscedasticity. This Pearson's correlation shows a strong positive correlation between HFDP used and decreased in HF readmissions.

Discussion and Significance

The aim of this quality improvement project was to educate nurses on the HFDP and decrease HF readmission by utilizing this protocol. The project lead investigated to answer the following project question: will nurses implementing a standardized discharge protocol on a Medical/Surgical/Telemetry unit improve the HF readmission rates compared to current practice and is there a statistical significance between pre-intervention and post-intervention in HF

readmissions. Base line data was performed on this Medical/Surgical/Telemetry unit prior to the implementation of the project. This baseline data showed 32 HF patients admitted in a one-month time frame with eight of these HF patients readmitted within 30 days for a total of 25% readmission rate.

The objectives of the project were to create and implement a HFDP, conduct in-services on readmissions and train on the tool, measure education learned with the aid of a pre and posttest, perform chart audits to verify compliance of 90 percent or greater and compare pre- and post-HF readmission rates for level of significance after completing the four-week DNP project. The education was performed on site in groups of 10-12 staff members at a time with a 92% attendance rate. The education was well received by the nursing staff and staff liked the process and the tool. The staff embraced this tool because they felt it helped them educate patients in a more structured manner. The nursing students completing a rotation on this unit were also trained on readmissions and with the HFDP tool. The empirical findings from the pre and post-test showed an increase in knowledge with training of 2.37 points difference from the pre-test.

Second, upon auditing the staff's compliance with the HFDP tool the project lead noticed there were some relief charge nurses who forgot to sign off on the tool. A review of the form completion was discussed with the relief charge nurses and compliance with the form improved. The compliance rate of form completion improved to 94.1%.

Last, seventeen HF patients received education utilizing the HFDP with one patient readmitted within 30 days of discharge for a strong positive linear correlation between the HFDP and reduction in HF readmissions. The patient was readmitted at 26 days of discharge which has been his longest time between two readmissions. The nursing staff identified a patient who was

homeless and living in her car. The nurses felt that without this tool they would not have identified this because the patient was ashamed of this situation. The nurse was able to consult with social services and patient was offered assistance on living arrangements, medications and follow up with a provider for care. The nursing staff felt the tool aids them in structuring their care and education on a continuous basis during the patient stay rather than educate patients 20 minutes before discharge.

The implications of these findings suggested that HF readmissions can be reduced by educating nurses and utilizing a HFDP tool. The literature revealed that implementation of a standardized discharge protocol could reduce readmissions. The RED toolkit from AHRQ (2013) recommended that delivering a standardized discharge plan can reduce 30-day readmissions, improve coordination of care, and improve patient outcomes. The nurses embraced this tool which assisted them in coordinating their care with the team and improved patient education on their disease, their medications, diet and importance of follow-up appointments.

Significance to Nursing

The American Association of College of Nursing [AACN] (2006) Essentials of Doctoral Education for Advanced Nursing Practice developed eight essentials. Essential I: Scientific underpinning of practice describes that in order to determine the nature and significance of health and health care delivery one must utilized science-based theories and evidence-based practices to enhance, ameliorate health and health care delivery phenomena and evaluate these new practices. Essential VII: Clinical Prevention of Population Health for Improving the Nations' Health states the importance of implementing evidence-based clinical practices and evaluate interventions to improve patient education and engage patients in their care. This HFDP was based off the RED

toolkit from AHRQ (2013) and proved to be reliable to reduce 30-day HF readmissions on this unit. This HFDP tool assisted nurses in educating patients and engaging patients in self-care by educating them on their disease process, the importance of taking their medications and attending their scheduled follow-up appointments. This tool has demonstrated a reduction in 30-day HF readmissions.

Limitations

The project design was to focus on the creation of a nurse-led discharge protocol and included training nursing staff and case manager on the application of the tool to educate patients and reduce 30-day HF readmissions. The initial goals of this project were met with the implementation of HFDP. One of the limitations of this project was the low number of HF patients admitted to this specific unit during the time frame of the project. Due to an increase in other unit specific patient diagnosis at the time of the project there were less HF patients admitted to this specific unit. A small number of patients may have limited the results of this project.

Another limitation of the project was due to project design with data recruitment methods. The waiting for 30-days after a patient was discharged to capture any HF 30-day readmissions delayed data extraction. When extracting the data for the first-time frame only five patients had met the 30-day readmissions and no patients had been readmitted. The collection methods were to complete a Pearson product-moment correlation coefficient test which was not possible to complete at that time due to a violation of the assumptions of the test. The readmissions data needed to be pulled at three different times so the correct and final data could be calculated. The data analysis of the DNP project showed the interventions implemented decreased 30-day HF readmissions. The data was limited to the number of patients admitted and

discharged with a HF diagnosis. Therefore, more HF patients discharged with the use of the HFDP would be beneficial to see a statistically significant difference in the HF 30-day readmission rates.

One last limitation was found in relation to the decreased involvement of the night shift staff in patient education and completion of the protocol. Even though the night shift nurses were trained in the protocol, they did not all have the same level of involvement as the day shift staff in completing the form and educating patients. A solution would consist of the project lead spending more time on the night shift to identify barriers to the protocol adherence and to reinforce the patient education process established by the protocol through demonstration.

Project Sustainability

This DNP project contributed to improving the discharge education given to patients with structured interventions to improve the discharge process by identifying the patients at risk of readmissions, educating patients about their disease process, medications, signs and symptoms to watch for and improving interdisciplinary communication by implementing a standardized HF discharge protocol. The practice site has requested for the implementation of this HFDP to be implemented on all inpatient units and for other discharge protocols for diagnosis' of chronic diseases such as Chronic Obstructive Pulmonary Disease (COPD), pneumonia, stroke, total joint replacement and cardiac patients whom have high 30-day readmission rates. A request was made to the practice site that on each unit all staff who will be utilizing the discharge protocol will receive a one-hour education prior to the start of the project. Corporate office process improvement department has requested the possibility to upload the protocol into the EMR

system which, would ease the use of documentation for the nursing staff and would assist in sustainability.

Dissemination

Dissemination of the project will include a formal presentation to the DNP faculty and colleagues. This DNP project will be submitted by the project lead to the Doctors of Nursing Practice repository website, which keeps an archive of curated documents. Once the project is uploaded and posted the project lead may share the URL web page address with other entities as desired (Doctors of Nursing practice, 2020). A poster-board presentation request will be submitted to the National Association of Healthcare Quality (NAHQ) summit, which will be held in September 2021as an online format. A request has been sent to NAHQ for the poster-board requirements. The completed poster-board requirements will be reviewed by the academic mentors prior to submitting to NAHQ.

Data will be collected upon implementation of the project on other units and once enough data has been collected and readmissions continue to decrease by utilizing the discharge protocol a peer review journal manuscript will be written and submitted to the IRB at the practice site and at AHRQ for dissemination. DNP prepared nurses play an essential role in providing process improvement projects to enhance patient care and this discharge protocol can be generalized and replicated on other nursing units and other facilities.

Conclusion

Heart Failure 30- day readmissions are complex and healthcare facilities are struggling with meeting the CMS goals in relation to 30-day readmissions. The gap in nursing practice identified in this DNP project was the lack of a structured process for nursing staff to utilize

when they educate patients on their disease process, medications and engaging patients in self-care. The nurses appreciated and embraced the HFDP, which assisted them in coordinating their care and issues were identified of patients being discharged home who needed services. The HFDP proved to have a decrease in HF 30-day readmissions and the Pearson's correlation showed a strong positive correlation between HFDP used and decreased in HF readmissions. This tool also increased communication between case managers and nursing staff regarding patients' needs and services. The support of stakeholders was necessary with this project and played a role in the importance of staff education prior to implementation of this project.

This DNP project proposed a standardized discharge protocol for HF patients admitted and discharged from an acute care facility. The results showed a decline in HF 30-day readmission rates with the utilization of this tool. Sharing this tool so others in the field can implement and reproduce this project focused on translation of research into practice and meets the AACN (2006) Essential VIII Advanced Nursing Practice. This DNP Essential describes the importance in improving patient's health by educating and guiding individuals and groups through transitions of care similar to this discharge protocol which can be replicated to other disease processes, other units and practice sites.

References

American Association of College of Nursing. (2006). *The essentials of doctoral education for advanced nursing practice*. Retrieved from https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf

Agency for Healthcare Research and Quality (2013). Re-Engineered Discharge (RED) Toolkit. Tool 1: Overview https://www.ahrq.gov/sites/default/files/publications/files/redtoolkit.pdf

Agency for Healthcare Research and Quality (2015). Types of healthcare quality measures. https://www.ahrq.gov/talkingquality/measures/types.html

American College of Cardiology. (ND). Heart Failure. https://www.acc.org/education-and-meetings/products-and-resources/guideline-education/heart-failure

American Heart Association. (2020). Heart Failure. https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure#:~:text=Heart%20failure%20is%20a%20chronic%2C%20progressive%20condition%20in,the%20heart%20can%E2%80%99t%20keep%20up%20with%20its%20workload.

American Nursing Association. (2015). *Code of ethics for nurses with interpretive statements*. Silver Spring, Maryland. www.nursingworld.org/ethics/coe-view-only

Ayanian, Z. & Markel, H. (2016). Donabedian's lasting framework for healthcare quality. *The New England Journal*, 375 (*3*). Pp. 2015-207. DOI: 10.1056/NEJMP1605101

Balaban, R.B., Zhang, F., Vialle-Valentin, C.E., Galbraith, A.A., Burns, M., E., Larochelle, M.R. & Ross-Degna, D. (2017). Impact of a patient navigator program on hospital-based and outpatient utilization over 180 days in a safety-net health system. *Journal of General Internal Medicine*, 32 (*9*). Pp. 981-989. doi: 10.1007/s11606-017-4074-2

Bazargan, M., Smith, J.L., Cobb, S., Berkley, L., Wisseh, C., Ngula, E., Thomas, R.J. & Assari, S. (2019). Emergency department utilization among underserved African American older adults in south Los Angeles. *International Journal of Environmental Research & Public Health*, 16 *(7*). 1175. DOI. 10.3390/ijerph16071175

Bemker, M. & Schreiner, B. (2016). *The DNP degree & Capstone Project: A practical guide*. Lancaster, P.A.: DEStech Publication

Berwick, D. & Fox, D.M. (2016). "Evaluating the quality of medical care": Donabedian's classis article 50 years later. *The Milbank Quarterly*, 94 (*2*). Pp. 237-241. doi: 10.1111/1468-0009.12189

Brennan, E.J. (2018). Chronic heart failure integrated multidisciplinary care. *British Journal of nursing*, 27 (*12*). Pp. 681-688. Retrieved from: https://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=1&sid=e0a2cbc2-bc8d-4fff-bdcc-c5b2b21f130a%40pdc-v-sessmgr06

Bristol. & Brett, A.L. (2015). Test items writing: 3 C's for successful tests. Teaching and Learning in Nursing, 10. Pp. 100-103. Http://dx.doi.org/10.1016/j.tein.2015.01.004 1557-3087

Center for Disease Control and Prevention (2019). Heart Disease, Heart Failure. https://www.cdc.gov/heartdisease/heart_failure.htm

Center for Medicaid and Medicaid Services (2020). Hospital Readmissions Reduction Program. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program

Chava, R., Karbi, N., Ketlogestwe, K. & Ayala. T. (2019). Multidisciplinary rounds in prevention of 30-day readmissions and decreasing length of stay in heart failure patients. A community hospital based retrospective study. *Journal of Medicine* (Baltimore), 98(*27*). Pp. 1-4. https://doi:org10.1097/MD.0000000000016233

CITI Program. (ND). *Institution Review Board Administration*. http:// about.citiprogram.org/en/courses/irb-administration

Department of Health and Human Services Nevada Division of Public and Behavioral Health. (2019). Health professional shortage area designations. http://dpbh.nv.gov/Programs/HPSA/Health_Professional_Shortage_Area_Designations_-_Home/

Diplock, G., Stewart. S., Scuffham, P., Stewart, P., Reeve, C., Davidson, L. & Maguire, G. (2017). The Alice Springs Hospital Readmission Prevention Project (ASHRAPP): a randomized control trial. *BMC Health Services Research*, 17 (*153*). Pp. 1-11. DOI:10.1186/s12913-017-2077-7

Dizon, M. L. & Reinking, C. (2017). Reducing readmissions: Nurse- driven interventions in the transition of care from hospital. *Worldviews on evidence-based Nursing*, 14 (*6*). Pp. 432-439. Retrieved from EBSCOhost

Doctors of Nursing Practice. (2020). *Doctoral project repository: an archive of curated documents.* www.doctorsofnursingpractice.org

Donabedian, A. (1966). Evaluating the quality of medical care. *The Milbank Memorial Fund Quarterly*, 44 (*3*). Pp. 166-206. DOI:10.2307/3348969

Donabedian, A. (1986). Criteria and standards for quality assessment and monitoring. *Quality Review Bulletin*, 12 (*3*). Pp. 99-108. https://doi.org/10.1016/S0097-5990(16)30021-5

Donabedian, A. (1997). Special article: the quality of care: how can it be assessed? *Archives of Pathology and Laboratory Medicine*, 121 (*11*). Pp. 1145-1150. https://www.proquest.com/docview/211957437/7505D7E43AAC4B04PQ/1?accountid=28843

Galbraith, A.A., Meyers, D.J., Ross-Degnan, D., Burns, M.E., Vialle-Valentin, C.E., Larochelle, M.R., Touw, S., Zhang, F., Rosenthal, M. & Balaban, R.B. (2017). Long-term impact of a post discharge community health worker intervention healthcare costs in a safety-net system. *Health Services Research*, 52 (*6*). Pp.2061-2078. Doi: 10.1111/1475 6773.12790

Gupta, A.& Fonarow, G.C., (2018). The hospital readmissions reduction program- learning from failure of a healthcare policy. *European Journal of Heart Failure*, 20 (*8*). Pp. 1169-1174. https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,sso&db=cmedm&AN=29791084&site=ehost-live&custid=s6175763

Hassan, I. (2019). Health care improvement process change. *Donabedian Model*. https://www.slideshare.net/imadhassan/healthcare-improvement-process-change-skills-n1-ss1

Henderson Hospital. (2020). *Hospital Insurance and admission data*.

Henderson Hospital (2018). *Readmissions data*.

Hesselink, G., Zegers, M., Vernooij-Dassen, M., Barach. P., Kalkman.C., Flink, M., Öhlén, G.,

Olsson, M., Bergenbrant, S., Orrego, C., Suñol1, R., Toccafondi1, G., Venneri, F. Dudzik-Urbaniak, E., Kutryba, B., Schoonhoven, L. & Wollersheim, H. (2014). Improving patient discharge and reducing hospital readmissions by using Intervention Mapping. *BMC Health Services Research,* 14 (*389*). Pp. 1-11. https://doi.org/10.1186/1472-6963-14-389

Hines, A.L., Barrett, M.L., Jiang, H. & Steiner, C.A. (2014). Conditions with the largest number of adult hospital readmissions by payer, 2011. *Agency for Healthcare Research and Quality (AHRQ)*. Statistical Brief #172. https://www.hcup-us.ahrq.gov/reports/statbriefs/sb172-Conditions-Readmissions-Payer.pdf#:~:text=These%20include%20congestive%20heart%20failure%20%28134%2C500%20readmissions%3B%20%241.7,infarction%20%2851%2C300%20readmissions%3B%20%24693%20million%20in%20total%20costs%29.

Hoyer, E.H., Padula, W. V., Brotman, D.J., Reid, N., Leung, C., Lepley, D. & Deutschendorf, A. (2018). Patterns of hospital performance on the hospital-wide 30-day readmission metric: is the playing field level?. *Journal of General Internal Medicine*, 33 (*1*). Pp. 57-64. DOI. 10.1007/s11606=-017-4193-9

Kamermayer, A.K., Leasure, A.R. & Anderson, L. (2017). The effectiveness of transitions of care interventions in reducing hospital readmissions and mortality, a systematic review. *Dimensions of Critical Care Nursing*, 36 (*6*). Pp. 311-316. Retrieved from Wolters Kluwer's Health

Kang, E., Gillespie, B.M., Tobiano, G. & Chaboyer, W. (2018). Discharge education delivered to general surgical patients in their management of recovery post discharge: A systematic mixed studies review. *International Journal of Nursing Studies*, 87. Pp. 1-13. Retrieved

from https://reader.elsevier.com/reader/sd/pii/S0020748918301585?token=56982CBF81120F9B5FF0E9CF3604DB04E3CA86F7210BEA78E1D7FCD0F1D1B7458B1C8D50E2190F2CF2D9CFDDEC5EADDD

L'Ecuyer, K.M., Subramaniam, D.S. & Reangsing, C. (2020). Development of the preceptor self-assessment tool & use of the content validity index. *The Journal of Continuing Education in Nursing*, 51 (*10*). Pp. 469- 476. DOI: 10.3928/00220124-2020091409.

Liu, S.W., Singer, S.J., Sun, B.C. & Camargo, C.A. (2011). A conceptual model for assessing quality of care for patients boarding in the emergency department: Structure-process-outcome. *Society for Academic Emergency Medicine*, 18. Pp. 430-435. DOI: 10.111/j.1553-2712.2011. 01033.x

Loop, M.S., Van Dyke, M.K., Chen, L., Brown, T.M., Durant, R.W., Safford, M.M. & Levitan, E.B. (2016). Comparison of length of stay, 30-day mortality, and 30-day readmission rates in Medicare patients with heart failure and with reduced versus preserved ejection fraction. *The American Journal of Cardiology*, 118 (*1*). Pp. 79-85. DOI: 10.1016/j.amjcard.2016.04.015

Mennuni, M., Gulizia, M.M., Alunni, G., Amico, A.F., Bovenzi, F.M., Caporale, R., Colivicchi, F., Di Lenarda, A., Di Tano, G., Egman, S., Fattirolli, F., Gabrielle, D., Geraci, G., Gregorio, G., Mureddu, G.F., Nardi, F., Radini, D., Riccio, F., Sicuro, M., Urbinati, S., Zuin, G. (2017). ANMCO position paper: hospital discharge planning recommendations and standards. *European Heart Journal Supplements*, 19 (*D*). Pp. D244-D255. Https://doi.org/10.1093/eurheartj/sup011

Messerli, A.W. & Deutsch, C. (2020). Implementation of institutional discharge protocols and transition of care following acute coronary syndrome. *Journal of Cardiovascular Revascularization Medicine.* Pp. 1-9. https://doi.org/10.1016/j.carrev.2020.02.013

Mitchell, E., Martin, J., Holmes, S., van Deusen Lukas, C., Cancino, R., Paasche-Orlow, M, Brach, C.& Jack, B. (2016). How hospitals reengineer their discharge processes to reduce readmissions. *Journal of Healthcare Quality*, 38 (*2*). Pp. 116-126. DOI: 10.1097/JHQ.0000000000000005.

Mitchell, S.E., Weigel, G.M., Laurens, V., Martin, J. & Jack, B.W. (2017). Implementation & adaptation of the Re-engineered discharge (RED) in five California hospitals: a qualitative research study. *BioMed Central Health & Services Research*, 17 (*291*). Pp. 1-14. DOI: 10.1186/s12913017-2242-2.

Moore, L., Lavoie, A., Bourgeois, G. & Lapointe, J. (2015). Donabedian's structure-process-outcomes quality of care model: Validation in an integrated trauma system. *Journal of Trauma Acute Care Surgery*, 78 (*6*). Pp. 1168-1175. DOI: 10.1097.0000000000000663.

Moran, K., Burson, R., Conrad, D. (2020). *The Doctor of Nursing Practice Project: A Framework for Success.* Burlington, MA: Jones & Bartlett Learning. (2nd edition)

Murtaugh, C.M., Deb, P., Zhu, C., Peng, T.R., Barron, Y., Shah, S., Moore, S.M., Bowles, K.H., Kalman, J., Feldman, P.H. & Siu, A.L. (2017). Reducing readmissions among heart failure patients discharged to home health care: effectiveness of early and intensive nursing services and early physician follow-up. *Health Services Research Journal*, 52 (*4*). Pp. 1445-1472. DOI: 10.1111/1475-6773.12537

Nosowsky, S. (ND). *Quality Improvement on research worksheet*. Https://irb.research.chop.edu/sites/default/files/documents/quality_improvement_or_research_worksheet.pdf

O'Connor, C.M. (2017). High heart failure readmission rates. Is it the health system fault? *Journal of American College of Cardiology*, 5 (*5*). Retrieved from: https://heartfailure.onlinejacc.org/content/5/5/393

Patel, P.H. & Dickerson, K.W. (2018). Impact of the implementation of project re-engineered discharge for HF patients at a Veterans healthcare system. Hospital Pharmacy, 53 (4). Pp. 266-271. DOI: 10.1177/0018578717749925.

Peter, D. Robinson, P., Jordan, M., Lawrence, S., Casey, K. & Salas- Lopez, D. (2015). Reducing readmissions using teach back. Enhancing patient and family education. *Journal of Nursing Administration*, 45 (*1*). Pp. 35-42. Retrieved from Wolters Kluwer Health, Lippincott Williams & Wilkins.

Qaddoura1, A., Yazdan-Ashoori, P., Kabali, C., Thabane, L., Haynes, R.B., Connolly, S.J. & Van Spall, H.G.C. (2015). Efficacy of Hospital at Home in Patients with Heart Failure: A Systematic Review and Meta-Analysis. *PLoS One*, 10 (*6*). Pp. 1-15. DOI: 10.1371/journal.pone.0129282

Reavy, K. (2016). *Inquiry and leadership*. A Resource for the DNP Project. F.A. Davis Company. ISBN: 978-0- 8036-4204-1

Robeznieks, A. (2017). Successful discharge planning starts at admission. *Hospitals & Health Networks*. Pp. 39-43.

https://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=21&sid=780aac06-ebb0-4b86-9f4e-66d623693b9c%40sdc-v-sessmgr01

Roger, V.L. (2013). Epidemiology of Heart Failure. *Journal of Circulation Research*, 113 (*6*). Pp. 646-659. https://www.ahajournals.org/doi/full/10.1161/circresaha.113.300268

Rosa, G.M., Scagliola, R., Ghione, P., Valbusa, A., Brunelli, C., Carbone, F., Montecucco, F. & Monacelli. F. (2019). Predictors of cardiovascular outcome and rehospitalization in elderly patients with heart failure. *European Journal of Clinical Investigation*, 49. Pp. 1-12. DOI: 10.1111/eci.13044.

Rupp, M.T. (2018). Assessing quality of care in pharmacy: remembering Donabedian. *Journal of Managed Care & Specialty Pharmacy*, 24 (*4*). Pp. 354-356. DOI: 10.18553/jmcp.2018.24.4.4.354.

Ryan, C.J., Bierle, R. & Vuckovic, K.M. (2019). The three R's for preventing heart failure readmission: review, reassess and reeducate. *Journal of Critical Care Nurse*, 39 (*2*), Pp. 85-93. Retrieved from American Association of Critical Care Nurses.

Samal, L., Dykes, P.C., Greenberg, J.O., Hasan, O., Venkatesh, A.K., Volk, L.A. & Bates, D.W. (2016). Care coordination gaps due to lack of interoperability in the United States: a qualitative study and literature review. *BMC Health Services research*, 16 (*143*). Pp. 1-8 DOI: 10.1186/s12913-016-1373-y

Sevilla-Cazes, J., Ahmad, F.S., Bowles, K.H., Jaskowial, A., Gallagher, T., Goldberg, L.R., Kangovi, S., Alexander, M., Riegel, B., Barg, F.K. & Kimmel, S.E. (2018). Heart failure home management challenges and reasons for readmission: a qualitative study to

understand the patient's perspective. *Journal of General Internal Medicine*, 33 (*10*). Pp. 1700-1707. DOI: 10.1007/s11606-018-4542-3

Sommer, A.E., Golden, B.P., Peterson, J., Knoten, C.A., O'Hara, L. & O'Leary, K. (2018). Hospitalized patients' knowledge of care: a systematic review. *Journal of General Internal Medicine*, 33 (*12*). Pp. 2210-2229. DOI: 10.1007/s11606-018-4658-5

Sylvia, M.L. & Terhaar, M.F. (2018). *Clinical Analytics and Data Management for the DNP*. Springer Publishing Company LLC. ISBN: 978-0-8261-4277-1

Universal Health System. (2019). *Quality Readmission Reduction Dashboard*.

Van Melle, M.A., Van Stel, H.F., Poldervaart, J.M., De Wit, N.J. & Zwart, D.L.M. (2018). Measurement tools and outcome measures used in transitional patient safety; a systematic review. *PLoS One*. Pp. 1-18 https://doi.org/10.1371/journal.pone.0197312

Vedel, I. & Khanassov, V. (2015). Transitional care for patients with congestive heart failure: A systematic review and meta-analysis. *Annals of Family Medicine*, 13 (*6*). Pp. 561-571. https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,sso&db=cmedm&AN=26553896&site=ehost-live&custid=s6175763

Vitacca, M. & Paneroni, M. (2018). Rehabilitation of Patients with Coexisting COPD and Heart Failure. *Journal of Chronic Obstructive Pulmonary Disease*, 15 (*3*). Pp. 231-237. https://doi.org/10.1080/15412555.2018.1468427

Wang, H., Johnson, C., Robinson, R.D., Netjek, V.A., Schrader, C.D., Leuck, J., Umejiegol, J., Trop, A. Delaney, K.A. & Zenarosa, N.R. (2016). Roles of disease severity and post discharge outpatient visits as predictors of hospital readmissions. *Bio Med Central*

Health Services Research, 16 (*564*). Pp. 1-10. DOI: 10.1186/s12913-016-1814-7

Welch, T.D. & Carter, M. (2018). Deliberate practice and skill acquisition in nursing practice. *The Journal of Continuing Education in Nursing*, 49 (*6*). Pp. 269-273. DOI:10.3928/00220124-20180517-07

Wood, R.L., Migleore, L.A., Nasshen, S.J., Morghani, S.R. & Contasti, A.C. (2019). Confronting challenges in reducing heart failure 30-day readmissions: lessons learned with implications for evidence-based practices. *World Views on Evidence-based Nursing*, 16 (*1*). Pp. 43-50. https://doi.org/10.1111/wvn.12336

World Health Population. (2020). Henderson, Nevada Population 2020. https://worldpopulationreview.com/us-cities/henderson-nv-population

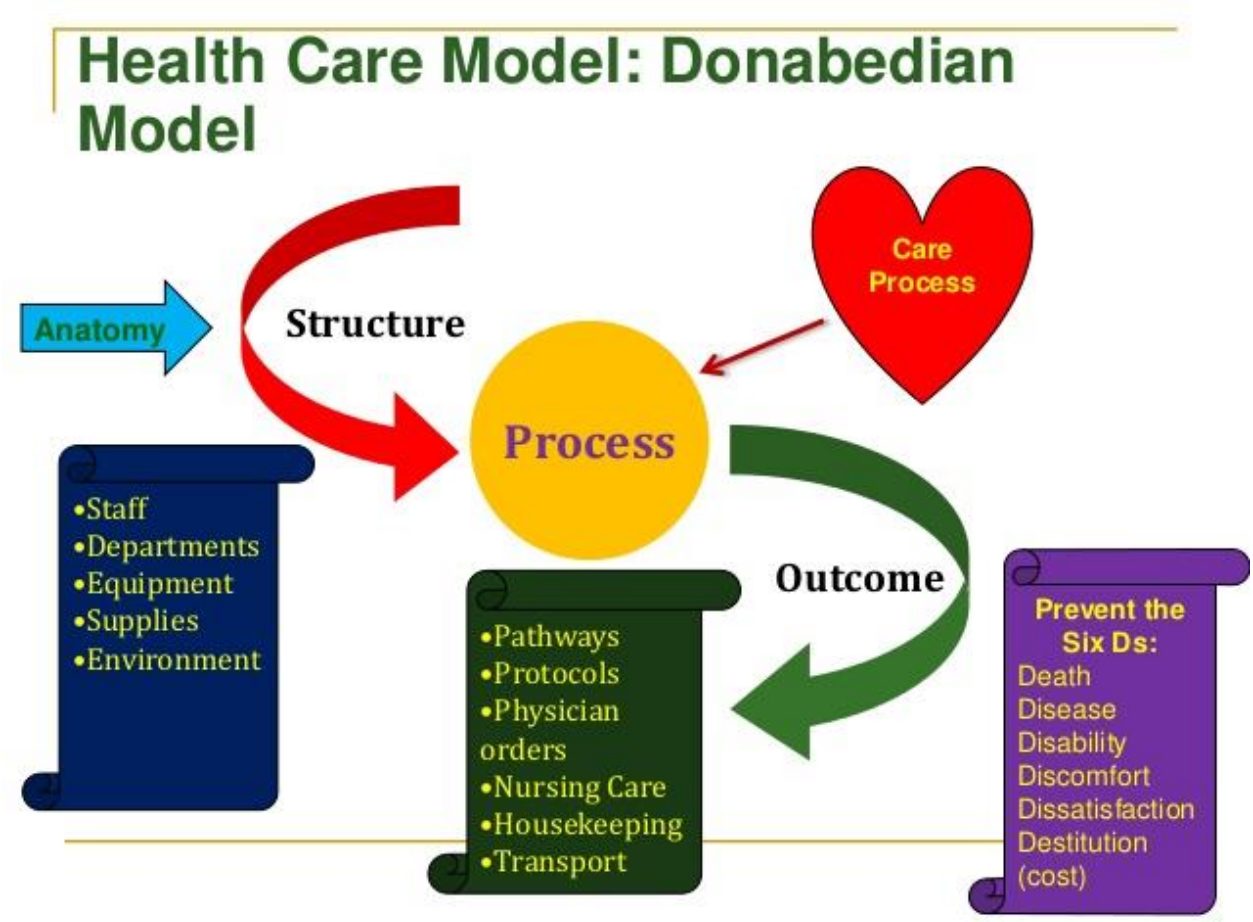
Xiao, C., Tengfei, M., Adii, D.B., Blei, D.M., Fei, W. (2018). Readmissions prediction via deep contextual embedding of clinical concepts. *PLoS One*, 13 (*4*). e0195024. DOI: 10.137/journal.pone.0195024

Yancy, C.W., Jessup, M., Bozkurt, B., Butler, J., Casey, D.E., Colvin, M.M., Drazner, M.H., Filippatos, G.S., Fonarow, G.C., Givertz, M.M., Hollenberg, S.M., Lindenfeld, Masoudi, F.A., McBride, P.E., Peterson, P.N., Warner Stevenson, L. & Westlake, C. (2017). 2017 ACC/AHA/HFSA Focused Update of the 2013 ACCF/AHA Guideline for the Management of Heart Failure. A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Failure Society of America. *Journal of the American College of Cardiology*, 70 (*6*). DOI: 10.1016/j.jacc.2017.04.025. https://www.onlinejacc.org/content/70/6/776?_ga=2.108380226.1120340311.1598736201-378183868.1595785080

Zhou, H., Della, P.R., Roberts, P., Goh, L. & Dhaliwal, S.S. (2016). Utility of models to predict 28-day or 30-day unplanned hospital readmissions: an updated systematic review. *BMJ Open*, 6 (*6*). Pp.1-25. DOI:10.1136/bmjopen-2016-011060

Appendix A

Health Care Improvement Process Change: Donabedian Model



https://www.slideshare.net/imadhassan/healthcare-improvement-process-change-skills-n1-ss1

Appendix B

UHS Quality Readmission Reduction Dashboard December, 2019

Run Date: 12/26/19

UHS Quality Readmission Reduction Dashboard

Data Type		Readmission Reduction Measures Data Collection Period:November 2018-October 2019					
Measures	Hospital Wide % 30-Day Readmit	AMI % 30-Day Readmit	Heart Failure % 30-Day Readmit	Pneumonia % 30-Day Readmit	Hip/Knee % 30-Day Readmit	COPD % 30-Day Readmit	CABG % 30-Day Readmit
Centennial	15.25	10.87	25.65	18.70	4.80	28.57	
Corona	12.47	9.68	16.16	14.15	5.56	7.41	
Desert Springs	12.71	10.53	20.56	13.01	5.56	14.42	9.30
Henderson	12.84	5.88	18.65	14.29	0.00	13.27	
Palmdale	12.56	8.89	18.61	11.57	8.33	13.12	
Northern Nevada	7.72	5.88	9.52	17.07	3.19	4.08	
Southwest (ALL)	13.25	20.00	14.82	11.97	6.25	22.86	
Spring Valley	13.76	10.87	20.57	17.07	6.30	16.05	18.52
Summerlin	15.09	22.62	25.11	16.36	3.13	22.54	12.90
Temecula	14.03	20.54	20.28	13.29	3.33	25.49	16.67
Valley	15.04	3.70	16.55	21.30	0.00	25.61	27.27
Laredo	13.61	17.50	17.80	12.08	0.00	16.44	12.00
Ft. Duncan	15.11	16.67	18.82	22.35		14.55	
Northwest Texas	8.93	11.01	8.33	10.00	0.00	16.44	13.64
South Texas (ALL)	13.03	14.17	17.92	9.86	0.00	10.53	14.29
St. Mary's	10.77	0.00	11.49	13.33	2.11	20.59	
Texoma	16.83	18.67	22.86	18.56	10.29	19.63	16.48
Aiken	12.42	14.52	18.88	14.63	9.76	14.10	27.27
GWU	9.41	9.80	13.42	11.35	2.27	7.94	7.69
Lakewood	9.36	15.91	15.89	7.21	1.19	10.94	
Manatee	12.63	12.15	16.24	12.90	4.80	18.84	5.26
Wellington	10.26	0.00	15.22	11.95	3.57	13.75	
UHS Total	**12.90**	**12.95**	**18.25**	**14.42**	**3.97**	**17.08**	**13.78**

Source System: Midas
Population: Medicare
Green indicates measure is below the CMS Expected Readmission Rate
Red indicates measure is above the CMS Expected Readmission Rate

Appendix C

Facility Agreement

Please check all areas where you may have students wishing to do their clinicals with us:

Registered Nursing	Medical Coding
Practical Nursing	Sonography
X Advanced Practice Nursing	Radiology
Certified Nursing Assistant	Social Workers
X Physical Therapist	Surgical Technology
Physical Therapist Assistant	Pharmacy Technician
X Occupational Therapist	Medical Imaging
Occupational Therapy Assistant	X Physician Assistant
Emergency Medical Technician	Cardiorespiratory Services
Paramedic Medicine	Speech Therapy
Health Information Technology	Therapy Services
Clinical Laboratory Sciences including Phlebotomy	

SCHOOL AFFILIATION AGREEMENT

This Agreement is entered into to be effective as of the 1st Day of July, 2018,by and among Touro University, Nevada, (hereinafter referred to as "School"), Valley Health System, L.L.C. d/b/a Centennial Hills Hospital Medical Center, Henderson Hospital, Spring Valley Hospital Medical Center, Desert Springs Hospital & Valley Hospital Medical Center ("VHS"), and Summerlin Hospital Medical Center, L.L.C. d/b/a Summerlin Hospital Medical Center ("SHMC") (VHS and SHMC shall jointly be referred to as "Hospital") and Desert View Hospital. This Agreement applies to those students placed for training at the Hospital on or after its effective date.

This Agreement is made with reference to the following facts:

A. WHEREAS, School conducts the educational programs for students ("Program"), which may require clinical experience in an acute care setting in order to acquire technical skill (the "Training Experience").

B. WHEREAS, Hospital operates seven general acute care hospitals known as the Centennial Hills Hospital Medical Center, Valley Hospital Medical Center, Spring Valley Hospital Medical Center, Desert Springs Hospital Medical Center, and Summerlin Hospital Medical Center, Henderson Hospital, and Desert View Hospital together with their related ancillary facilities (collectively, "Hospital" or "Hospitals").

C. WHEREAS, Hospital is willing to allow School's Students (referred to individually as "Student" or collectively as "Students") to receive Training Experience at its acute care facilities in order that Student may receive the required clinical experience, all upon the terms and conditions and subject to the limitations set forth in this Agreement.

THEREFORE, it is agreed between the parties as follows:

1. **RESPONSIBILITIES OF SCHOOL.**

1.1 **Program Under Jurisdiction of School.** The Program conducted pursuant to this Agreement is an education program of School and not Hospital. Students participating in the Program shall be under the exclusive jurisdiction of the School at all times. Notwithstanding the foregoing, the time, place and subject matter of all educational activities at the Hospital, including plans therefore, shall be subject to the approval of Hospital, and School assumes responsibility for assuring that Students observe the rules and regulations of Hospital and that nothing is done which might prove detrimental to Hospital or its patients. Further, School shall:

(a) Designate a faculty member ("Faculty Coordinator") and an alternate who shall be responsible for the development, coordination, implementation and supervision of the Student's experience at Hospital in consultation with the Designated Representative of Hospital;

(b) Maintain records and reports of the Student's Training Experience for a period of not less than four (4) years;

(c) Notify the Hospital in advance of the planned Training Experience, to include area, date of arrival and name of the Student. This schedule shall be subject to the Hospital's approval, which approval shall not be unreasonably withheld; use all reasonable efforts to assure Student's compliance with Hospital's policies and procedures, rules and regulations, including maintaining confidentiality with respect to all confidential information acquired in the course of the Training Experience;

(d) Provide a copy of the performance objectives for the Training Experience and the assurance that the Student is academically prepared to meet such objectives;

(e) Consult with Hospital's Designated Representative with respect to a Student evaluation process pertaining to the Training Experience;

(f) Assure that Student assigned to Hospital, prior to any observation period or participation in any clinical experience, has received training in blood and body fluid standard precautions consistent with the U.S. Centers for Disease Control and Prevention Guidelines. Documentation of such training will be provided to Hospital upon request;

(g) Assure that Student has obtained the physical examination, maintains medical insurance, and has complied with such other requirements upon request of Hospital, and submit documentation of that compliance;

(h) Agree to obtain, for each student, a criminal background check to include as a minimum an outstanding warrants search, statewide criminal search, and civil and criminal public filings for the State of Nevada (hereinafter collectively referred to as the "Background Information"). We agree to submit the background check via Pre-Check to the Hospital in which the student will be completing their clinical rotations, no more than sixty (60) days prior to the beginning of the student's externship.

(i) Inform Student, prior to the Student's participation in the clinical portion of the Program at Hospital, of the Student's responsibilities as set forth in Paragraph 3 of this Agreement;

(j) Maintain and evidence the insurance participation required by the provisions of Paragraph 7 throughout the term of this Agreement and, unless said insurance provides coverage on an occurrence basis, for at least three (3) years following termination of this Agreement; and

(k) Assure that Student has signed **Exhibit "A,"** Confidentiality Statement, and **Exhibit "B,"** Student's Responsibilities Prior to and During Student's Training Experience at Hospital.

(l) Yearly – in July, provide a list of the number of students you have/had at each of our seven acute-care facilities and the areas for their rotation/clinical for the year. Please send the list to Valley Health System University, 8801 W. Sahara, 2nd Floor, Las Vegas, NV 89117.

(m) Conduct an OIG List of Excluded Providers,

(i) School represents and warrants that it has checked the OIG List of Excluded Providers ("List") and that School and no Students provided under this Agreement appear on said List. Further, School represents and warrants that School and no Student provided by School under this Agreement is subject to sanction or exclusion from participation under any Federal or State health care program. In the event that School becomes so sanctioned or excluded, Hospital may immediately terminate this Agreement. In addition, any Student or School personnel who become so sanctioned or excluded during the term of this Agreement shall be immediately removed from the Hospital by School, if applicable, and shall be thereafter as pertains to this Agreement excluded from the Hospital. Removal of any excluded personnel pursuant to this

Section shall not preclude Hospital's right to immediately terminate this Agreement.

(ii) School shall provide proof of compliance of School's obligations pursuant to this Section 1.1(1) promptly upon request by Hospital. Failure to comply with the obligations of this Section shall be deemed a material breach of this Agreement.

1.2 **Cooperation and Coordination with Hospital.** In order to assure the effectiveness of the Program, School and Hospital will work together in planning and implementing the Program, and in this connection, shall advise one another of the philosophy, objectives, policies and regulations of their respective institutions.

1.3 **No Compensation.** The Program conducted hereunder shall be conducted without the payment of any monetary consideration by School or Hospital to the other or by or to any Student participating in the Training Experience.

1.4 **Joint Commission Human Resources Provision.** School represents that each person performing the services under this Agreement (1) has been educated and trained consistent with applicable regulatory requirements and Hospital policy; (2) is appropriately licensed, certified or registered, as applicable, to provide the services as provided herein; (3) has appropriate knowledge, experience and competence as are appropriate for his or her assigned responsibilities as required by Hospital; and (4) has been oriented to Hospital policies and procedures. School also represents that it evaluates each student's performance, has verified each employee's health status as required by his or her duties in providing the services under the Agreement and as required by all applicable laws and regulations (collectively, "Law"), it has performed criminal background checks and/or pre-employment verification of convictions for abuse or neglect when required by Law and it has evaluated and reviewed each employee's references, when applicable. School shall provide Hospital with evidence of compliance with this paragraph upon request.

1.5 **Sanctioned Provider.** School represents and warrants to Hospital that neither School nor any Student performing the services under the Agreement is a "Sanctioned Provider" meaning that neither School nor any Student (i) is currently excluded, debarred, or otherwise ineligible to participate in the Federal health care programs, including but not limited to Medicare, Medicaid or TRICARE, as defined in 42 USC § 1320a-7b(f) (the "Federal health care programs"); (ii) is convicted of a criminal offense related to the provision of health care items or services and has not yet been excluded, debarred, or otherwise declared ineligible to participate in the Federal health care programs; and (iii) is under investigation or otherwise aware of any circumstances which may result in a Student being excluded from participation in the Federal health care programs. This shall be an ongoing representation and warranty during the

term and School shall immediately notify Hospital of any change in the status of the representation and warranty set forth in this Section. Any breach in this representation shall be cause for Hospital to terminate this Agreement immediately.

1.6 **Referral Source.** School further represents and warrants that no physician who is or may be a referral source to Hospital (as said term is defined at 42 U.S.C. section 1395x(r) nor any "immediate family member" of a physician owns or holds and "ownership or investment interest" in School. For purposes of the preceding sentence, the term "immediately family member" shall have the meaning described in 42 C.F.R. section 411.351 and the term "ownership or investment interest" shall have the meaning described in 42 U.S.C. section 1395nn(a)(2).

1.7 **Confidentiality of Patient Information.** School agrees to protect to the fullest extent required by law the confidentiality of any patient information generated or received by School, its employees, or agents in connection with the performance of services hereunder. School specifically acknowledges that in receiving, storing, processing, or otherwise handling records of Hospital patients, School may be bound by federal laws governing addictive disease patients, including 42 C.F.R. Part 2. School agrees, if necessary, to resist in judicial proceedings any efforts to obtain access to patient records except as permitted by law. School's obligation to maintain the confidentiality of Hospital patient information shall survive termination of this Agreement.

1.8 **HIPAA Requirements.** To the extent applicable to this Agreement, School agrees to comply with the Health Insurance Portability and Accountability Act of 1996, as codified at 42 USC § 1320d ("HIPAA") and any current and future regulations promulgated thereunder including without limitation the federal privacy regulations contained in 45 C.F.R. Parts 160 and 164 (the "Federal Privacy Regulations"), the federal security standards contained in 45 C.F.R. Part 142 (the "Federal Security Regulations"), and the federal standards for electronic transactions contained in 45 C.F.R. Parts 160 and 162, all collectively referred to herein as "HIPAA Requirements." School agrees not to use or further disclose any Protected Health Information (as defined in 45 C.F.R. § 164.501) or Individually Identifiable Health Information (as defined in 42 USC § 1320d), other than as permitted by HIPAA Requirements and the terms of this Agreement. School shall make its internal practices, books, and records relating to the use and disclosure of Protected Health Information available to the Secretary of Health and Human Services to the extent required for determining compliance with the Federal Privacy Regulations. School's obligation to maintain the confidentiality of HIPAA information shall survive termination of this Agreement.

1.9 **FERPA Requirements.** The parties agree that they are subject to the Family Educational Rights and Privacy Act ("FERPA") and to that end agree (a) they are each providing educational services to the other that they would otherwise have to provide for themselves using faculty and staff; (b) each party has a legitimate educational interests in the student education records disclosed under this Agreement and (c) Facility agrees to be under the direct control of School with respect to the use and maintenance of information from student education records. The Parties agree that any Party, including a "school official," that receives student education records as otherwise enumerated in this Agreement acknowledges that the student education record is confidential and may use the information only for the purposes for which the disclosure was made hereunder. Except as permitted elsewhere in this agreement, Facility may not re-disclose the information to any third party without prior written consent from the student and School. Furthermore the parties agree to work together to share student education records in a manner that best assures the protection of student education records from disclosure.

1.10 **Confidentiality of Hospital Information.** School understands and agrees that in connection with School's engagement by Hospital, School may acquire competitively sensitive information which is neither known to nor ascertainable by persons not engaged by School and which may cause School to suffer competitively or economically if such information became known to persons outside of School. Unless legally required to disclose such information, School agrees to maintain the confidentiality of any confidential information School acquires during School's engagement for the entire term of such engagement by School, and for as long as such information remains confidential.

2. HOSPITAL'S RESPONSIBILITIES

2.1 Hospital shall:

(a) Appoint a Designated Representative who shall consult with the School Faculty Coordinator for the purpose of implementing and coordinating the Training Experience at Hospital. The Hospital's Designated Representative is authorized to provide any approval, which is required by the terms of this Agreement but is not authorized to approve any amendment to or waiver of the terms of this Agreement;

(b) Provide appropriate general patient care facilities for the Training Experience conducted under this Agreement, including classroom and conference room space when available, provided that the presence of the Students shall not be allowed to interfere with the regular activities of the Hospital;

(c) Provide opportunities to Student to enable Student to acquire clinical experience as required by Program but only to the extent that the existing facilities and varying patient census of Hospital permit;

(d) Permit designated Hospital personnel to participate with the faculty of School in the instruction of Student at Hospital; however, this shall not interfere with the service commitments of Hospital personnel;

(e) Provide a reasonably safe area for storage of Student's personal belongings, although Hospital does not assume responsibility for any personal belongings of Students;

(f) Provide the same cafeteria privileges to Student as are available to Hospital staff;

(g) Maintain ongoing communication with School; and

(h) Provide instruction in safety and require that Students adhere to all safety regulations established by the hospital. Hospital will provide safety education and orientation to safety equipment, policies, and procedures at the time of student orientation. The Hospital will provide all necessary personal protective equipment, appropriate safety equipment and related information for students during assigned clinical experiences.

(i) The Hospital will provide emergency medical treatment in the event of an accident or injury. All expenses for the emergency treatment are the responsibility of the Student. Student is responsible for all follow-up treatment after emergency treatment has been given.

3. STUDENT'S RESPONSIBILITIES.

3.1 **Education Primary Responsibility.** It is understood and agreed that Student assigned to Hospital pursuant to this Agreement is assigned primarily for purposes of education and training, and at no time shall replace Hospital personnel in the provision of patient services. Prior to participating in the Training Experience, shall:

(a) Provide Hospital with certification of training in standard precautions for handling blood and body fluids consistent with U.S. Centers for Disease Control and Prevention guidelines;

(b) Provide evidence of medical insurance coverage;

(c) Provide evidence of a current physical examination or certification from a licensed physician that the Student is in a state of good health and is free from any casually transmitted communicable disease in a contagious stage, and including proof of current status of the following:

(i) Certificate that they have received a flu vaccination each year that they participate in the program.

(ii) Negative result to a 10-panel drug screen (including amphetamines, barbiturates, benzodiazepines, cocaine metabolites, marijuana metabolites, methadone, methaqualone, opiates, phencyclidine and propoxyphene) consistent with testing done on Hospital employees but no less than a 10-panel drug screen.

(iii) Tuberculosis: proof of non-infectivity with pulmonary tuberculosis by completing either (1), (2), (3) or (4):

(1) Two-step TB skin test (TST) for students with no history or a positive TST who have not been tested in the last 12 months;

(2) One step TST test for students with proof of a negative TST in the last 12 months;

(3) Negative chest radiograph for students with proof of past positive TST;

(4) Negative blood test results.

(iv) Rubella: documented receipt of one vaccination after 1st birthday, history of disease, born before 1957, serological evidence of immunity or statement of refusal.

(v) Rubeola: documented receipt of two vaccinations on or after first birthday, history of disease, born before 1957, serological evidence of immunity or statement of refusal.

(vi) Chicken pox: documented receipt of vaccination, history of the disease, serological evidence of immunity or statement of refusal.

(vii) Hepatitis B: documented vaccine series of three doses, serological evidence of immunity or statement of refusal.

(viii) Tetanus and diphtheria: documented inoculation within ten (10) years.

(d) Execute and transmit to Hospital a Confidentiality Statement in the form attached hereto, marked **Exhibit A**; and Student Declaration of Responsibilities marked **Exhibit B**;

(e) Conform to all applicable Hospital policies, procedures, and regulations, and such other requirements and restrictions as may be mutually specified and agreed upon by the Designated Representatives of Hospital and School; and

(f) Be responsible for his or her own support, maintenance and living quarters while participating in the Training Experience and for transportation to and from Hospital.

3.2 **Student Access to Hospital Facilities.** Access to the facilities of Hospital by Student shall be allowed only to the extent that access is necessary for the implementation of the Training Experience.

4. **RELATIONSHIP.** Student and faculty, while participating in the Training Experience conducted pursuant to this Agreement, shall not be considered employees of Hospital. Hospital does not assume any liability under any law relating to workers' compensation on account of any act of any Student or faculty performing any duty, receiving or participating in any clinical experience and training, or traveling pursuant to this Agreement. Student and faculty participating in the Training Experience shall not be entitled to any monetary remuneration from Hospital for services performed by them, in the course of receiving clinical experience pursuant to this Agreement.

5. **INDEPENDENT CONTRACTORS.** In the performance of their respective duties and obligations under this Agreement, it is mutually understood and agreed that the parties are at all times acting as independent contractors, and that neither shall have nor exercise any control or direction over the methods by which the other shall perform their obligations under this Agreement. No agency or employment relationship, partnership, joint venture or other business organization is created hereby. It is expressly agreed by the parties hereto that neither shall have authority to bind the other, and that no work, act, or omission in the performance of their respective obligations under this Agreement shall be construed to make or render either, the servant, agent, employee or partner of the other.

6. **TERMINATION OF STUDENT.** Notwithstanding anything in this Agreement to the contrary, Hospital may suspend the right of any Student participating under the terms of this Agreement to participate in the Training Experience at Hospital if, in the sole judgment and discretion of Hospital, the conduct, health or attitude of the Student threatens the health, safety, or welfare of any patient at Hospital or the confidentiality of any information relating to a patient. This action shall be taken by Hospital only on a temporary basis until Hospital has consulted with representatives of School. The consultation shall include an attempt to resolve the suspension, but the final decision regarding the Student's continued participation in the Training Experience at Hospital is vested in Hospital. The procedures referred to in this Paragraph are separate from any procedures of School relating to the Student's continued participation in Program at School.

7. **INSURANCE.**

7.1 **Insurance.** School shall purchase and maintain in full force and effect during the term of this agreement the following:

(a) Commercial or comprehensive general liability insurance with a combined single limit each occurrence for bodily injury and property damage not less than $3,000,000. Such insurance shall include personal and advertising injury with an annual aggregate limit not less than $1,000,000.

School shall secure and maintain for each Student participating in the Training Experience medical professional liability insurance in amounts of not less than One Million Dollars ($1,000,000) per occurrence and Three Million Dollars ($3,000,000) in the aggregate. School warrants and represents that Students are not employees of the Nevada System of Higher Education, its institutions, or of the State of Nevada. Nevada Revised Statute 41.035, which limits awards for damages against present or former officers or employees of the State or of any political subdivision to $50,000 does not, therefore, apply to students.

(b) Hospital and School shall each maintain Workers' Compensation insurance for their own employees, as required under Nevada State law; such insurance shall include Employer's liability with a limit not less than $1,000,000 each occurrence. Student participants are not employees of Hospital or School.

7.2 **Continuous Coverage.** Such insurance shall be on an occurrence or claims made form. If such insurance is on a claims made form, all acts and omissions of its subcontractors shall be, during the term of this Agreement, "continually covered" notwithstanding the term of the Agreement or the provisions of this Agreement allowing School to purchase claims made coverage. In order for the acts and omissions of School to be "continually covered" there must be insurance coverage for the entire period commencing with the effective date of this agreement and ending on the date that is at a minimum three (3) years after the final termination date of this agreement including any extensions or renewals thereof. Claims made coverage shall have a retroactive date at least concurrent with the effective date of this agreement. If such claims made coverage is cancelled or terminated or not renewed for any reason, School shall purchase either a three-year Extended Reporting (tail) coverage applicable to all claims arising during the term of this agreement including renewals and extensions thereof or nose coverage with a retroactive date at least concurrent with the effective date of this agreement. School shall produce evidence of the above-referenced insurance placements/coverages upon request.

7.3 **Insurance Company.** All required insurance shall be placed with an insurance company or companies licensed to do business in the State of Nevada, or a program of self-insurance.

7.4 **Primary Insurance.** Hospital and School agree that other than the self insurance general liability insurance, such policies are primary insurance and shall not contribute to or be excess of any other insurance or self insurance available to the insureds, with respect to any claims arising out of this Agreement, and that insurance applies separately to each insured against whom claim is made or suit may be brought.

7.5 **Certificates of Insurance/Evidence of Protection.** Prior to the commencement of this Agreement, the parties will furnish to one another, certificates of insurance or evidence of protection evidencing the required insurance coverage. Such insurance shall contain a provision that the coverage cannot be cancelled, terminated or materially changed without 30 days written notice to the other party except that 10 days written notice shall be given for non-payment of premium.

7.6 **Mandatory Insurance.** The insurance requirements under this section are mandatory. Failure of either party to request certificates of insurance shall not constitute a waiver of either party's obligations and requirements to maintain the coverage specified in this section.

7.7 **Hospital Insurance.** Hospital shall keep and maintain, at its sole cost and expense, professional and general liability coverage for acts and omissions of Hospital. All such insurance shall be issued upon such forms and in such amounts that are customary in the hospital industry or through programs of self insurance.

8. **INDEMNIFICATION.** The parties shall indemnify, defend and hold harmless each other and each other's respective officers, employees and agents from and against any and all actions, liabilities, claims, damages, suits, liens, and judgments arising out of or resulting from the negligent and/or unlawful acts or omissions of the indemnifying party or the indemnifying party's officers, employees, agents or subcontractors occurring during or in connection with performance under or regarding this Agreement.

9. **APPROVAL AND QUALIFICATION.** Only Students who have satisfactorily completed the pre-clinical didactic portion of the Program, which is prerequisite to clinical experience, shall participate in the Training Experience at Hospital. The number of Students to participate at any one time shall be approved by Hospital.

10. **PROHIBITION AGAINST DISCRIMINATION.** Hospital, School or Student participating in the Program shall not discriminate against any person because of race, color, creed, age, sexual orientation, national origin, sex, marital status, or veteran's status as provided by law. In addition, Hospital, School, or Student shall not discriminate against any person because of handicap under Section 504 of the federal Rehabilitation Act of 1973 or disability under the Americans with Disabilities Act of 1990.

11. **DESTRUCTION OF FACILITIES.** In the event that Hospital facilities shall be partially damaged or destroyed by fire, earthquake, or other catastrophe, and such damage is sufficient to render the facilities untenable but not entirely or substantially destroyed, this Agreement shall be suspended until such time as Hospital determines that the premises or the facilities shall again be tenantable.

12. **TERM AND TERMINATION.**

12.1 **Term.** This Agreement, except as otherwise expressly provided, is effective as of the date stated in the first paragraph of the Agreement and shall terminate three (3) years later, unless terminated earlier under any of the following provisions.

12.2 **Termination.**

(a) This Agreement may be terminated, without penalty or cause, at any time by either party by giving to the other party a thirty (30) day written notice by registered mail to the people at the addresses set forth below the signatures at the end of this Agreement, with the effective date of termination specified in said notice.

(b) The provisions of Paragraphs 1.1(j), 7 and 8 shall survive any termination of this Agreement.

(c) Hospital may terminate this Agreement for cause upon thirty (30) days' written notice to School in the event of a breach of the terms of this Agreement by School or Students.

13. **GENERAL PROVISIONS.**

13.1 **Amendment.** This agreement may not be amended except in writing signed by the authorized representatives of both parties.

13.2 **Governing Law.** The laws of the state of Nevada shall govern this Agreement.

13.3 **Counterparts.** This Agreement may be executed in several counterparts, each of which so executed shall constitute one and the same instrument.

13.4 **Modification and Amendments.** The terms and provisions of this Agreement may be modified or amended by mutual consent of the parties to this Agreement. In the event of a conflict, the terms and conditions of this Agreement will take precedence over those of any similar agreement.

13.5 **Severability of Terms.** If any provision of this Agreement shall be deemed invalid or unenforceable by a court of appropriate jurisdiction, then such unenforceable or invalid provision shall be deemed to be deleted from this Agreement. All remaining provisions of the Agreement shall be deemed to be in full force and effect.

13.6 **Entire Agreement.** This Agreement and Exhibits attached hereto constitute the entire Agreement between the parties pertaining to the subject matter contained in it and supersedes all prior and contemporaneous agreements and no other representations or understandings of the parties shall be binding unless executed in writing by all the parties. No waiver of any of the provisions of this Agreement shall be deemed, or shall constitute, a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. This Agreement may not be modified except by an instrument in writing executed by the parties.

13.7 **Arbitration.**

13.7.1 Agreement to Arbitrate. Any controversy or claim arising out of or relating to this Agreement, or the breach, termination or validity thereof, shall be determined by arbitration in County and State in which Hospital is located, in accordance with the provisions of this Paragraph and the arbitration rules of the American Arbitration Association ("AAA") in effect on the date of this Agreement by a single arbitrator who is selected as provided in Paragraph 13.7.2 below. The arbitrator shall base the award on this Agreement and applicable law and judicial precedent. The arbitration shall be governed by the substantive and procedural laws of the State in which Hospital is located, applicable to contracts made and to be performed therein. The decision of the Arbitrator shall be binding upon the parties and enforceable in the courts of the State in which Hospital is located. Each party shall equally bear the costs of Arbitration.

13.7.2 Selection of Arbitrator. The arbitrator shall be mutually selected by the parties hereto and in the event the parties cannot agree on an arbitrator, then the arbitrator will be selected in accordance with the rules of the AAA in effect on the date of this Agreement.

13.7.3 Authority of Arbitrator. The arbitrator shall have the exclusive authority to decide the scope of issues to be arbitrated. Any challenge to the arbitrability of any issue related in any way to the matters or claims in dispute between the parties shall be determined solely by the arbitrator. Also, any challenge to the validity of this arbitration provision or any subpart thereof shall be determined and decided exclusively by the arbitrator.

13.7.4 Discovery; Arbitration Hearing. Notwithstanding any AAA discovery rules to the contrary discovery shall be limited to (1) the production, by all parties to the arbitration, to the other parties thereto of all documents and electronic or computer records relevant or pertaining to any of the matters at issue; and (2) to allow each party to the arbitration to take five depositions, none of which may last more than four hours (exclusive of breaks and adjournments). These limits may be relaxed only upon the express agreement of each of the parties to the arbitration and the arbitrator. Notwithstanding any AAA rule to the contrary, the parties hereby agree that once the evidentiary hearing commences, it shall continue day-to-day until completed, with the exception of Saturdays, Sundays and legal holidays. Otherwise, the evidentiary hearing can only be adjourned by agreement of all of the parties and of the arbitrator for a period of time agreed upon by all of them.

13.8 **Assignment.** This Agreement may not be assigned by either party without the express written consent of the other party, and any attempted assignment without such consent shall be deemed void ab initio.

13.9 **No Rights of Third Parties.** Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any persons other than the parties to it and their respective successors, legal representatives, nor is anything in this Agreement intended to relieve or discharge the obligations or liability of any third persons to any party to this Agreement, nor shall any provisions give any third person any right of subrogation or action over or against any party to this Agreement.

13.10 **Non Exclusive Agreement.** This Agreement is not exclusive, and either party may contract freely with any other party for the provision of other similar services.

13.11 **Business Associate Agreement.** School shall not have access to Hospital patients' PHI and, in the event this occurs, School shall execute Hospital's standard Business Associate Agreement.

14. **NOTICE.** All notices hereunder by either party to the other shall be in writing, delivered personally, or by certified or registered mail, return receipt requested, or by overnight courier, and shall be deemed to have been duly given when delivered personally or when deposited in the United States mail, postage prepaid, addressed as follows:

Hospital: Valley Health System Hospitals
c/o Valley Health System Education & Training Center
8801 W. Sahara Avenue, 2nd Floor
Las Vegas, NV 89117

School: Touro University, Nevada
874 American Pacific Dr.
Henderson, NV 89014

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective duly authorized representatives of the date first written above.

VALLEY HEALTH SYSTEM, L.L.C.
SUMMERLIN HOSPITAL MEDICAL CENTER, L.L.C.

By: _____
Nina Carter
Market Director, Learning and Development

Date: 8.7.2018

By: _____
Wayne Cassard
Market Director of Human Resources

Date: 8/13/18

TOURO UNIVERSITY, NEVADA

By: _____
Andrew Priest, EdD, PT
Dean, CHHHS

Date: 8-6-18

EXHIBIT A

STUDENT CONFIDENTIALITY STATEMENT

The undersigned understands that all medical information acquired as a result of their participating in work and/or health care activities at Hospital is confidential and that the undersigned is prohibited from disclosing that information to any person or persons not involved in the care or treatment of the patients, in the instruction of Students, or in the performance of administrative responsibilities at Hospital. The undersigned agrees to protect the confidentiality of patient information as required by law at all times both during and following his or her relationship with Hospital. Conversations between physicians, nurses and other health care professionals in connection with or in the presence of a patient receiving care or between the undersigned and a patient are also protected and may not be discussed. The undersigned recognizes that other sources of medical information include medical records, emergency room department and ambulance records, child abuse reporting forms, elderly abuse reporting forms, laboratory requests and results, and x-ray requests and results. The undersigned understands that a breach of this confidentiality by him or her may result in an action for damages against him or her as well as against Hospital. Hospital may terminate the undersigned's relationship with Hospital based upon a single breach of confidentiality by him or her.

Date: 07/30/2020 Josee Gill Gill
Student

Date: _____
Witnessing Faculty Advisor

EXHIBIT B

STUDENT DECLARATION OF RESPONSIBILITIES

I, José Gill, hereby state, represent and agree that:
(Student Name)

1. I am over eighteen (18) years old.

2. I am a student enrolled in DNP Program (hereinafter referred to as "Program"), and as such I am participating in the School's clinical experience program (hereinafter referred to as the "Training Experience") at Henderson Hospital (hereinafter referred to as "Hospital").

3. I agree to obtain a physical examination within one year prior to entering into the Training Experience at Hospital and to provide proof of the following:

   a. Negative results to a 10-panel drug screen (including amphetamines, barbituates, benzodiazepines, cocaine metabolites, marijuana metabolites, methadone, methaqualone, opiates, phencyclidine and propoxyphene);

   b. Tuberculosis; Proof of non-infectivity with pulmonary tuberculosis by completing either (1), (2), (3), or (4):

      (1) Two-step TB skin test (TST) for students with no history or positive TST who have not been tested in the last 12 month;

      (2) One step TST test for students with proof of a negative TST in the last 12 months;

      (3) Negative blood test results; and

      (4) Negative chest x-ray for students with proof of past positive TST.

   c. Rubella: documented receipt of one vaccination on or after first birthday, history of the disease, born before 1957, serological evidence of immunity, or statement of religious or medical refusal;

   d. Rubeola: documented receipt of two vaccinations on or after first birthday, history of the disease, born before 1957, serological evidence of immunity, or statement of religious or medical refusal;

   e. Chicken pox: documented receipt of vaccination, history of the disease, born before 1957, serological evidence of immunity, or statement of religious or medical refusal;

f. Hepatitis B: documented vaccine series of three doses, serological evidence of immunity, or statement of religious or medical refusal;

g. Tetanus and diphtheria: documented inoculation within ten (10) years; and

h. Certification from a licensed physician that I am free of any casually transmitted communicable disease in a contagious stage.

i. Certification that I received a flu vaccination each year that I participate in the program.

4. I agree to conform to all applicable Hospital policies, procedures, and regulations, and such other requirements and restrictions as may be mutually specified and agreed upon by the Hospital Designated Representative and School

5. I understand and agree that I am responsible for my own support, maintenance and living quarters while participating in the Training Experience and that I am responsible for my own transportation to and from the Hospital.

6. I understand and agree that I am responsible for my own medical care needs. I understand that Hospital will provide access to emergency medical services should the need arise while I am participating in the Training Experience. However, I understand and agree that I am fully responsible for all costs related to general medical or emergency care, and that Hospital shall assume no cost or financial liability for providing such care.

7. I acknowledge that I have received training in blood and body fluid standard precautions consistent with the guidelines published by the U.S. Centers for Disease Control and Prevention. Documentation of such training shall be provided prior to beginning my Internship Program.

8. I acknowledge that I will receive academic credit for the Training Experience provided at Hospital and that I will not be considered an employee of Hospital or School, nor shall I receive compensation from either the Hospital or the School. I further acknowledge that I am neither eligible for nor entitled to workers' compensation benefits under Hospital's or School's coverage based upon my participation in Program. I further acknowledge that I will not be provided any benefit plans, health insurance coverage, or medical care based upon my participation in this Program.

9. I understand that Hospital may suspend my right to participate in the Training Experience if, in its sole judgment and discretion, my conduct or attitude threatens the health, safety or welfare of any patients, invitees, or employees at Hospital or the confidentiality of any information relating to such persons, either as individuals or collectively. I further understand that this action shall be taken by Hospital only on a temporary basis until after consultation with School. The consultation shall include an attempt to resolve the suspension, but the final decision regarding my continued participation in the Program at Hospital is vested in Hospital.

10. I agree to comply with discrimination regulations and shall not discriminate against any person because of race, color, religion, sex, marital status, sexual orientation, national origin, age, physical handicap, or medical condition as provided by law.

11. I further understand that Hospital has the right to suspend use of their facilities in connection with this Training Experience should their facilities be partially damaged or destroyed and such

damage is sufficient to render the facilities untenable or unstable for their purpose while not entirely or substantially destroyed.

12. I recognize that medical records, patient care information, personnel information, reports to regulatory agencies, conversations between or among any healthcare professionals are considered privileged and should be treated with utmost confidentiality. I further understand that if it is determined that a breach in confidentiality has occurred as a result of my actions, I can be held liable for damages that result from such a breach.

I have read the foregoing, I understand and agree to the terms therein. I recognize that as consideration for agreeing to said terms Hospital will permit me to participate in the Training Experience at Hospital.

Josee Gill
Student Signature

07/30/2020
Date

Josee Gill
Printed Name of Student

Appendix D

Director of Medical/Surgical/Telemetry Unit Agreement

HENDERSON
HOSPITAL
A Member of The Valley Health System

August, 5th 2020

Dr Denise Zabriskie,

Project Chair

Touro University

Object: DNP Project

I, Samantha Quinn, Director of Adult Health Services and Ortho Unit at Henderson Hospital agree to have Josee Gill, DNP Student from Touro University complete a DNP project on one of my units. The project is to implement a standardized discharge protocol for Heart Failure patients with Adult Health nurses and case managers working on the specified unit.

I look forward to working with Josee on this project and improving patient outcomes for these patients.

Thank you,

Samantha Quinn, RN, BSN, MHA

Director of Adult Health & Ortho

Henderson Hospital

702-963-7159 office

702-524-8523- cell

1050 W. Galleria Drive · Henderson, NV 89011 · **www.hendersonhospital.com**

TOP HOSPITAL 2018

LEAPFROG HOSPITAL SAFETY GRADE

Appendix E

Nurse-Led Standardized Discharge Protocol

	Task /checklist	Date/Time	Nurse signature
1.	Ascertain need to obtain language assistance? Speaks: **English** or _____ (Use Globo for translation assistance)		
2.	**Make follow up Appointment** : Provider Name: Date/Time of Appointment: Address: **Add** information to discharge instructions **in Cerner**		
3.	Test results or labs pending at discharge are: Example: Echo results if not available at discharge		
4.	Does patient need Post discharge outpatient services and medical equipment? **Y/N** **Does patient have a scale to weigh self at home? Y/N** **Educate patient on weight gain of 3 lbs./day & call PCP- Y/N**	_____ _____	_____ _____
5.	Teach back on **new** medications related to Diagnosis: (medication cards and list which ones given) - BP medications - Diuretic	_____ _____	_____ _____
6.	Teach back on disease and signs/symptoms: -Heart Failure booklet given to patient? **Y/N** -Heart Failure Teach-back form Y/N	_____ _____	_____ _____
7.	Review with patient what to do if a problem arises? Call PCP or 911 or Call Dispatch Health 702-848-4443		
8.	Level of comprehension of discharge instructions? **Good** or not **understanding**?		
9.	Inform patient they will receive a discharge phone call within a few days from discharge. Patients **preferred phone number**: _____		
10.	**Document in Cerner HF education completed**		

Complete checklist and turn into Clinical Supervisor

Date: _____ Time: _____

Discharge RN signature: _____

Clinical S up. /Manager Signature: _____

Patient Label

Reference

Agency for Healthcare Research and Quality (2013). Re-Engineered Discharge (RED) Toolkit. Tool 1: Overview

https://www.ahrq.gov/sites/default/files/publications/files/redtoolkit.pdf

Appendix F

Email Response from AHRQ

Authorization to Utilize Tool

Dear Ms. Gill:

This email constitutes permission from the Agency for Healthcare Research and Quality (AHRQ) for you to adapt the information in the 12-point table of Re-Engineered Discharge (RED) components and discharge educator responsibilities (https://www.ahrq.gov/patient-safety/settings/hospital/red/toolkit/redtool3.html) for use in your quality improvement project for the DNP degree from Tourpo University (Henderson, NV). We understand that the table was used in developing your "Nurse-led Standardized HF Discharge" form.

Your form gives adequate credit to the AHRQ Re-Engineered Discharge Toolkit. Although the list of components appears in Tool 1, the more accurate source appears to be Tool 3 ("How To Deliver the Re-Engineered Discharge at Your Hospital"), Table 1.

You can reprint the list of components or Tool3/Table 1 in your capstone paper. However, if you subsequently want to reprint the RED source material in a professional journal article or book chapter, you will need to obtain reprint rights for the publisher from the AHRQ Office of Communications.

All the best on the success of your project and your degree program.

Thank you for your patience. If you have any questions about the permission, please do not hesitate to contact me or Ms. Siegel.

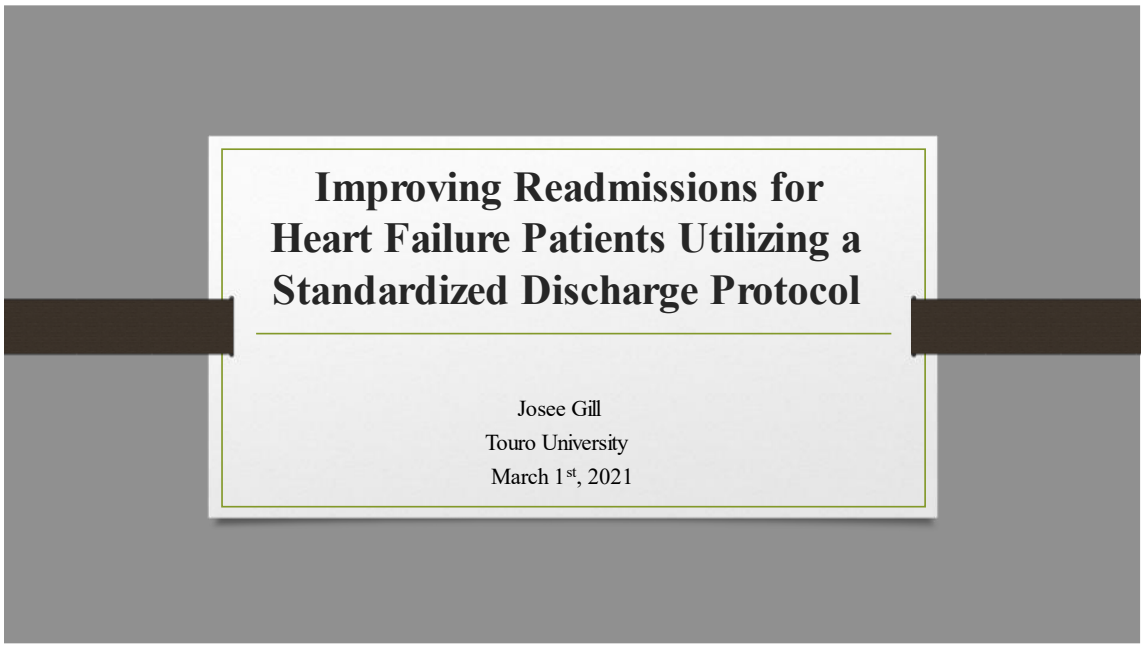
Sincerely,

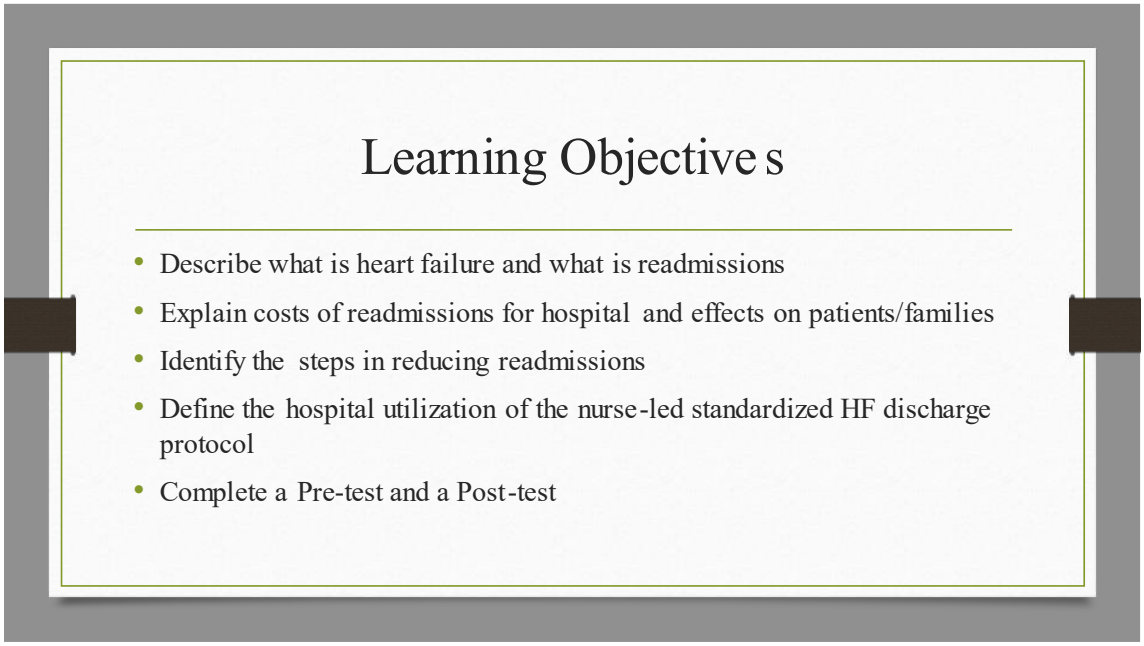
David I. Lewin, M.Phil.
Health Communications Specialist/Manager of Copyrights & Permissions
Office of Communications
Agency for Healthcare Research and Quality
5600 Fishers Lane
Room # 07N58D / Mail Stop # 07N94A
Rockville, MD 20857 USA

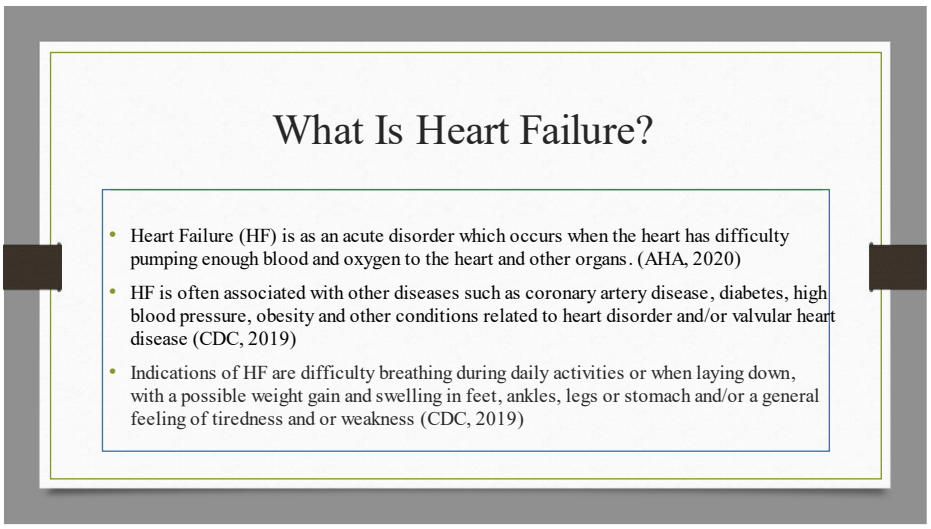
Email: David.Lewin@ahrq.hhs.gov
Phone: +1 301-427-1895
Fax: +1 301-427-1783

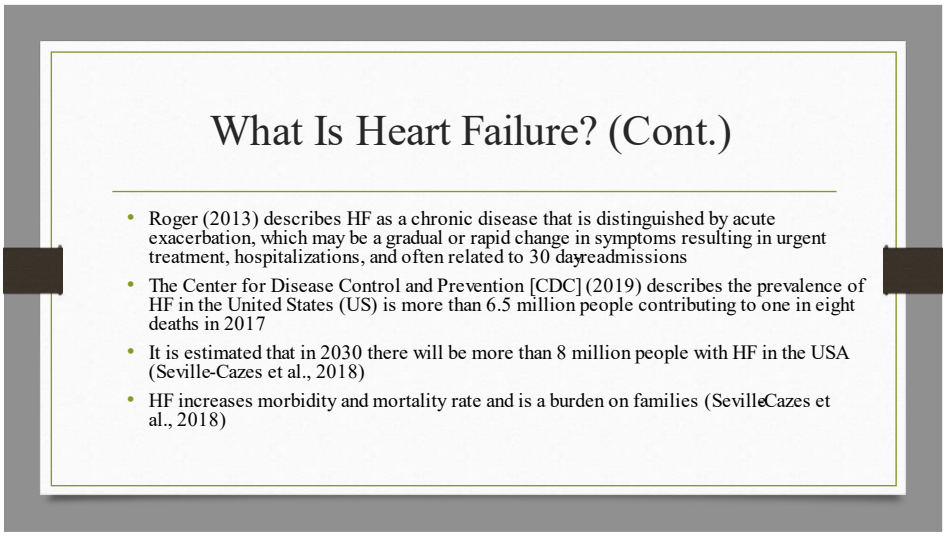
Appendix G

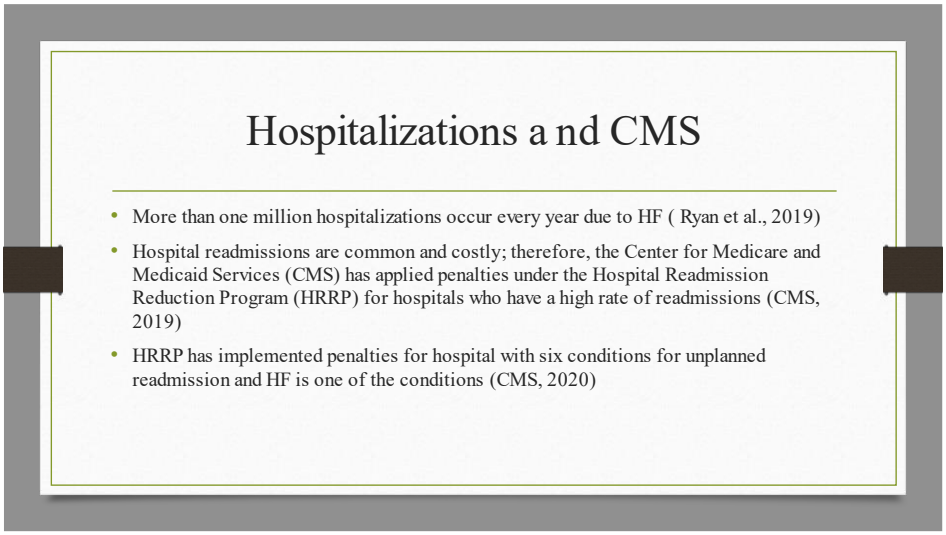
Education Training






What Is Heart Failure?
Heart Failure (HF) is as an acute disorder which occurs when the heart has difficulty pumping enough blood and oxygen to the heart and other organs. (AHA, 2020)
HF is often associated with other diseases such as coronary artery disease, diabetes, high blood pressure, obesity and other conditions related to heart disorder and/or valvular heart disease (CDC, 2019)
Indications of HF are difficulty breathing during daily activities or when laying down, with a possible weight gain and swelling in feet, ankles, legs or stomach and/or a general feeling of tiredness and or weakness (CDC, 2019)


What Is Heart Failure? (Cont.)
Roger (2013) describes HF as a chronic disease that is distinguished by acute exacerbation, which may be a gradual or rapid change in symptoms resulting in urgent treatment, hospitalizations, and often related to 30 day readmissions
The Center for Disease Control and Prevention [CDC] (2019) describes the prevalence of HF in the United States (US) is more than 6.5 million people contributing to one in eight deaths in 2017
It is estimated that in 2030 there will be more than 8 million people with HF in the USA (Seville-Cazes et al., 2018)
HF increases morbidity and mortality rate and is a burden on families (Seville-Cazes et al., 2018)


Hospitalizations a nd CMS
More than one million hospitalizations occur every year due to HF (Ryan et al., 2019)
Hospital readmissions are common and costly; therefore, the Center for Medicare and Medicaid Services (CMS) has applied penalties under the Hospital Readmission Reduction Program (HRRP) for hospitals who have a high rate of readmissions (CMS, 2019)
HRRP has implemented penalties for hospital with six conditions for unplanned readmission and HF is one of the conditions (CMS, 2020)

What Are Readmissions?

- A patient who is discharged and readmitted within 30 days of discharge date for any reason
- HF is the principle cause of readmissions with increase length of stay, increase in morbidity and mortality and poor patient outcomes (Chava et al., 2019)
- Cost of readmissions is 2.7 billion in USA a year (Chava et al., 2019)
- 20% of all readmissions in acute care hospitals are related to HF (O'Connor, 2017)
- More than 50% of all HF patients are readmitted within 6 months of discharge (O'Connor, 2017)

What Do Readmissions Costs?

- Cost of a 30 day readmission in 2011 was 41.3 billion in hospital cost with over 3.3 million patients (Hines et al., 2014)
- Readmissions can be avoided by improving the discharge process, utilizing a standardized discharge protocol and a transition of care model (Peter et al., 2015)
- HRRP Medicare Valued Based Purchasing Program have reduced payments to hospitals with a high readmission rate (CMS, 2020)
- CMS goal for HF readmission rate is 15.3% (CMS, 2020)
- Henderson Hospital HF readmission rate is 18.65% (UHS, 2019)

Why Reduce HF Readmission ?

- Improve the quality of care for our patients
- Improve clinical outcomes by improvement of symptoms, understanding medications, weighing themselves and by reducing 30 -day readmissions and patients quality of life (Roger, 2013)
- Incomplete transitions of care and incorrect information between hospital and providers or receiving agencies may lead to unplanned readmissions (Hesselink et al., 2014)
- Poor discharge process can cause higher readmissions rates and unfortunate patient outcomes related to increase in morbidity, more complicationa and a mortality rate of 13% (Messerli & Deutsch, 2020)

Implementing a Discharge Process

- Need for interdisciplinary manage approach to include case management, physicians, pharmacy, all coordinated by nursing (Dizon & Reinking, 2017)
- Transitions of care founded on evidence -based protocol to reduce preventable readmissions (Kamermayer, Leasure & Anderson, 2017)
- Agency for Healthcare Research and Quality (AHRQ) developed a discharge process called the Re -Engineering Discharge (RED) toolkit in 2013 with a checklist of 12 components
- RED toolkit implementation reduced 30 day readmissions by 30% compared to no process (AHRQ, 2013)

Implementing a Discharge Process (Cont.)

- Well implemented discharge process can reduce 30 -day readmissions by educating patients on:
  - What is HF
  - Reviewing signs and symptoms
  - Verifying patient's understanding utilizing teach-back
  - Reviewing new medications with patient
  - Educating on the importance of their followup appointment and reiterating date and time of appointment with patient

DNP Project Question

- Will nurses implementing a standardized discharge protocol on a medical/surgical/telemetry unit improve HF readmissions rates compared to current practice within a four - week period?

Nurse- Led HF Standardized Discharge Protocol

Nurse-Led Standardized HF Discharge Protocol

	Task /checklist	Date/Time	Nurse signature
1.	Ascertain need to obtain language assistance? Speaks: English or _____ (Use Globo for translation assistance)		
2.	Arrange for Follow-up Appointment Provider Name: Date/Time: Address: Add information to discharge instructions in Cerner		
3.	Ensure patient has all test results Examples: Echo results if not available at discharge		
4.	Does patient need Post discharge outpatient services (Home health, Heart Failure Clinic)? Y/N Does patient have a scale to weigh self at home? Y/N Educate patient on weight gain of 5 lbs./day & call PCP. Y/N		
5.	Teach back on new medications related to Diagnosis: (Medication cards and list which ones given) - BP medications - Diuretic		
6.	Teach back on disease and signs/symptoms: Heart Failure booklet given to patient? Y/N Heart Failure Teach-back form Y/N		
7.	Review with patient what to do if a problem arises? Call PCP or 911 or Call Dispatch Health 702-848-4443		
8.	Assess patient understanding of discharge instructions? Good or not understanding		
9.	Inform patient they will receive a discharge phone call within a few days from discharge. Patients preferred phone number:		
10.	Document in Cerner HF education completed Complete checklist and turn into Clinical Supervisor		

Date: _____ Time: _____

Discharge RN signature: _____

Clinical S up. /Manager Signature: _____

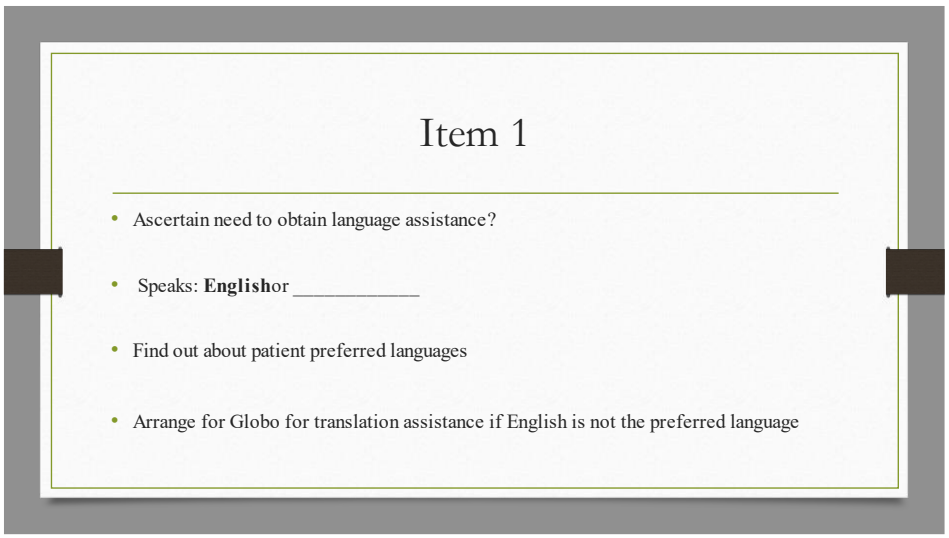
Patient Label

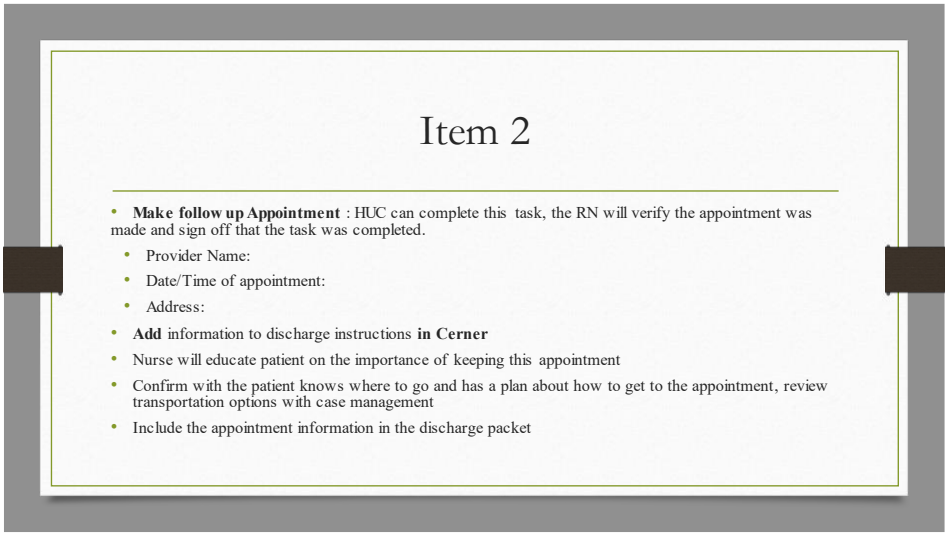
Process

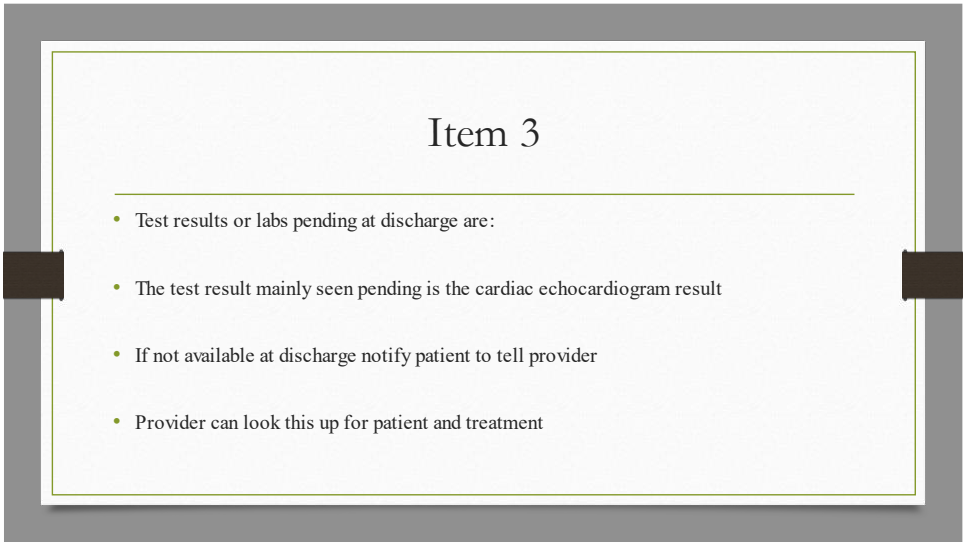
- Nurse-Led Standardized Discharge Protocol will be utilized for all patients admitted with HF diagnosis and or history of HF
- Protocol will be placed on white communication board in patient room
- The admitting nurse will explain to the patient that this protocol will be completed during the patient's stay
- Day one of Admission
- Date and time with signature when items are completed
- Items do not need to be completed in order
- Day and night shift RN's to educate and complete protocol

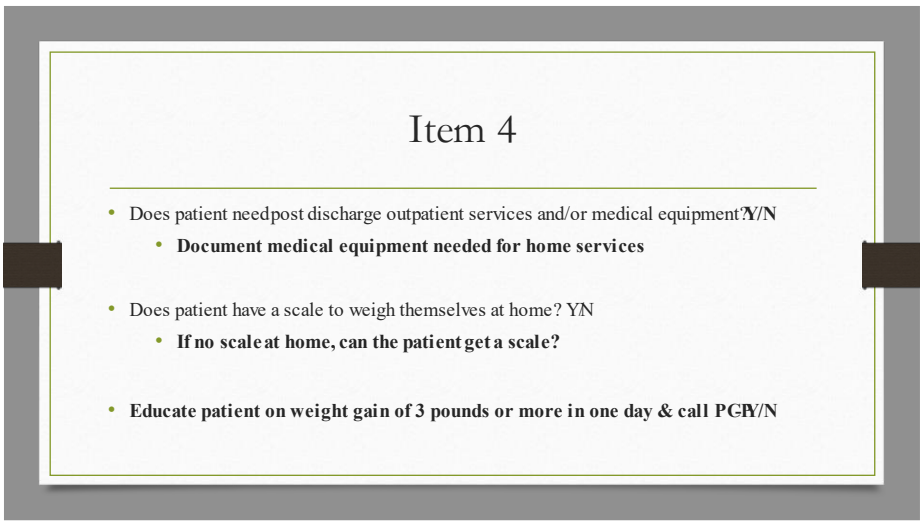
Item 1

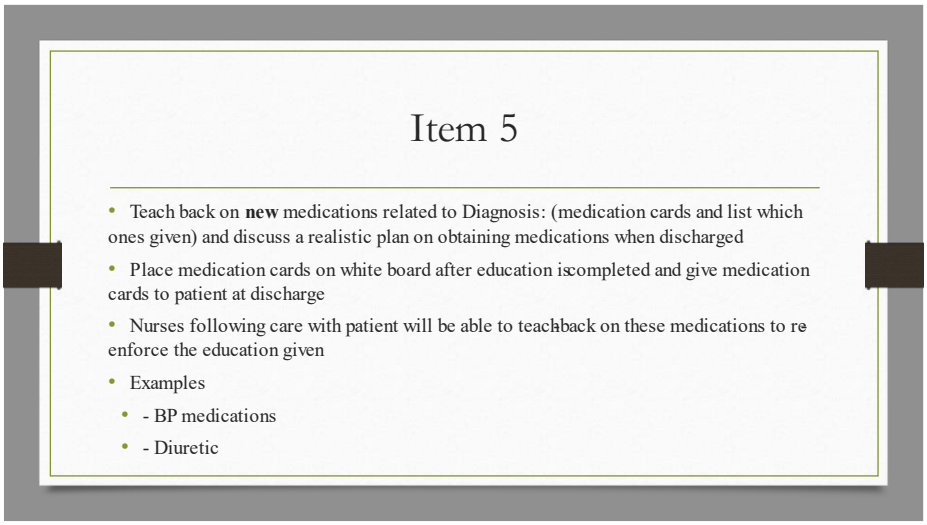
- Ascertain need to obtain language assistance?
- Speaks: **English**or _____
- Find out about patient preferred languages
- Arrange for Globo for translation assistance if English is not the preferred language

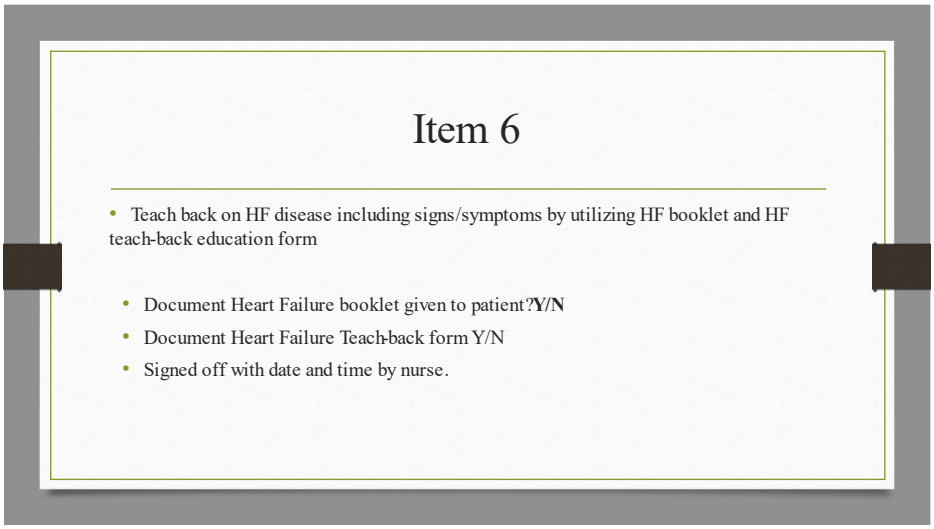

Item 1
Ascertain need to obtain language assistance?
Speaks: Englishor _____
Find out about patient preferred languages
Arrange for Globo for translation assistance if English is not the preferred language

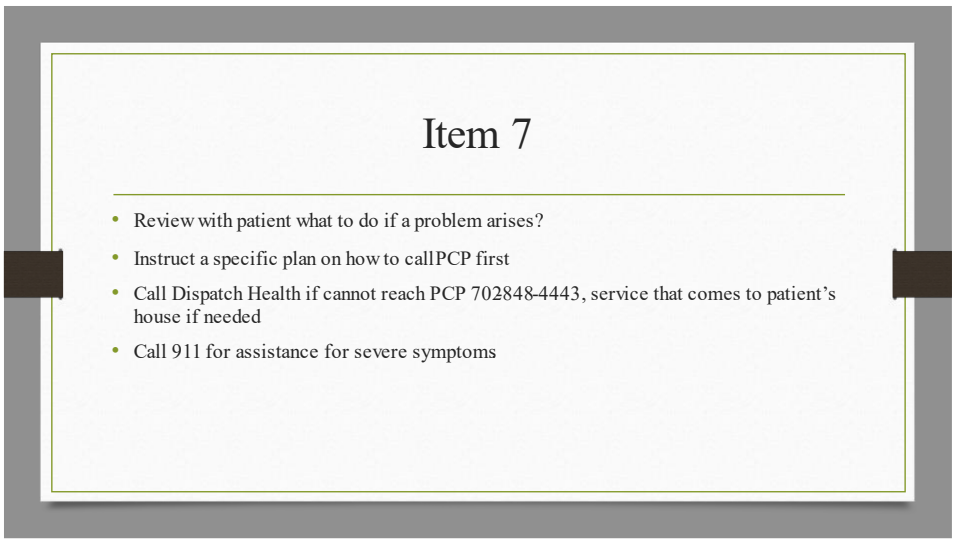

Item 2
Make follow up Appointment : HUC can complete this task, the RN will verify the appointment was made and sign off that the task was completed.
Provider Name:
Date/Time of appointment:
Address:
Add information to discharge instructions in Cerner
Nurse will educate patient on the importance of keeping this appointment
Confirm with the patient knows where to go and has a plan about how to get to the appointment, review transportation options with case management
Include the appointment information in the discharge packet

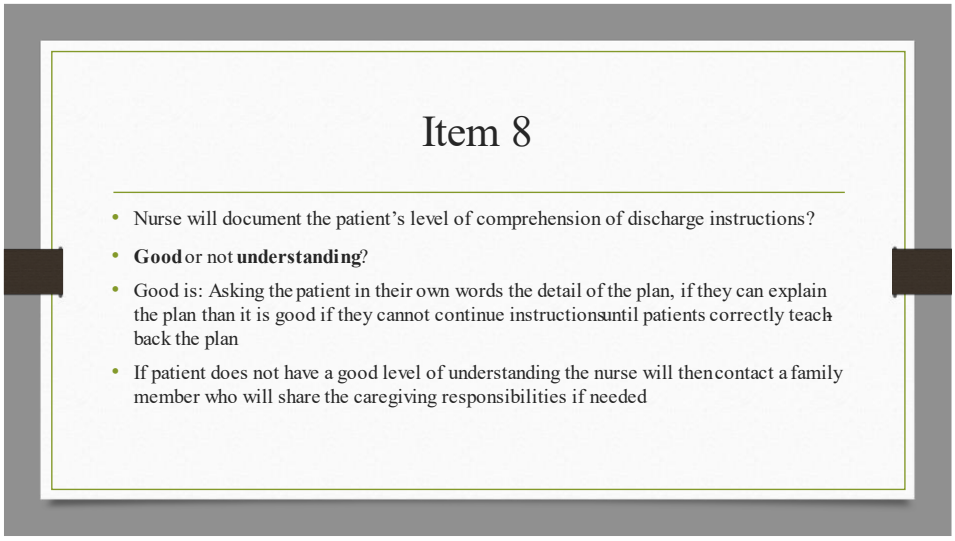

Item 3
Test results or labs pending at discharge are:
The test result mainly seen pending is the cardiac echocardiogram result
If not available at discharge notify patient to tell provider
Provider can look this up for patient and treatment

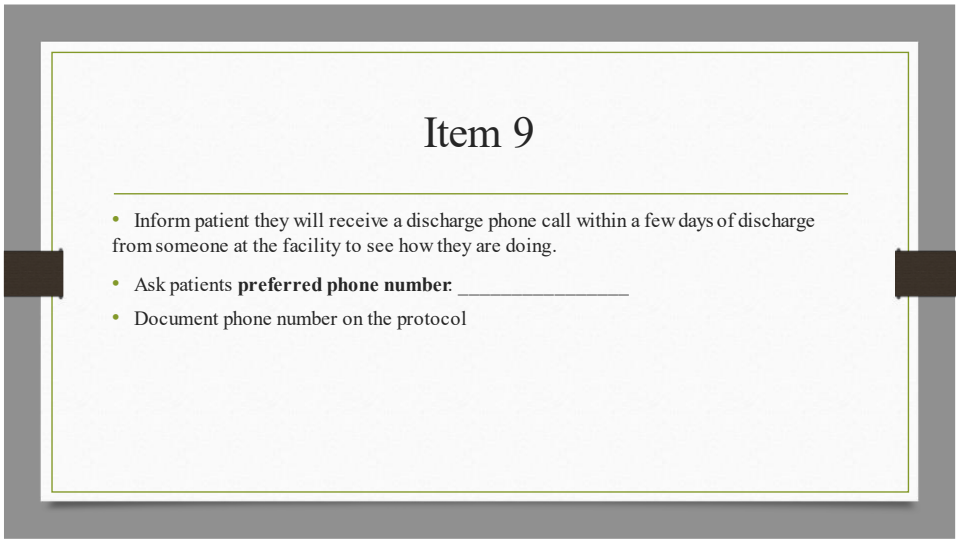

Item 4
Does patient need post discharge outpatient services and/or medical equipment? Y/N
Document medical equipment needed for home services
Does patient have a scale to weigh themselves at home? Y/N
If no scale at home, can the patient get a scale?
Educate patient on weight gain of 3 pounds or more in one day & call PCP Y/N


Item 5
Teach back on new medications related to Diagnosis: (medication cards and list which ones given) and discuss a realistic plan on obtaining medications when discharged
Place medication cards on white board after education is completed and give medication cards to patient at discharge
Nurses following care with patient will be able to teach-back on these medications to re-enforce the education given
Examples
- BP medications
- Diuretic


Item 6
Teach back on HF disease including signs/symptoms by utilizing HF booklet and HF teach-back education form
Document Heart Failure booklet given to patient? Y/N
Document Heart Failure Teach-back form Y/N
Signed off with date and time by nurse.


Item 7
Review with patient what to do if a problem arises?
Instruct a specific plan on how to call PCP first
Call Dispatch Health if cannot reach PCP 702848-4443, service that comes to patient's house if needed
Call 911 for assistance for severe symptoms


Item 8
Nurse will document the patient's level of comprehension of discharge instructions?
Good or not understanding?
Good is: Asking the patient in their own words the detail of the plan, if they can explain the plan than it is good if they cannot continue instructions until patients correctly teach-back the plan
If patient does not have a good level of understanding the nurse will then contact a family member who will share the caregiving responsibilities if needed


Item 9
Inform patient they will receive a discharge phone call within a few days of discharge from someone at the facility to see how they are doing.
Ask patients preferred phone number: _____
Document phone number on the protocol

Item 10

- **Document in Cerner HF education completed**
- **Document HF booklet given to patient**
- **Have patient sign the first page**
- **Keep signed copy in paper chart**

Completion of Nurse-Led HF Standardized Discharge Protocol

Complete checklist and turn into Clinical Supervisor

- Discharge nurse will date and sign the document as well as the Clinical supervisor
- Date: _____ Time: _____
- Discharge RN signature: _____
- Clinical Sup. /Manager Signature: _____
- Completed protocol will be given to Clinical Supervisor
- Project lead will pick up the nurse-led standardized discharge protocol on a daily basis during the implementation of this project.

Clinical Scenario 1

- 69 year old Spanish speaking only admitted with diagnosis of HF
- How will the nurse educate the patient?
- Can the nurse translate to patient utilizing a CNA?
- Can the nurse call family for translation?

Clinical Scenario 2

- Patient transferred from IMC unit to your unit with a diagnosis of HF
- Do you utilize the Nurse-led discharge standardized protocol?

Clinical Scenario 3

- Patient admitted from ED with diagnosis of HF at 23:45PM
- Who starts the Nurse - led standardized discharge protocol?

Clinical Scenario 4

- Patient transferred from IMC unit at 11;30 AM and has an order to be discharged at 13:30 on same day
- Do I start the nurse -led standardized discharge protocol?
- How do I make sure all education is done and completed?

Conclusion

- Implementing a discharge process will improve patient care
- Utilization of a nurse -led standardized discharge protocol has been proven effective in reducing readmission
- Reduce readmissions rate at the practice site will decrease poor patient outcomes, comorbidities and mortality
- THANK YOU for doing the right thing for your patient
- YOU ARE MAKING A DIFFERENCE!

References

Agency for Healthcare Research and Quality (2013). Re -Engineered Discharge(RED) Toolkit. Tool 1: Overview https://www.ahrq.gov/sites/default/files/publications/files/redtoolkit.pdf

American Heart Association. (2020). Heart Failure https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure#:~:text=Heart%20failure%20is%20a%20chronic%2C%20progressive%20condition%20in,the%20heart%20can%E2%80%99t%20keep%20up%20with%20its%20workload.

References (Cont.)

Center for Disease Control and Prevention (2019). Heart Disease, Heart Failure. https://www.cdc.gov/heartdisease/heart_failure.htm

Center for Medicaid and Medicaid Services (2020). Hospital Readmissions Reduction Program. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program

Chava, R., Karbi, N., Ketlogestwe, K. & Ayala. T. (2019). Multidisciplinary rounds in prevention of 30-day readmissions and decreasing length of stay in heart failure patients: A community hospital based retrospective study. *Journal of Medicine* (Baltimore), 98(27). Pp. 1-4. https://doi.org/10.1097/MD.0000000000016233

References (Cont.)

Dizon, M. L. & Reinking, C. (2017). Reducing readmissions: Nurse driven interventions in the transition of care from hospital. *Worldviews on evidence-based Nursing*, 14 (*6*). Pp. 432 -439. Retrieved from EBSCOhost

Henderson Hospital (2018). *Readmissions data*.

Hesselink, G., Zegers, M., Vernooij-Dassen, M., Barach. P., Kalkman.C., Flink, M., Öhlén, G., Olsson, M., Bergenbrant, S., Orrego, C., Suñol1, R., Toccafondi1, G., Venneri, F. Dudzik-Urbaniak, E., Kutryba, B., Schoonhoven, L. & Wollersheim, H. (2014). Improving patient discharge and reducing hospital readmissions by using Intervention Mapping. *BMC Health Services Research*, 14 (*389*). Pp. 1-11. https://doi.org/10.1186/14726963-14-389

References (Cont.)

Hines, A.L., Barrett, M.L., Jiang, H. & Steiner, C.A. (2014). Conditions with the largest number of adult hospital readmissions by payer, 2011. *Agency for Healthcare Research and Quality (AHRQ)* Statistical Brief #172. https://www.hcup-us.ahrq.gov/reports/statbriefs/sb172-Conditions-Readmissions-Payer.pdf#:~:text=These%20include%20congestive%20heart%20failure%20%28134%2C500%20readmissions%3B%20%241.7,infarction%20%2851%2C300%20readmissions%3B%20%24693%20million%20in%20total%20costs%29.

Kamermayer, A.K., Leasure, A.R. & Anderson, L. (2017). The effectiveness of transitions of care interventions in reducing hospital readmissions and mortality, a systematic review. *Dimensions of Critical Care Nursing* , 36 (*6*). Pp. 311-316. Retrieved from Wolters Kluwer's Health

Messerli, A.W. & Deutsch, C. (2020). Implementation of institutional discharge protocols and transition of care following acute coronary syndrome. *Journal of Cardiovascular Revascularization Medicine*. Pp. 1-9. https://doi.org/10.1016/j.carrev.2020.02.013

References (Cont.)

O'Connor, C.M. (2017). High heart failure readmission rates. Is it the health system fault? *Journal of American College of Cardiology* 5 (*5*). Retrieved from: https://heartfailure.onlinejacc.org/content/5/5/393

Peter, D. Robinson, P., Jordan, M., Lawrence, S., Casey, K. & Salas- Lopez, D. (2015). Reducing readmissions using teach back. Enhancing patient and family education *Journal of Nursing Administration*, 45 (*1*). Pp. 35 -42. Retrieved from Wolters Kluwer Health, Lippincott Williams & Wilkins.

Roger, V.L. (2013). Epidemiology of Heart Failure. *Journal of Circulation Research*, 113 (*6*). Pp. 646-659. https://www.ahajournals.org/doi/full/10.1161/circresaha.113.300268

References (Cont.)

Ryan, C.J., Bierle, R. & Vuckovic, K.M. (2019). The three R's for preventing heart failure readmission: review, reassess and reeducate. *Journal of Critical Care Nurse*, 39 (*2*), Pp. 85-93. Retrieved from American Association of Critical Care Nurses.

Sevilla -Cazes, J., Ahmad, F.S., Bowles, K.H., Jaskowial, A., Gallagher, T., Goldberg, L.R., Kangovi, S., Alexander, M., Riegel, B., Barg, F.K. & Kimmel, S.E. (2018). Heart failure home management challenges and reasons for readmission: a qualitative study to understand the patient's perspective. *Journal of General Internal Medicine*, 33 (*10*). Pp. 1700-1707. DOI: 10.1007/s11606 -018-4542-3

Appendix H

Pre and Post-Tests

Test Construction

Purpose: The purpose of this education is to improve the medical/surgical/telemetry nurses and RNCM knowledge on how to utilize the nurse-led standardize discharge protocol to reduce heart failure readmissions. The course will also provide education on what is heart failure, what is a readmission, the costs of readmissions and strategies on implementing a discharge process. This education will assess the learners' knowledge on the needed practice behaviors of implementing a discharge process. A retrospective analysis will be performed to measure if any patients were re-admitted within 30-days of discharge after utilizing a nurse-led standardized heart failure discharge protocol.

Learning Objectives: Upon successful completion of this course, you will be able to:

- Describe what is heart failure and what is readmissions
- Explain the costs of readmissions for hospital and patients/families
- Identify the steps in reducing HF readmissions
- Define the hospital utilization of the nurse-led standardized HF discharge protocol

Population: Nurses on Medical/surgical/telemetry unit and RNCM on this unit

Length of the Test: The length of this test will be 10 questions

Difficulty and Discrimination Levels of Test Items: According to Bristol & Brett (2015), producing test questions by describing clinical experiences examples can assess the nurse's ability to apply new concepts learned and can measure the reliability and the validity of the education taught. Since this test will be used as a pre and post-test, knowledge learned will be assessed prior to education and post education. The test is offered as a continued education on a new process and therefore, will use low level to moderate difficulty questions

Scoring Procedures to be Used: Each nurse will be given a number for their pre and posttest to keep anonymity among other co-workers and a separate answer sheet will be used to develop a computer-generated item analysis report

Item Format: The test will be a selected response multiple-choice format

Test Blueprint

Content	Level of Cognitive Skill				
	K	C	AP	AN	Total
Heart Failure	1		1		2
Readmissions				1	1
Costs of readmissions	1				1
Steps in reducing readmissions		1	1		2

Utilization of nurse-led protocol	1	1	1	1	4
Total	3	2	3	2	10

General Directions for the Test and Prepare a Cover Sheet

Questions

1) **A 69-year-old man is discharge home after being hospitalized with heart failure. The patient was readmitted 12 days after discharge on the medical/surgical/telemetry unit with severe shortness of breath, R: 28 BP: 190/110, P- 108, Pulse Ox- 90% with swelling in both feet. When the nurse asked the patient about his diet, he did not explain a low sodium diet or fluid restrictions. The patient explains that he took his medications as prescribe however he did not weigh himself or knew to call PCP if he had a weight gain. The nurse would interpret the following as readmission due to poor understanding of discharge instructions. (Select all that apply)**

   a) The patient did not understand diet restrictions
   b) The patient did not weigh himself at home
   c) The patient took his medications as prescribed
   d) The patient did not call primary care provider to notify of weight gain

   Answer: A, B &D Comprehension-steps in reducing readmissions
   Rationale: Nurses on Medical Surgical Telemetry units need to understand the comprehension level among patients may be lower due to advanced age and lower education level, in addition to the patient being sick at the time education interventions are completed. Multiple studies recommend implementation of targeted teaching interventions in relation to disease process, medications, signs and symptoms to watch for by utilizing teach-back methods, discharge checklist, follow up appointment and discharge call-back (Sommer et al., 2018; Balaban et al., 2018; Peter et al., 2015).

2) **The medical/surgical/telemetry nurse is receiving change of shift report on a 74-year-old patient admitted for heart failure. The off going nurse is in a rush and tells the oncoming nurse the patient is sleeping and was confused during the day. The patient appears alert and oriented. When entering the room there is no nurse-led standardized HF discharge protocol on white board. Which of the following actions would the nurse complete? (Select all that apply)**

   a) Place nurse-led standardized protocol on white board
   b) Verify patient knowledge on diagnosis
   c) Notify clinical supervisor that protocol was not started
   d) Wait till day shift comes in tomorrow

   Answer: A, B &C Comprehension-Utilization of Nurse-led discharge Protocol

Rationale: Per hospital policy, the patient has a diagnosis of HF therefore implementation of the nurse-led standardized HF discharge protocol upon admitting patient to the room. Verifying patient knowledge on diagnosis will assist with information needed to educate patient. Notifying clinical supervisor will assist in educating the day shift nurse of the new protocol and if patient is awake and alert education can be started on night shift. (Nurse-Led Standardized HF Discharge Protocol, 2020).

3) The primary care nurse discharges a HF patient, how does the nurse know that the nurse-led standardized HF discharge protocol was completed? (Select all that apply)

a) Nurse-led standardized HF discharge protocol on white communication board and all items on the protocol have been completed, dated and signed off
b) Discharge nurse verifies that the patient can describe two signs and symptoms of HF
c) Discharge nurse verifies that the patient is able to describe when to call their provider
d) Discharge nurse has documented in the electronic record that HF education is completed

Answer: A, B, C & D Application-nurse-led standardized discharge protocol
Rationale: National and clinical practice guidelines showed evidence-based practice utilizing a standardized discharge protocol reduces readmissions (Yancey et al., 2017; Hines et al. 2014; Messerli & Deutsch, 2020; AHRQ, 2013). AHRQ (2013) RED toolkit was effective in reducing readmissions and decreasing visits to the emergency department post-discharge. The RED toolkit includes a set of actions that include, a follow up appointment prior to discharge, teach- back education on HF and medications, identifying if patient needs post-discharge outpatient services and/or medical equipment and reviewing with patient what to do if a problem arises. Implementation of the RED toolkit has demonstrated a decrease in 30-day readmission rates of 30% compared to patients receiving usual discharge care (AHRQ, 2013; Hines et al., 2014).

4) The nurse is caring for a patient diagnosed with HF, the patient lives alone, has difficulty walking, has no means of transportation and is slightly confused. Which of the following findings would indicate to the nurse that the patient needs outpatient services? (Select all that apply)

a) The patient lives alone
b) The patient has difficulty walking
c) The patient has no means of transportation
d) The patient is slightly confused

Answer: A, B, C & D Analysis-Readmissions
Rationale: Improved coordination in care with increased communication between hospital and community: home health agency, nursing home, and or primary care provider is required to reduce fragmentation of care across the continuum. These measures can reduce readmissions and improve patient care (Murtaugh et al., 2017).

5) Which of these patients is at highest risk of HF readmissions? (Select all that apply)

a) A 75-year-old who lives alone and has not no support
b) An 80-year-old who lives with wife and daughter and can be taken to provider when necessary
c) A 60-year-old with HF, history of diabetes, with non-adherence to medications.
d) An 84-year-old who lives with her daughter who is a retired high school teacher and very present during hospitalization

Answer: A & C Knowledge-Signs and symptoms of HF
Rationale: Heart failure readmissions are often due to poor transitions of care associated with a lack of patient's understanding of the treatment plan, symptom exacerbation, as well as non-adherence to medical therapy (Wang et al., 2016).

6) What is the prevalence of HF and what is the estimated cost for the USA?

a) 6.5 million patients diagnosed with HF and a cost of 2.7 billion dollars
b) 5 million patients diagnosed with HF and a cost of 1.2 billion dollars
c) 10 million patients diagnosed with HF and a cost of 2 billion dollars
d) 3 million patients diagnosed with HF and a cost of 1 billion dollars

Answer: A Knowledge-Cost of readmissions
Rationale: The Center for Disease Control and Prevention [CDC] (2019) describes the prevalence of HF in the United States (US) is more than 6.5 million people. The estimated cost of a 30-day readmission is 2.7 billion dollars. (Chava et al., 2019)

7) During patient education a nurse notices that a patient does not know what to do if a problem arises at home. The nurse demonstrates understanding of the nurse-led standardized discharge protocol when?

a) The nurse will educate to call PCP first
b) The nurse will educate on calling Dispatch Health if cannot reach PCP
c) The nurse will educate to call 911 for assistance if symptoms are severe
d) All of the above

Answer: D Knowledge-Utilization of nurse led protocol
Rationale: The goal of the nurse-led discharge protocol is to educate the patient on what to do if symptoms worsen to prevent deterioration and or readmission and to improve patient outcomes by implementing the nurse-led standardize HF discharge protocol. (Henderson Hospital, Nurse-Led Standardized HF Discharge Protocol, 2020).

8) A nurse is precepting a new graduate nurse caring for a patient diagnosed with HF. What statement would indicate that the new graduate understands the nurse-led standardized HF discharge protocol? (Select all that apply)

a) "I will utilize the nurse-led discharge protocol for all patients admitted with HF diagnosis"
b) "I will place the protocol on the white communication board in the patient's room"
c) "This protocol will start upon admission and I will date, time and sign when item is completed"
d) "Day and night shift RN's are to educate and complete the protocol"

Answer: A, B, C & D Analysis-Utilization of nurse led discharge protocol
Rationale: Process for following the nurse-led standardize discharge protocol is to utilized it for all admitted patients with HF diagnosis or history of HF. (Henderson Hospital, Nurse-Led Standardized HF Discharge Protocol, 2020).

9) The primary care nurse caring for a HF patient understands the disease process when he or she can educate patient on? (Select all that apply)

a) HF is when the heart has difficulty pumping enough blood and oxygen to the heart and other organs
b) HF is never associated with other diseases
c) S/S of HF are: difficulty breathing during exercise
d) Other s/s are: possible weight gain, swelling in feet, ankles, legs and stomach.

Answer: A, C &D Application-Heart Failure
Rationale: Heart Failure (HF) is as an acute disorder which occurs when the heart has difficulty pumping enough blood and oxygen to the heart and other organs. (AHA, 2020). HF is often associated with other diseases such as coronary artery disease, diabetes, high blood pressure, obesity and other conditions related to heart disorder and/or valvular heart disease (CDC, 2019). Indications of HF are difficulty breathing during daily activities or when laying down, with a possible weight gain and swelling in feet, ankles, legs or stomach and/or a general feeling of tiredness and or weakness (CDC, 2019)

10) The primary care nurse for a HF patient realizes the patient is not understanding the education regarding signs and symptoms, medication, weight assessment. The patient walks with a walker and has not taken a bath for the past month. Patient admits he cannot get into his tub/shower at home. What are the steps the primary nurse should take to reduce readmission with this patient and increase patient safety at home? (Select all that apply)

a) Request a transfer to a rehab facility
b) Refer to case management for assessment and smooth transition of care
c) Request a Physical Therapy/Occupational Therapy evaluation
d) Ask the nursing team to spend more time with teach-back on medications and signs and symptoms

Answer: B, C & D Application-Steps in Reducing Readmission

Rationale: Many studies such as Peter et al. (2015); Kang et al. (2018); and Wang et al. (2016) describes strategies to address 30-day HF readmissions by improving transition of care and specific interventions that include: patient/family education in self-management, discharge planning, structured follow-up discharge appointment, and coordination of care with the primary care provider. Peter et al. (2015) describes how teach-back methods can be beneficial with patient/family education and when using the learning domains of knowledge, behaviors and attitude it can improve patient adherence and understanding in regards to medications, signs and symptoms and when to call the provider to prevent a readmission to the hospital.

References

Agency for Healthcare Research and Quality (2013). Re-Engineered Discharge (RED) Toolkit. Tool 1: Overview https://www.ahrq.gov/sites/default/files/publications/files/redtoolkit.pdf

American Heart Association. (2020). Heart Failure. https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure#:~:text=Heart%20failure%20is%20a%20chronic%2C%20progressive%20condition%20in,the%20heart%20can%E2%80%99t%20keep%20up%20with%20its%20workload.

Balaban, R.B., Zhang, F., Vialle-Valentin, C.E., Galbraith, A.A., Burns, M., E., Larochelle, M.R. & Ross-Degna, D. (2017). Impact of a patient navigator program on hospital-based and outpatient utilization over 180 days in a safety-net health system. *Journal of General Internal Medicine*, 32 (*9*). Pp. 981-989. doi: 10.1007/s11606-017-4074-2

Bristol, T. & Brett, A.L. (2015). Test Items writing: 3 C's for successful tests. *Teaching and Learning in Nursing*, 10. Pp. 100-103. http://dx.doi.org/10.1016/j.teln.2015.01.004 1557-3087

Chava, R., Karbi, N., Ketlogestwe, K. & Ayala. T. (2019). Multidisciplinary rounds in

prevention of 30-day readmissions and decreasing length of stay in heart failure patients. A community hospital based retrospective study. *Journal of Medicine* (Baltimore), 98(*27*). Pp. 1-4. https://doi:org10.1097/MD.0000000000016233

Center for Disease Control and Prevention (2019). Heart Disease, Heart Failure. https://www.cdc.gov/heartdisease/heart_failure.htm

Dizon, M. L. & Reinking, C. (2017). Reducing readmissions: Nurse- driven interventions in the transition of care from hospital. *Worldviews on evidence-based Nursing*, 14 (*6*). Pp. 432-439. Retrieved from EBSCOhost

Henderson Hospital. (2020). *Nurse-Led Standardized HF Discharge Protocol*.

Hines, A.L., Barrett, M.L., Jiang, H. & Steiner, C.A. (2014). Conditions with the largest number of adult hospital readmissions by payer, 2011. *Agency for Healthcare Research and Quality (AHRQ)*. Statistical Brief #172. https://www.hcup-us.ahrq.gov/reports/statbriefs/sb172-Conditions-Readmissions-Payer.pdf#:~:text=These%20include%20congestive%20heart%20failure%20%28134%2C500%20readmissions%3B%20%241.7,infarction%20%2851%2C300%20readmissions%3B%20%24693%20million%20in%20total%20costs%29.

Kamermayer, A.K., Leasure, A.R. & Anderson, L. (2017). The effectiveness of transitions of care interventions in reducing hospital readmissions and mortality, a systematic review. *Dimensions of Critical Care Nursing*, 36 (*6*). Pp. 311-316. Retrieved from Wolters Kluwer's Health

Kang, E., Gillespie, B.M., Tobiano, G. & Chaboyer, W. (2018). Discharge education delivered to general surgical patients in their management of recovery post discharge: A systematic

mixed studies review. *International Journal of Nursing Studies*, 87. Pp. 1-13. Retrieved from https://reader.elsevier.com/reader/sd/pii/S0020748918301585?token=56982CBF81120F9B5FF0E9CF3604DB04E3CA86F7210BEA78E1D7FCD0F1D1B7458B1C8D50E2190F2CF2D9CFDDEC5EADDD

Messerli, A.W. & Deutsch, C. (2020). Implementation of institutional discharge protocols and transition of care following acute coronary syndrome. *Journal of Cardiovascular Revascularization Medicine.* Pp. 1-9. https://doi.org/10.1016/j.carrev.2020.02.013

Murtaugh, C.M., Deb, P., Zhu, C., Peng, T.R., Barron, Y., Shah, S., Moore, S.M., Bowles, K.H., Kalman, J., Feldman, P.H. & Siu, A.L. (2017). Reducing readmissions among heart failure patients discharged to home health care: effectiveness of early and intensive nursing services and early physician follow-up. *Health Services Research Journal*, 52 (*4*). Pp. 1445-1472.

Peter, D. Robinson, P., Jordan, M., Lawrence, S., Casey, K. & Salas- Lopez, D. (2015). Reducing readmissions using teach back. Enhancing patient and family education. *Journal of Nursing Administration*, 45 (*1*). Pp. 35-42. Retrieved from Wolters Kluwer Health, Lippincott Williams & Wilkins. DOI: 10.1111/1475-6773.12537

Sommer, A.E., Golden, B.P., Peterson, J., Knoten, C.A., O'Hara, L. & O'Leary, K. (2018). Hospitalized patients' knowledge of care: a systematic review. *Journal of General Internal Medicine*, 33 (*12*). Pp. 2210-2229. DOI: 10.1007/s11606-018-4658-5

Wang, H., Johnson, C., Robinson, R.D., Netjek, V.A., Schrader, C.D., Leuck, J., Umejiegol, J., Trop, A. Delaney, K.A. & Zenarosa, N.R. (2016). Roles of disease severity and post

discharge outpatient visits as predictors of hospital readmissions. *Bio Med Central Health Services Research*, 16 (*564*). Pp. 1-10. DOI: 10.1186/s12913-016-1814-7

Yancy, C.W., Jessup, M., Bozkurt, B., Butler, J., Casey, D.E., Colvin, M.M., Drazner, M.H., Filippatos, G.S., Fonarow, G.C., Givertz, M.M., Hollenberg, S.M., Lindenfeld, Masoudi, F.A., McBride, P.E., Peterson, P.N., Warner Stevenson, L. & Westlake, C. (2017). 2017 ACC/AHA/HFSA Focused Update of the 2013 ACCF/AHA Guideline for the Management of Heart Failure. A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Failure Society of America. *Journal of the American College of Cardiology*, 70 (*6*). DOI: 10.1016/j.jacc.2017.04.025. https://www.onlinejacc.org/content/70/6/776?_ga=2.108380226.1120340311.1598736201-378183868.1595785080

Appendix I

Experts Rating on Content Validity Index

Experts Rating Form Instructions

Rating instructions: For each item, please indicate the following:

Please rate how relevant each item is to the overall construct of HF and improving discharges and care by placing a number in the first box to the right of each item.

1 = Not relevant at all

2 = Slightly relevant

3 = Moderately relevant

4= Highly relevant

Your honest feedback is appreciated and will be used to enhance the quality of this questionnaire.

Expert Rating Form

Item	Relevance Rating
1) A 69-year-old man is discharge home after being hospitalized with heart failure. The patient was readmitted 12 days after discharge on the medical/surgical/telemetry unit with severe shortness of breath, R: 28 BP: 190/110, P- 108, Pulse Ox- 90% with swelling in both feet. When the nurse asked the patient about his diet, he did not explain a low sodium diet or fluid restrictions. The patient explains that he took his medications as prescribe however he did not weigh himself or knew to call PCP if he had a weight gain. The nurse would interpret the following as readmission due to poor understanding of discharge instructions. (Select all that apply) a) The patient did not understand diet restrictions b) The patient did not weigh himself at home c) The patient took his medications as prescribed d) The patient did not call primary care provider to notify of weight gain	

2) The medical/surgical/telemetry nurse is receiving change of shift report on a 74-year-old patient admitted for heart failure. The off going nurse is in a rush and tells the oncoming nurse the patient is sleeping and was confused during the day. The patient appears alert and oriented. When entering the room there is no nurse-led standardized HF discharge protocol on white board. Which of the following actions would the nurse complete? (Select all that apply) a) Place nurse-led standardized protocol on white board b) Verify patient knowledge on diagnosis c) Notify clinical supervisor that protocol was not started d) Wait till day shift comes in tomorrow	
3) The primary care nurse discharges a HF patient, how does the nurse know that the nurse-led standardized HF discharge protocol was completed? (Select all that apply) e) Nurse-led standardized HF discharge protocol on white communication board and all items on the protocol have been completed, dated and signed off f) Discharge nurse verifies that the patient can describe two signs and symptoms of HF g) Discharge nurse verifies that the patient is able to describe when to call their provider h) Discharge nurse has documented in the electronic record that HF education is completed	
4) The nurse is caring for a patient diagnosed with HF, the patient lives alone, has difficulty walking, has no means of transportation and is slightly confused. Which of the following findings would indicate to the nurse that the patient needs outpatient services? (Select all that apply) e) The patient lives alone f) The patient has difficulty walking g) The patient has no means of transportation h) The patient is slightly confused	
5) Which of these patients is at highest risk of HF readmissions? (Select all that apply) e) A 75-year-old who lives alone and has not no support f) An 80-year-old who lives with wife and daughter and can be taken to provider when necessary	

g) A 60-year-old with HF, history of diabetes, with non-adherence to medications. h) An 84-year-old who lives with her daughter who is a retired high school teacher and very present during hospitalization	
6) What is the prevalence of HF and what is the estimated cost for the USA? e) 6.5 million patients diagnosed with HF and a cost of 2.7 billion dollars f) 5 million patients diagnosed with HF and a cost of 1.2 billion dollars g) 10 million patients diagnosed with HF and a cost of 2 billion dollars h) 3 million patients diagnosed with HF and a cost of 1 billion dollars	
7) During patient education a nurse notices that a patient does not know what to do if a problem arises at home. The nurse demonstrates understanding of the nurse-led standardized discharge protocol when? e) The nurse will educate to call PCP first f) The nurse will educate on calling Dispatch Health if cannot reach PCP g) The nurse will educate to call 911 for assistance if symptoms are severe h) All of the above	
8) A nurse is precepting a new graduate nurse caring for a patient diagnosed with HF. What statement would indicate that the new graduate understands the nurse-led standardized HF discharge protocol? (Select all that apply) e) "I will utilize the nurse-led discharge protocol for all patients admitted with HF diagnosis" f) "I will place the protocol on the white communication board in the patient's room" g) "This protocol will start upon admission and I will date, time and sign when item is completed" h) "Day and night shift RN's are to educate and complete the protocol"	
9) The primary care nurse caring for a HF patient understands the disease process when he or she can educate patient on? (Select all that apply)	

e) HF is when the heart has difficulty pumping enough blood and oxygen to the heart and other organs f) HF is never associated with other diseases g) S/S of HF are: difficulty breathing during exercise h) Other s/s are: possible weight gain, swelling in feet, ankles, legs and stomach	
10) The primary care nurse for a HF patient realizes the patient is not understanding the education regarding signs and symptoms, medication, weight assessment. The patient walks with a walker and has not taken a bath for the past month. Patient admits he cannot get into his tub/shower at home. What are the steps the primary nurse should take to reduce readmission with this patient and increase patient safety at home? (Select all that apply) e) Request a transfer to a rehab facility f) Refer to case management for assessment and smooth transition of care g) Request a Physical Therapy/Occupational Therapy evaluation h) Ask the nursing team to spend more time with teach-back on medications and signs and symptoms	

Step 3: Calculate your Content Validity Index

Content Validity Index Table

Item	Expert 1	Expert 2	Expert 3	Mean
1	4	4	4	4
2	4	4	4	4
3	4	4	4	4
4	3	4	4	3.66
5	3	4	3	3.33
6	4	4	3	3.66
7	4	4	4	4
8	4	4	4	4
9	4	4	4	4
10	4	4	4	4

The procedure consists of having experts rate items on a four-point scale of relevance. Then, for each item, the item (CVI) (I-CVI) is computed as the number of experts giving a rating of 3 or 4, divided by the number of experts-the proportion in agreement about relevance.

The content validity index is calculated using the following formula:

CVR = [(E-(N/2)) / (N/2)] with E representing the number of judges who rated the item as Moderately Relevant or Highly Relevant and N being the total number of judges.

The mean total of all of the means was 3.865 indicating that all of the questions were moderately/highly relevant.

The calculation is as follows:

CVR = [(3-(3/2)) / (3/2)]

CVR = [(3-1.5) /1.5]

CVR = 1.5/1.5

Appendix J

Chart Audit Tool/Compliance- Nurse- Led Standardized HF Discharge Protocol

A	B	C	D	E	F	G	H	I
Chart Audit/Compliance tool								
Numerical number of HF diagnosis admitted to unit	Date of Admission	Numerical number on Nurse-led Discharge protocol	Completion date of protocol completed	Patient Discharge date	Nurse- Led Discharge protocol Completed Y/N	Percent of completion of Nurse-Led Discharge protocol	Readmission within 30 days of discharge Yes/No	Readmission Date

Implementation

Appendix K

Hospital IRB Decision

From: Tingey, Ryan <Ryan.Tingey@uhsinc.com>
Sent: Wednesday, December 2, 2020 1:05 PM
To: Gill, Josee <Josee.Gill@uhsinc.com>
Subject: FW: IRB request

See below from Sandra regarding the question about whether your project requires IRB approval. It is my understanding that we have determined that it does not require UHS RAC approval, but that if you intend to publish the results you would need IRB approval which would be done through the educational institution that you are working with.

Let me know if you have any questions,
Ryan

I consulted with Dr. Michael Nduati who is our CAO/DIO for the UHS Southern California Medical Education Consortium and who is a member of the UHS RAC. He replied to me today,

> *Since the target project population is hospital staff, I don't believe they technically need IRB or RAC approval, and can do this as a QI project. However, given the solid project structure and use of objective surveys, I would recommend use of IRB so the results could be published. – Mike*

If you have any other questions, please let me know.

Kind regards,
Barbara

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