

EVALUATION OF THE TRANSITIONAL CARE PROCESS POST-DISCHARGE
IN THE VA OF SOUTHERN NEVADA

by

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As members of the DNP Project Committee, we certify that we have read the DNP project prepared by *Sharlynnne Anne Maucesa*, titled *Evaluation of the Transitional Care Process Post-Discharge in the VA of Southern Nevada* and recommend that it be accepted as fulfilling the DNP project requirement for the Degree of Doctor of Nursing Practice.

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DEDICATION

I dedicate this manuscript to my grandmother Patrocenia Boldo. She was selfless, intelligent, and full of love. I am privileged to have had you in my life, you taught me unconditional love. I miss you every day of my life; I hope that I have made you proud!

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ABSTRACT

According to the U.S. Department of Health & Human Services (2015) 5.7 million people living in the United States have been diagnosed with heart failure. During the time frame between January 1, 2017 – June 30, 2017, there were a total of 1,972 patients receiving care from the VA of Southern Nevada that were diagnosed with congestive heart failure (CHF).

Objective: The purpose of this quality improvement project is to evaluate the utilization and impact of the VA of Southern Nevada Transitional Care Program for patients admitted with CHF to improve hospital readmission rates and health outcomes.

Method: The design of this DNP project included conducting a retrospective chart review to better understand participants, program follow-up, and identify the impact of primary care follow-up post hospital discharge on 30-day readmission rates within the VA Medical Center in Southern Nevada.

Results: During the time frame between January 1, 2017 – June 30, 2017, 212 patients were admitted with CHF as part of their admission diagnosis, with 99 of these patients admitted with a primary diagnosis of CHF. Seventeen of these 99 patients with a primary diagnosis of CHF were readmitted in the VA of Southern Nevada within 30 days. Out of 17 patients, only nine patients were contacted within 48 hours of hospital discharge and one was seen by the PCP within two weeks of hospital discharge.

Conclusions and Recommendations: There are significant gaps in the post discharge process that can be addressed and corrected with various modifications in the discharge and transitional care process, including incorporating a transitional care APRN role, telehealth, CHF clinic, and hospice referrals.

INTRODUCTION

In the past decade high health care costs placed a burden on the US drawing increased attention towards health care policies. A strategy to decrease health care costs is the reduction of hospital readmissions. Over the recent years, readmission rates have been under extreme scrutiny (Carey & Stefos, 2015). According to a report from the Centers for Medicare & Medicaid Services (CMS) (2016), there were an estimated 17-20% of patients readmitted within 30 days of hospital discharge in 2008. At least 75% of these readmissions were preventable. Similarly, a report conducted for the Department of Veteran Affairs by Kansagara and colleagues (2015) conveyed that 15-20% of Veterans hospitalized with conditions considered high risk, such as congestive heart failure (CHF), were readmitted within 30 days. The project will focus on Veterans diagnosed and treated for congestive heart failure (CHF).

Transitional care proposes to build a healthcare bridge to complement primary care with programs such as care coordination, discharge planning, and case management. According to Naylor, Aiken, Kurtzman, Olds and Hirschman (2011), transitional care is defined as a wide range of services developed to enable continuity of care while avoiding the prevalence of preventable poor outcomes among populations considered “at risk.” This process was designed to promote smooth transfer of patients from one level of care to another (Naylor et al., 2011). In recent years, transitional care interventions have flourished as a result of policy initiatives designed to promote interest in quality improvement development as recommended by CMS (Kansagara et al., 2015). This proposal describes the evaluation of the transitional care program within the Veteran Affairs Medical Center of Southern Nevada post hospital discharge for patients admitted with congestive heart failure (CHF).

Background

Patients are often uncertain towards self-care management after being discharged from the hospital (Kansagara et al., 2015). The process of transition from hospital discharge to home can be viewed as an abrupt shift from medical providers directing and managing care to self-managed care. Another significant adjustment occurs when shifting from care provided by inpatient providers to outpatient providers. A study conducted by Stephens et al. (2013) suggests that recently hospitalized veterans are at an increased risk for readmission as a result of significant gaps in knowledge related to their needs post-discharge and a limited capacity to manage a combination of medical, psychiatric, and socioeconomic challenges.

Congestive Heart Failure

According to the U.S. Department of Health & Human Services (2015) 5.7 million people living in the United States have been diagnosed with heart failure, a condition in which the heart is unable to pump enough blood to accommodate the body's needs. Benjamin and colleagues (2017) highlighted that 6.5 million Americans ≥ 20 years of age have been diagnosed with heart failure, this number is projected to increase to 8.5 million by 2030. Annually there are 960,000 reported new cases of heart failure (Benjamin et al., 2017). Conditions causing heart failure are diseases that damage the structure and function of the heart include: coronary artery disease (CAD), hypertension, and diabetes.

Although there is no cure for CHF, the plan of care is centered on symptom management. The American College of Cardiology Foundation/American Heart Association clinical practice guidelines focus on treating contributing factors and comorbidities that significantly impact the clinical course. Measures to lengthen life expectancy and improve quality of life include patient

education. Lifestyle modifications, pharmacologic therapy, cardiac rehabilitation, management of comorbidities, and preventative care are the primary topics for patient education (Yancy et al., 2016) (Table 1).

TABLE 1. ACCF/AHA stages of heart failure.

STAGE	CHARACTERISTICS	TREATMENT
A	Patients at risk for heart failure lacking symptoms of heart failure or evidence of structural heart disease	Heart healthy lifestyle modifications
B	Patients exhibiting structural heart disease without symptoms associated with heart failure	Symptom prevention
C	Patients with structural heart disease exhibiting symptoms of heart failure	Symptom management, hospital admission prevention
D	Patients with refractory heart failure	Symptom management, improve heart-related quality of life (HRQOL), prevent hospital readmission

The New York Heart Association (NYHA) functional classification of heart failure is utilized by cardiologists to assess condition severity and prognosis in heart failure based on symptoms and exercise tolerance (Snyder, Van Iterson, & Olson, 2015) (Table 2).

TABLE 2. NYHA heart failure classification.

CLASS	CHARACTERISTICS
I	No limitation in physical activity
II	Slight limitation of physical activity, regular physical activity may result in symptoms associated with heart failure
III	Marked limitation of physical activity, less than regular activity results in heart failure symptoms
IV	Unable to perform physical activity, heart failure symptoms exhibited at rest.

The goals of pharmacologic therapy for heart failure are to improve symptoms (including risk of hospitalization), slow or reverse deterioration in myocardial function, and reduce mortality. Initial treatment recommendations towards improvement in symptoms may include diuretics, beta blockers, angiotensin converting enzyme inhibitors (ACE inhibitors), and angiotensin II receptor blockers (ARB) (Borlaug et al., 2015). A multidisciplinary framework is ideal for disease management and care of heart failure patients.

A study conducted by Assari (2014) reported that Veterans had a higher risk of new onset heart disease compared to non-veterans determining that Veterans are at an increased risk for heart disease over time, thus increasing the risk for heart failure. Heart failure continues to impact health care costs and is considered a leading cause of hospitalization.

An analysis led by Medicare for 2007-2009 reported 35% of hospital readmissions occurring within 30-days post discharge were patients for heart failure Mcilvennan, Eapen & Allen (2015). A review conducted by the Agency for Healthcare Research and Quality (AHRQ) in patients diagnosed with CHF demonstrated that the development of multi-disciplinary heart failure clinics significantly reduced the prevalence of 30 days readmission rates (Adams, Stephens, Whiteman, Kersteen, & Katruska, 2014). The key feature of these clinics was providing education, and promoting self-management post-discharge (Feltner et al., 2014). Despite the improvements in care for CHF patients, hospital readmissions related to CHF continues to rise (U.S. Department of Health & Human Services, 2015).

Hospital Readmissions

The Veteran Health Administration (VHA) reported that a 30-day readmission results in an estimated cost of \$2,488 per patient diagnosed with heart failure (Carey & Stefos, 2016). Prior studies indicate that transitional care interventions led by nursing services in hospitals post discharge have the potential to decrease hospital readmission rates (Kansagara et al., 2015).

Readmission rates have caused a significant burden in healthcare. Nearly 25% of patients with heart failure are readmitted within 30-days causing an economic burden. The rate of readmission for patients diagnosed with heart failure drew national attention and concern resulting in a requirement for the development of a readmission reduction program which was

included in the Affordable Care Act of 2010 (Kilgore, Patel, Kielhorn, Maya & Sharma, 2017). Various hospitals around the nation are facing penalties from CMS because of their readmission rates.

Although the VHA is not subject to CMS penalties for readmission rates, a mandate under the Patient Protection and Affordable Care Act (PPACA) was developed as a core strategic goal for the VHA to reduce readmission rates and improve the quality of transitional care (Stephens et al., 2013). Primary care follow-up plays an important role in identifying facilitators and barriers in the older adult's decision to follow-up and manage their care. The process of effective post-hospital discharge care can clarify healthcare management goals and promote prevention of hospital readmissions (Harman & Newcomb, 2016).

Ineffective Post-Discharge Care

The transition between the acute care setting to home can be a turbulent process, therefore, achieving a smooth transition post hospital discharge is considered critical to high quality care. The older adult is at a higher risk for adverse events during the point of transition. Some adverse events that can occur during transition may include misunderstanding discharge instructions, medication errors, communication breakdown between providers, inadequate patient/caregiver education (McNeil, Strasser, Lightfoot, & Pong, 2016). Self-care management focuses on maintenance of health aiming towards prevention and management of chronic illnesses (Riegel et al., 2017). There have been various concerns regarding patients' lack of participation post-discharge care, which has been correlated with increased exacerbations of chronic diseases (Hillebregt et al., 2017). According to the IOM's Crossing the Quality Chasm (2001), ineffective transitional care was emphasized as one of the most damaging characteristics

within the fragmented US healthcare system. Transitional care is an important step in discharge planning to engage the patient in self-management increasing the likelihood of compliance and follow-up which will critically improve patient outcomes.

Transitional Care

Transitional care interventions were designed to prevent readmissions aiming to avoid poor outcomes resulting from uncoordinated care (Feltner et al., 2014). Transitional care components such as discharge planning, patient education, frequent outpatient assessment, comprehensive outpatient and inpatient support programs may reduce hospitalization rates (Colucci, Gottlieb, & Yeon, 2017). Quality improvement programs and case management were implemented in the discharge planning process to reduce hospital readmissions in the 1990's.

Increasing health care costs have brought hospital readmissions to the forefront of health system redesign (White et al., 2014). Studies have indicated a correlation between failure to follow-up with a primary care provider post discharge from an acute care setting and readmission within 90 days among elderly patients (Kim et al., 2015). A review of experimental research conducted by Kim & Thyer (2015) reported that previous studies have demonstrated the effectiveness of transitional care. In addition, the review revealed transitional care services exhibited lower rehospitalization rates, shorter length hospital stays, and decreased costs of health care services (Kim & Thyer, 2015).

Local Problem

The city of Las Vegas inside the southern portion of the state of Nevada is located in the Mojave Desert and lies within Clark County. In 2012, Nevada was ranked 47th in overall health within the United States. According to the Nevada Division of Public and Behavioral Health

(2010), the rate of hospitalization in older adults (65 years of age and older) diagnosed with CHF in Las Vegas was consistently higher than the rate in the entire state of Nevada. Between the years 2000 – 2008 both the city and state hospitalization rates fluctuated. According to Centers for Medicare & Medicaid Services (2018), between the years 2012 – 2016 some 12% of the population in Clark County has a documented diagnosis of heart failure. Local programs available for older adults with CHF include cardiac & pulmonary rehabilitation centers in major hospitals; however, the majority of cardiac conditions are managed through primary care referrals to cardiologists. There is no effective tracking system in many primary care settings aside from reminder calls therefore self-care management is important.

The VA of Southern Nevada is comprised of a medical center incorporating: emergency room, inpatient acute care/intensive care units, radiology, surgical services, specialty clinics (i.e., cardiology, pulmonary, podiatry, surgical, Eyes, Ears, Nose, Throat (ENT), ophthalmology, gastroenterology, wound, and prosthetics), CHF clinic, VA benefits and enrollment offices, mental health inpatient unit, and mental health outpatient clinic. An extension of the main medical center offers primary care outpatient clinics with locations throughout Las Vegas (Northwest, Northeast, Southwest, Southeast), home-based primary care and telehealth programs. In January 1, 2017 – June 30, 2017, there were a total of 1,972 patients receiving care from the VA of Southern Nevada that were diagnosed with congestive heart failure (CHF).

VA Southern Nevada Transitional Process

The transitional care program post hospital discharge within the VA of Southern Nevada is executed by multiple disciplines including: inpatient discharging provider, inpatient RN, inpatient RN case manager, outpatient RN care manager, primary care provider.

The transitional care process emphasizes identifying patient learning needs and providing education to patients and their families to avoid preventable re-hospitalizations. Upon hospital discharge, each patient is provided a discharge summary prepared by the discharging provider, instructed to follow-up with their PCP, and provided patient education by an inpatient RN. The hospital case manager assigned to the patient composes a note within the Electronic Health Record (EHR) detailing services provided, follow up needs and alert the PACT team of the patients discharge. The PACT teams care manager (RN) will view these alerts in place and begin the transitional care process with a non-face-to-face contact such as telephone appointments with the patient to schedule a follow-up appointment and consult with the provider regarding any follow-up tests needed prior to scheduling.

Purpose

The Department of Veteran Affairs made it a mission to “fulfill President Lincoln's promise – "To care for him who shall have borne the battle and for his widow, and his orphan" – by serving and honoring the men and women who are America's Veterans” (Department of Veteran Affairs, 2017). The VA healthcare administration (VHA) prides itself in honoring America’s heroes by exploring various healthcare advances in order to understand and treat the healthcare trends affecting our Veterans. The purpose of this quality improvement project is to evaluate the utilization and impact of the VA of Southern Nevada Transitional Care Program on patients diagnosed with CHF.

Specific Aims

This quality improvement project aims to evaluate the utilization and impact of the VA of Southern Nevada Transitional Care Program for patients admitted with CHF to improve hospital

readmission rates and health outcomes. This project evaluated the utilization and impact of the VA of Southern Nevada Transitional Care Program for patients admitted with CHF to improve hospital readmission rates and health outcomes. An assessment of the socio-demographic characteristics and health status of program patients who have been admitted with CHF and discharged to primary care, program follow-up, and the impact of follow-up towards 30-day readmission rates in CHF patients will be conducted. This project will:

1. Describe the socio-demographic and health status characteristics of program participants
2. Describe the post-discharge follow-up process
 - a. RN care manager follow-up
 - b. PCP follow-up appointment
 - c. Referral to CHF Clinic
3. Evaluate the impact of program follow-up on 30-day readmissions including:
 - a. Total number readmitted within 30 days
 - b. Relationship between PCP appointment within two weeks and readmission rates.

Theoretical Framework

Meleis' Transitions Theory was selected as a guiding framework for this project.

According to Meleis, a transition is considered "a passage between two relatively stable periods of time" (Meleis, 2010, p. 129). Transition is viewed as a process of passage from one life phase to another which changes health status, or abilities can create a period of vulnerability (Meleis, 2010). The transitions theory provides a framework describing the experience of individuals who are facing and coping with a situation requiring new skills, goals, behaviors, or function (Meleis, 2000). This includes transitioning from hospitalization to home.

This middle-range theory is broken down into five components (illustrated in Appendix C). The first component describes the types and properties of transitions. Types of transitions include: developmental, health and illness, situational, and organizational. Patterns of transitions include multiplicity and complexity questioning how many transitions the patient is experiencing at the same time. The second component describes the properties of transitions which can be defined as experiences occurring within the patients: awareness, engagement, change & difference, time span, critical points and events. The third component are the transition conditions (facilitators and inhibitors) such as personal, community, or societal factors can either facilitate or inhibit the processes of transition. The fourth component are the patterns of response, since the effect of transitions unfold over time, identifying indicators that either shift the patient towards health or vulnerability and risk is crucial to early interventions. The final component incorporates the outcome indicators: mastery and fluid integrative identities. This component determines the completion of transition demonstrating mastery of skills and behaviors necessary for self-care management (Meleis, 2010).

There are three phases in a transitional process during hospital discharge. The first phase is hospitalization when discharge planning begins. The second phase is the when the short-term outcomes developed in discharge planning can be measured. The final phase considers the patients perception of managing their care after discharge and their ability to cope with their condition and needs for support and assistance (Meleis, 2010).

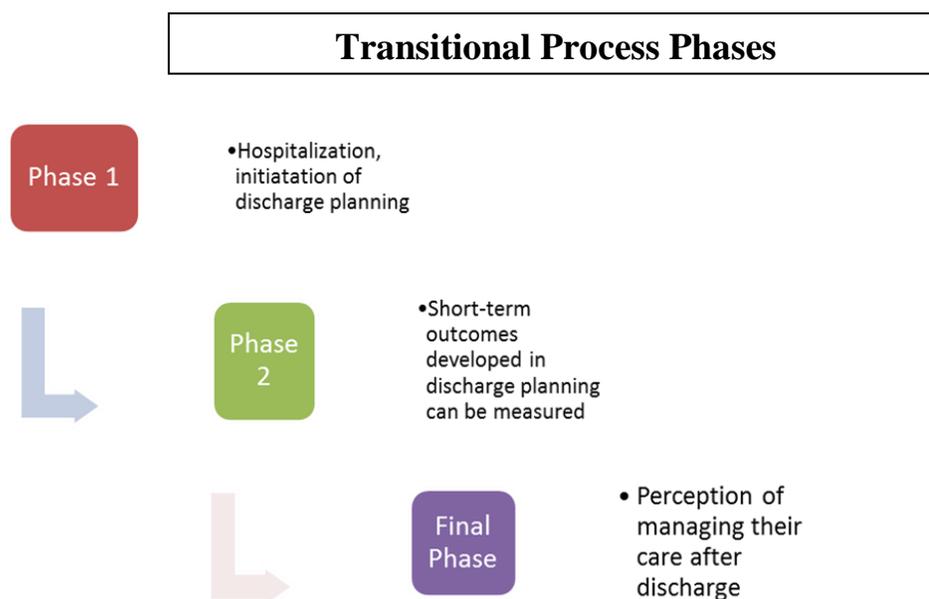


FIGURE 1. Transitional process phases.

The theory will be incorporated into the project by focusing on the transitions patients face in their healthcare management after being discharged from the hospital as they move towards self-care management in collaboration with primary care. Veterans with complex care needs are vulnerable post-hospitalization. The framework will shed light on the patient's needs during each phase of the transition allowing for a better understanding on how to ensure they are supported through the transitional process.

Meleis' Transitions Theory has been utilized in healthcare especially in the nursing aspect with various transitions involved in patient care focusing on health and illness and provides a foundation in the field of nursing that is applied to the care throughout the lifespan with age related transitions (Son & You, 2015). This framework guides healthcare practitioners towards a better understanding of the patient experience of transitioning from a hospital to home and how healthcare providers can develop multifaceted interventions to facilitate a smoother transition process for patients.

Synthesis of Evidence

The synthesis of evidence was conducted utilizing several literature databases, including PubMed, CINAHL as well as Google Scholar. Research key words included: transitional care, transitional care model, care transition, care coordination, hospital readmissions, primary care and discharge planning. For this evidence synthesis 20 articles were collected ranging between the years 2007 – 2017. Of the 20 articles collected the search was narrowed down by population, similarities in settings and diagnoses exhibited in the evidence appraisal table (Appendix B). Only the most relevant articles were utilized in this project. In an effort to collect more articles on transitional care, a search for the primary care provider's role in transitional care was searched to no avail.

Although limited articles surfaced regarding the primary care role in transitional care, a significant amount of evidence supporting transitional care outcomes were obtained. Naylor et al. (2012) noted that patients are at an increased risk for hospital readmission within the first few weeks' post discharge due to experiencing lingering symptoms of fatigue, decreased performance of activities of daily living (ADL'S), weakness, and memory loss. The synthesis review highlighted evidence from studies indicating a reduction in readmission rates with improved care coordination, communication. A study conducted by Boult et al. (2009) resulted in decreased readmission rates after designating healthcare providers to initiate transitional care with the provision of discharge summaries, scheduling follow-up appointments, and telephone follow-up for four weeks' post hospital discharge (Boult, Green, Pacala, Snyder, & Leff, 2009). An observational analysis conducted by Hernandez et al. (2010) concluded that patients discharged with early PCP follow-up rates had a lower risk of 30-day readmission. Bryant et al.

(2015) analyzed the clinical effectiveness and cost-effectiveness of the Advanced Practice Registered Nurse (APRN) in transitional care. The retrospective study identified that transitional care conducted by APRNs reduced mortality rates and readmission rates as a result of improved treatment adherence and patient satisfaction.

A project conducted by Son and You (2015) studied transitional care in older adults that incorporated Meleis' theory discussed hospitalization of an older adult is a transition that significantly impacts people living within a complex family system. An example discussed in this article was the struggle to implement new acquired skills to manage the changes in condition and resuming family roles during the discharge and home recovery transition period (Son & You, 2015).

Gaps

Many of the reviews lacked information regarding the primary care providers' role in the transitional care model. Although the reviews indicated there were positive outcomes which were identified by a reduction of readmission rates, they did not discuss identified barriers to transitional care or readiness for discharge. Another perspective that was investigated was the primary care provider's role in transitional care to identify the follow-up end of transitional care. There were very few articles linking the primary care follow-up, however, the primary care provider perspective was not highlighted or described.

METHODOLOGY

Design

This Quality Improvement project aimed to evaluate the utilization and impact of the VA of Southern Nevada Transitional Care Program for patients admitted with CHF to improve

hospital readmission rates and health outcomes. The design of this DNP project included conducting a retrospective chart review to better understand participants, program follow-up, and identify the impact of primary care follow-up post hospital discharge on 30-day readmission rates within the VA Medical Center in Southern Nevada. A recommendation towards encouraging timely primary care follow-up post hospital discharge was developed during this analysis.

In collaboration with the quality metrics analyst, nurse educator, transitional care APRN and CHF clinic APRN, a fishbone diagram located in the appendix was developed as a visual presentation of the potential causes of an effect, used to guide the project and find a starting point (Nelson, Batalden, and Godfrey, 2007) (Appendix A). Short term goals will be identification of barriers to early contact with the patient which can be measured by reviewing documentation within the EHR indicating non-face-to-face contact has been met and chronic care management has resumed. Long term goals include continuity of care and clinical outcomes parallel with gold standards of chronic care management

Setting

The project took place at the VA Southern Nevada Medical Center established in 2012. This quality improvement project evaluated discharged patients from an acute care inpatient 24 bed unit located in the medical center. The hospital acute care unit offers complex care delivery with services offered by physicians, nurses, physician assistants, nurse's assistants, dietitians, physical and occupational therapists, respiratory therapists, and social workers, among others.

The Primary Care Program Office within the VHA implemented a new patient-centered medical home (PCMH) model at all VHA primary care clinic sites identified as Patient Aligned

Care Teams (PACT). These teams were developed to provide accessible and patient-centered care and are managed by primary care providers consisting of physicians and advanced nurse practitioners collaborating with other clinical and non-clinical staff. The PACT is supported by an interdisciplinary team of which includes social workers, dietitians, pharmacists, and mental health specialists. These teams are implemented across the VA primary care sites considered to be “super” outpatient clinics (U.S. Department of Veterans Affairs, 2016). Patients discharged from the inpatient acute care unit are instructed to follow-up with the primary care outpatient clinic they are assigned to which is based off of the closest location to their home address. The inpatient RN case manager alerts the outpatient RN care manager to follow-up post-discharge.

Participants

The VA of Southern Nevada in Las Vegas provides care to patients spanning from WWII to the Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The majority of the Veterans treated in the facility are male and many of them have CHF. The largest percentage of this patient population would be defined as geriatric, over the age of 65 from the Vietnam War era. The majority of this Veteran population is diagnosed with multiple comorbidities which are treated simultaneously within this population. Common comorbidities that are treated among Veterans include the following:

- Chronic Obstructive Pulmonary Disease (COPD)
- Congestive Heart Failure (CHF)
- Skin and wound disorders related to diabetes
- Uncontrolled Diabetes
- Transient Ischemic Attack (TIA) / Stroke

All patients discharged with CHF from January 1, 2017 to June 30, 2017 were included in the sample.

Data Collection

An electronic query was performed by VA Southern Nevada personnel in the Quality Metrics department to collect program participant sociodemographic and health status, follow-up, and 30-day readmission data. Data was provided electronically as an Excel spreadsheet to this student. The following sections outline the variables collected for each aim.

Program Participants

Identifying socio-demographic characteristics were conducted:

- Age
- Gender
- Assigned Clinic

Program Utilization

A collection of data on transitional care program utilization included the following:

- Discharge date
- Date Care Manager RN contacted patient
- Date seen by PCP
- Documentation of referral to CHF clinic

Outcome

The next set of data collected included the impact of follow-up post hospital discharge on readmission rates within 30 days. 30-day readmission date (if any)

- Number of CHF patients re-admitted within 30 days

Nation-wide data bases including the electronic health record and quality metrics utilized within the entire VA healthcare system was utilized for this project. One of the databases utilized within the VA healthcare system is a performance tool called Strategic Analytics for Improvement and Learning (SAIL). This comprehensive performance tool assesses 25 quality measures in areas such as death rate, complications, and patient satisfaction, as well as overall efficiency and physician capacity at individual VA Medical Centers (U.S. Department of Veterans Affairs, 2017). Another source of data is the EHR Computerized Patient Record systems (CPRS) is utilized nation-wide. All VA facilities are linked which allows access to extract data about a patient's assigned PCP provider, medical history, and documentation on care received. This EHR was utilized to audit the number of hospital readmissions and primary care follow-up. During the search queries, VA Southern Nevada personnel in the Quality Metrics department were unable to obtain full reports for each variable. Though these data were in the EHR, it was discovered that reports were not able to extract these elements. Manual record review was required by the VA Southern Nevada personnel in the Quality Metrics department for readmission elements and resulted in limited available data for analysis. Excel was utilized for data management.

Data Analysis

Descriptive statistics and comparative analysis were performed in this project. Quantitative data analysis was conducted via measuring and comparing readmission rates and primary care follow-up. Comparative analysis was planned to compare the variables in a contingency table to identify a correlation among readmission rates with lack of primary care follow up post hospital discharge. This quality improvement project aimed to analyze the relationship between PCP appointment within two weeks as well as readmission rates and the

relationship between CHF clinic referral and readmission rates. However, limited data prevented statistical analysis. An analysis of the following variables was conducted.

1. Socio-demographic and health status characteristics of program participants
(descriptive statistics)
2. Utilization The post-discharge follow-up process (descriptive statistics)
 - a. RN care manager follow-up
 - b. PCP follow-up appointment
 - c. Referral to CHF Clinic
3. The impact of program follow-up on 30-day readmissions including:
 - a. Total number readmitted within 30 days (descriptive statistics)

Ethical Considerations

Ethical considerations were included in the design and implementation of this quality improvement project. The University of Arizona IRB review and VA of Southern Nevada site permission was obtained prior to conducting the project. No identifiable data was recorded for the purposes of this project. A key principle incorporated in this quality improvement project is beneficence. Beneficence encourages the researcher to do good and “above all, do no harm.” This quality improvement project was conducted to benefit the participants by utilizing the data collected to enhance the quality of transitional care and ongoing chronic disease management to improve patient care and outcomes. The second key principle is justice. This principle states that human subjects should be treated fairly in terms of the benefits and the risks of research (Grove et al., 2015). This quality improvement project ensured that the data was collected without bias. All CHF patients discharged during the study time period were included in the analysis. Prior to

conducting the study, the VA of Southern Nevada agreed to provide protected access within their electronic health records to minimize risks safeguard privacy. All data was kept in password-protected electronic files during the period of time the data was utilized for analysis.

RESULTS

Socio-Demographic and Health Status Characteristics

During the time frame between January 1, 2017 – June 30, 2017, there were a total of 1,972 patients receiving care from the VA of Southern Nevada that were diagnosed with congestive heart failure (CHF). Of these, 212 patients were admitted during this timeframe with CHF as part of their admission diagnosis, including 99 patients admitted with a primary diagnosis of CHF. Some 17 of these 99 CHF patients were readmitted with CHF in the VA of Southern Nevada. Planned data were not available for all patients admitted with a diagnosis of CHF due to limitations described above. Limited data were available for the 17 patients who were readmitted, based on manual review by the Quality Metrics personnel. Available data collected include sociodemographic characteristics, noted RN care manager contact within 48 hours, noted patient encounters by PCP within one week of hospital discharge. Unavailable data include health status characteristics as a result of a manual chart review completed by quality metrics personnel. Available data are presented below.

Patients Admitted with CHF

Of the 212 patients admitted with a CHF diagnosis, there were 44 patients with multiple comorbidities inclusive of hypertension, unspecified cardiovascular disease, chronic kidney disease, and diabetes. Among these 212 patients, the ages ranged between 43 – 94 years old the mean age of the sample was 73 years old (+/-11 years; Table 3). Some 22 patients were

documented to be residing in rural areas in Nevada. The majority of the patient population admitted between January 1, 2017 – June 30, 2017 and diagnosed with heart failure was male (211 patients), only one patient out of 212 was female.

TABLE 3. *Patient's admitted cardiorespiratory cohort category (N = 212).*

Admitted Cardiorespiratory Cohort Patient Characteristics	N (%)
Age	Range: 43 – 94 years Mean (+/-SD): 73 years (+/-11 years)
Gender	Male: 211 (99%) Female: 1 (< 1%)
Rurality	Living in rural areas: 22 (10%)
Number of readmitted patients with multiple comorbidities	N = 44(20%)
Comorbidities	Diabetes: 44 (20%) Chronic Kidney Disease Stage I – IV: 42(19%) Unspecified Cardiovascular Disease: 28 (13%) Hypertension: 20 (10%) End Stage Renal Disease: 5 (2%)

Patients Readmitted with CHF

The results of post-discharge follow-up, 30-day readmissions, and ED visits between the dates January 1, 2017 – June 30, 2017 are summarized in Table 4. There were 17 patients readmitted with CHF during this timeframe. The age range of patients diagnosed with heart failure are between 43-94 years of age, however 61% of the patients diagnosed with heart failure were aged 60-80; all were male (Table 4).

The Care Assessment Need (CAN)

Prior to developing this project, this metric was not incorporated. However, upon collecting data, the Quality Metrics analyst volunteered information reporting that the VA of Southern Nevada measured and placed great emphasis on the Care Assessment Need (CAN) score. The CAN score indicates the estimated probability of hospital admission or death within

90 days to a year. The score ranges from 0 (low risk) to 99 (highest risk) indicating how each patient compares with other VA patients in relation to hospitalization probability or mortality (Fihn & Box, 2013). The CAN score is generated using statistical prediction models based on demographic data such as age, gender and clinical information reported from Veteran Healthcare Administration (VHA) administrative data (Fihn & Box, 2013). In addition to the CAN score, VHA administrative data reports also display patient diagnoses, care management resources provided and utilization. The main objective of recognizing these reports and score is to identify groups of patients that are considered high risk and may benefit from care coordination (Fihn & Box, 2013).

TABLE 4. *Patient socio-demographic characteristics of readmitted CHF patients (N = 17).*

Characteristic	N (%)
Age	Range: 60-90years Mean (+/-SD): 75 years (+/-10years)
Gender	Male: 17 (100%) Female: 0
Assigned Clinics	Northeast Clinic: 2 (11%) Northwest Clinic: 10 (58%) Southeast Clinic: 0 Southwest Clinic: 0 No assigned clinic: 5 (29%)
PCP Assigned	Yes: 12 (70%) No: 5 (29%)
Number of ED visits* made by readmitted patients over a 2 year period	0 ED visits: 0 1-5 ED visits: 1 5-10 ED visits: 1 >10 ED visits: 9 Undocumented by analyst: 6
Patients with a CAN Score >90	10 (59%)

*Number of ED visits during time period

Utilization: Post-Hospital Discharge Follow-Up

Data were only available for the patients readmitted within 30 days. And 10 patients were contacted by their assigned RN Case Manager to follow-up post hospital discharge (Table 5).

Only one patient received a PCP follow-up in the designated time period. None of the 17 patients

had documentation of referral to the CHF clinic. However, three patients were enrolled into non-specific telehealth programs.

TABLE 5. *Follow-up post-discharge.*

Follow-Up	N (%)
<i>Contact by RN Case Manager</i>	
Within 48 hours D/C	9 (53%)
After 48 hours D/C	0 (0%)
Contacted but no answer	1 (5%)
No contact documented	7 (41%)
<i>Seen by PCP</i>	
Within 2 Weeks post D/C	1 (5%)
After 2 Weeks post D/C	0 (0%)
No visit documented	16 (94%)
<i>CHF Clinic Referral</i>	
	0 (0%)
<i>Enrolled in non-specific tele-health</i>	
	3 (18%)

Outcome: Total Number Readmitted Within 30 Days

Seventeen patients (17.2%) were readmitted out of 99 patients who were admitted with a primary diagnosis of CHF within 30 days of previous discharge between the dates January 1, 2017 - June 30, 2017.

DISCUSSION

A quantitative retrospective chart review was performed to evaluate the utilization and impact of the VA of Southern Nevada Transitional Care Program for patients admitted with CHF to improve hospital readmission rates and health outcomes. An electronic query was performed by VA Southern Nevada personnel in the Quality Metrics department to assess program participant sociodemographic and health status, follow-up and 30-day readmission data on patients discharged with a diagnosis of CHF between the dates January 1, 2017 and June 30, 2017. Limitations in the electronic query were identified; although the Quality Metrics analyst obtained results of admitted and readmitted patients a manual chart review was necessary to

gather sociodemographic and follow-up data. Multiple sessions were held with the analyst in order to focus and explore the data.

Patient Characteristics

Patient characteristic data was limited to available data obtained by the Quality Metrics analyst, including manual chart review for patients readmitted. As expected, the largest percentage of this patient population would be defined as geriatric, over the age of 65 for both the cohort of patients admitted with CHF, and for patients readmitted. The mean age of patients admitted with a diagnosis of heart failure was 73 years old while the mean age for patient's readmitted within 30 days of post hospital discharge was slightly higher at 75 years old. Rurality was identified in 22 out of 212 patients admitted with a diagnosis of heart failure, which may impact ability to access care, though it is unclear if patients who were readmitted were more likely to be rural as data was not available. As expected, about 20% of the CHF patient population in this evaluation were diagnosed with multiple comorbidities. Multiple comorbidities are common characteristics in the VA patient population which are more prevalent in older adults. Comorbidities that have been associated with heart failure patients of which were indicated by the ICD-10 codes utilized in admission diagnoses included hypertension, cardiovascular disease, chronic kidney disease, and diabetes. Among patients admitted with a diagnosis of heart failure, VA patients have been found to more likely to have a medical history of diabetes yet less likely to have a medical history documenting coronary atherosclerosis or valvular heart disease compared to non-VA patients within the community (Nutti, Rumsfeld, Ross, Masoudi, Normand & Krumholz (2016). Age, rurality, and comorbidities may impact risk for readmission.

Utilization: Post-Discharge Follow-Up

During January 1, 2017 – June 30, 2017, there were 99 patients admitted with a primary diagnosis of heart failure in VA of Southern Nevada. The data revealed that five (29%) patients were not assigned to a primary care provider, which can impact continuity of care. The manual chart review of the 17 patients readmitted within 30 days revealed that 10 (58%) patients were either contacted by an RN within 48 hours and one (5%) was seen by a PCP within two weeks. Therefore, almost half of patients discharged with CHF during this time period did not receive the RN follow-up after discharge. There were various instances found where a patient was readmitted within 30 days with no documentation of RN outpatient care manager contact or primary care follow-up.

Statistical analysis utilizing chi square was not incorporated as planned; the initial inquiry for this quality improvement project was to obtain a larger sample of patients who were followed up post-hospital discharge. Limitations in data collection were encountered and challenges uncovered. Initially data collection was assumed to be available and the search via data collection tools were assumed to be simple and straightforward to obtain until the team discovered barriers which impacted the ability to perform an analysis. Access to the data collection sites were compromised due to the facilities information technology overhaul. The transition to the new sites denied team members access to the data collection sites. These limitations impacted the ability to evaluate this program.

A manual chart review was performed by the administrator on 17 patients included in the project sample. There was another barrier in obtaining an accurate sample due to incorrect ICD coding within the EHR. Although data was obtained utilizing data collection tools, some

information was not readily accessible for program evaluation creating a barrier for full analysis and understanding the scope of the problem. There were however some findings that were not identified prior to the evaluation. Some findings include lack of follow-up with a provider and gaps in follow up care during weekend discharges.

There are various potential barriers that may play a role in lack of follow-up such as weekend discharges which delay the inpatient case manager notification. Another barrier to be considered is if the contact information in the patient's chart is incorrect, or if the patient is homeless if so then contact with the patient will not take place. Lack of follow-up visit post hospital discharge can significantly impact health status. For instance, acute conditions swiftly transition into chronic conditions that could have been prevented if managed appropriately. The VHA has faced criticisms regarding increased wait times for appointments as a result of shortages in healthcare providers; this may also contribute to the lack of follow-up. Unmanaged chronic conditions have the ability multiply comorbidities leading to a worsening the quality of life.

A study on Post-Hospitalization Transitions conducted by Misky, Wald, & Coleman (2010) suggested that care coordination by advanced nurse practitioners, pharmacist follow-up phone calls and involving a transitional care coach while encouraging active patient involvement are methods to improve patient outcomes post hospitalization. However, such transitional care processes are not readily available in Las Vegas. It is evident that timely PCP follow-up post hospital discharge is a process that can significantly impact hospital readmissions. The VA of Southern Nevada has an advantage of monitoring patient hospital admissions and discharges. This advantage can facilitate timely PCP follow-up and decrease readmission rates. Community

hospitals in Las Vegas do not have this advantage placing the responsibility to follow-up solely on the patient. An observational study conducted by Zabawa, Cottenet, Zeller, Mercier, Rodwin, Cottin, and Quantin (2018) emphasized the importance of the post-discharge period and concluded that the engagement of primary care professionals beginning from the early post-discharge period may be essential to preventing hospital readmissions. Although hospital case managers and social workers can provide some information and assistance in finding a PCP and other healthcare services further follow-up relies heavily on self-care management post-hospital discharge. A future evaluation may be able to explore the patient's perceived barriers to PCP follow-up post hospital discharge.

CHF Clinic Referral

Data revealed that only three patients were enrolled in a telehealth program between the dates January 1, 2017 – June 30, 2017, though the specific telehealth program was not identified. There was no documentation identifying referral specifically to the CHF telehealth clinic among 15 randomly selected patients. Upon reaching out to the CHF clinic, it was reported that there are a various exclusion factors considered when enrolling in telehealth which may be placing a significant barrier in referrals:

1. Must have a phone of their own.
2. Must have a permanent address.
3. Must have a PACT team assigned to them.
4. Must not be on Dialysis.
5. Must not be on Chemotherapy.

6. Must not be hearing or vision impaired so that they can enter data on the phone keypad.
7. Must be able to get on a scale or take their own BP.
8. Must not use illicit drugs (marijuana included) or have ETOH abuse.

The Care Assessment Need (CAN)

Patients with a CAN score of >90% are to be referred to hospice per the VA policy. However, of the 17 patients that were readmitted between the dates January 1, 2017 – June 30, 2017 there were 10 patients with a CAN score of > 90%. Yet none of these patients were referred or had a discussion regarding hospice documented within their EHR. A discussion with the Quality Metrics department revealed key information regarding the current state of the VA of Southern Nevada. A significant amount of attention was drawn to CHF rates in the facility due to its heavy emphasis in the facilities current star rating. With such attention, various plans are being developed to address the facilities ratings.

Care Coordination Gaps

Another issue identified during the data collection process was the gaps in care coordination. According to the current process in place, inpatient case managers are to place an alert to discharged patients assigned PACT teams. However, it was apparent that these alerts were being placed over 24 hours or greater after discharge which places a delay and greatly impacting the ability of the outpatient RN care manager to contact patients within 48 hours of hospital discharge. Since inpatient care managers work five days out of the week, patients who are discharged over the weekend receive an even longer delay which can significantly impact their risk for readmission.

SAIL Ratings

Each VA medical center is assessed for overall Quality Performance using a star rating system from '1' (lowest) to '5' (highest). According to the data provided, the VA of Southern Nevada is currently a two-star facility. The quality metrics analyst discussed that upon utilizing a predictor calculating tool, improving CHF readmission rates can greatly impact the star rating. The Quality Metrics department emphasized that CHF readmission rates are heavily categorized in the overall quality performance of the facility. Therefore, focus on improving post-discharge care of patients admitted with CHF can impact patient outcomes, as well as facility quality ratings.

Outcome: Readmission

According to the U.S. Department of Veterans Affairs (2017), the VA of Southern Nevada's readmission rate during 2013-2016 was 19%. During the time period of January 1, 2017 – June 30, 2017 the CHF readmission rate was calculated to be 17.1%. Though this calculated rate for 2017 was slightly lower than the previous four-year period, there is still room for improvement. The VA of Southern Nevada is reported as a two-star facility according to SAIL reports. This facility was compared with 5-star facilities achieving 18% readmission rates. Being reported as a two-star facility in comparison with VHA nationwide has been quite a concern for the facility. In fact, the CHF readmission was considered a factor in the facility star ratings. According the quality metrics analyst, upon utilizing the projection calculator, decreasing the amount of CHF readmissions can significantly increase the facility star ratings up to a four-star facility due to its heavy impact in the facility score. According to CMS (2016) data, during the years 2013-2016 the national readmission rate for patients diagnosed with heart

failure is at 21.6%. It was difficult to compare the VA of Southern Nevada with two larger community hospitals in Southern Nevada due to the differing patient population. University Medical Center the only level 1 trauma Center in Las Vegas readmission rate of patients diagnosed with heart failure during 2013-2016 was 20% with 155 discharges and 28 readmissions (CMS, 2016). Sunrise Hospital's readmission rate of patients diagnosed with heart failure during 2013-2016 was 23% with 521 discharges and 130 readmissions (CMS, 2016). Ten other hospitals in the Las Vegas area reported a readmission rate that ranked no different than the national rate (CMS, 2016).

Overall the information provided indicates that although the VA of Southern Nevada has room for improvement, the readmission rate is slightly lower than the national average and equivalent to the national VA average. A significant barrier to interpreting these results is if a VA patient was discharged from a VA facility and readmitted within 30 days to a non-VA facility the results will not be accurately reflected on the 30-day readmission report.

Conclusion

The purpose of this quality improvement project was to evaluate the utilization and impact of the VA of Southern Nevada Transitional Care Program for patients discharged with CHF to improve hospital readmission rates. Upon conducting this quality improvement project, there were many factors that contributed in the VA of Southern Nevada's quality and performance rankings. It is apparent that there are significant gaps in the discharge process. These gaps and barriers include case manager alert/documentation of discharge, unassigned to PCP, lack of outpatient RN care managers contact within 48 hours, lack of PCP follow-up post hospital discharge, lack of CHF telehealth referral, and a lack of hospice referral with a CAN

score of > 90%. Meleis' transitions theory guided this project in identifying each transition patients face throughout hospitalization. The transitions theory focuses on supporting the patient through the transitional process phases of hospitalization (Meleis, 2010). This theory also assisted in understanding the importance of the CAN score to the patient's quality of life and revealing the lack of supportive transition to hospice referral. These barriers can be addressed and corrected with various modifications in the discharge and transitional care process. With that said, there is an underlying problem of lack of communication among inpatient and outpatient healthcare teams that may be the root cause of these findings evidenced by the lapse in patient discharge alerts and PCP follow-up.

Strengths

The strengths of this quality improvement project included identification of the gaps contributing to the lack of post-hospital discharge follow-up. Identification of these gaps in care coordination facilitated the development of specific modifications within the transitional care process, even during the time this project was being conducted as a result of the process of data collection and preliminary data analysis. Furthermore, there are various existing tools and ratings in place to assess the facilities current overall quality and performance. These tools permit evaluation and comparisons over time.

Limitations

The limitations of this quality improvement project included the lack of readily available information regarding RN outpatient care manager and PCP follow-up. A manual chart review was required and performed by the administration to locate documentation of RN outpatient contact and PCP follow-up post hospital discharge. A significant barrier was having to rely on

the Quality Metrics analyst to obtain the data. During the time of the evaluation, there were adjustments within the quality department personnel which made it difficult to conduct meetings regarding this quality improvement project due to decreased staffing. Other limitations include unclear roles of the healthcare team in the discharge process. There is an evident lack of communication among healthcare team's inpatient and outpatient in the transitional care process. Inconsistent communication and documentation made it difficult to evaluate the actual discharge process.

Recommendations

Bridging the healthcare gaps and improving communication are the key recommendations for the barriers in the transitional care process post hospital discharge.

- Inpatient discharging RN should place the discharged patient alert to assigned outpatient PACT care manager RN. This modification will resolve the delayed discharge alert. Inpatient RN's who are discharging the patient can place the alert and add the outpatient PACT care manager onto their hospital discharge note to ensure timely alerts are prompted at the time of discharge.
- Incorporating transitional care APRN role. This modification can improve timely post-hospital discharge non-face-to-face contact with patients as well as reinforce post-discharge instructions, answer questions, review/place necessary tests prior to PCP face-to-face contact.
- Education provided by the Quality Metrics consultants to PACT teams regarding the discussion of hospice and referral to hospice in patients with a CAN score of <90%. A

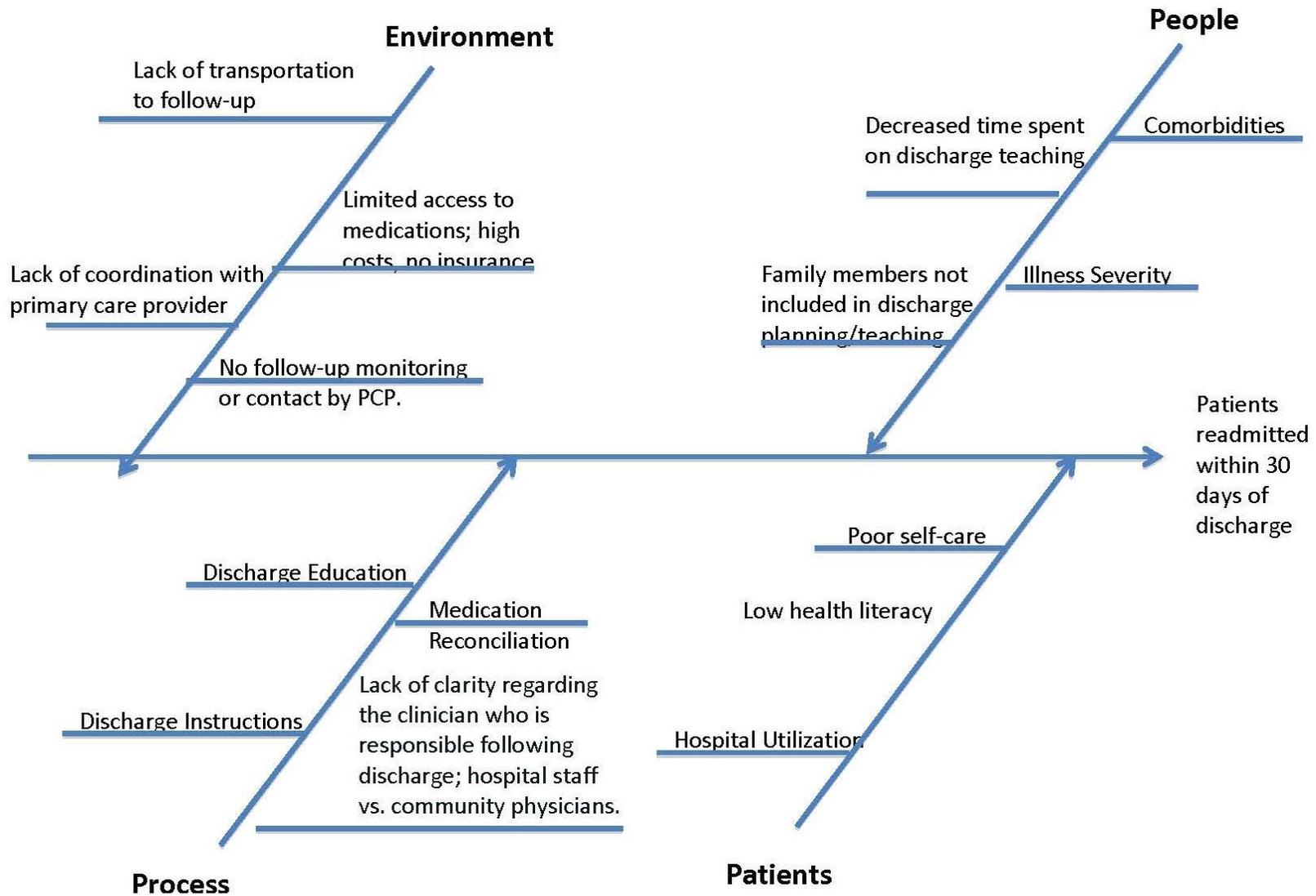
collaborative effort between hospice specialists and the quality metrics consultant can shed light on the process and promote a better understanding among the PACT teams.

- CHF telehealth clinics coordinator provides in-services on program objectives and encourage referrals from the PACT teams. This modification will promote improved communication and a better understanding of program objectives offered by CHF telehealth clinic. Reluctance to refer patients to this service will be addressed.
- Explore potential transportation needs and resources. This modification will identify potential barriers that transportation may pose towards Veterans living in rural areas.
- Further evaluations. Incorporating further evaluations to monitor the progress of improvements in the transitional care process will improve the quality and overall performance of the VA of Southern Nevada. Another retrospective review in 3 months can help identify whether previous modifications have improved patient outcomes. Another form of evaluation may be conducted by surveying patients to identify the patient's perspective of the current transitional process post-hospital discharge. The patient's perspective can provide a patient centered care approach to the transitional process while improving patient compliance and satisfaction.

Dissemination

The results of this quality improvement project will be shared, including evidence-based recommendations obtained through analysis. An executive summary of the project findings will be developed and a power point presentation highlighting recommendations and goals for improved outcomes will also be presented to the clinical and research department in charge of QI at the VA of Southern Nevada.

APPENDIX A:
FISHBONE DIAGRAM



APPENDIX B:
EVIDENCE APPRAISAL TABLE

Project Question: The effect of transitional care during the hospital discharge process and its correlation to primary care follow-up and readmission rates.

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Allen, K. R., Hazelett, S. E., Jarjoura, D., Wright, K., Fosnight, S. M., Kropp, D. J., & Pfister, E. W. (2011). The after discharge care management of low income frail elderly (AD-LIFE) randomized trial: theoretical framework and study design. <i>Population health management, 14</i> (3), 137-142.	Quantitative: What is the effectiveness of a posthospitalization nurse-led interdisciplinary care management for low income frail elders with multiple chronic illnesses.	Wagner's chronic illness care model	Randomized controlled trial	(N = 530) patients \geq 65 years old diagnosed with at least 1 chronic illness and at least 1 impaired ADL or 2 impaired instrumental activities of daily living (IADL)	Data collected within a timeline of 6 months include: cognitive function, physical function, ER visits, hospitalizations, nursing home admission, quality of life, ADLs, IADLs, quality of medical management, medications, blood pressure, depression, falls, nutrition, pain, exercise, smoking, patient involvement in decision making	The study was completed with pending results.
Bradway, C., Trotta, R., Bixby, M. B., McPartland, E., Wollman, M. C., Kapustka, H., & Naylor, M. D. (2011). A qualitative analysis of an advanced practice nurse-directed transitional care model intervention. <i>The Gerontologist, gnr078</i> .	Qualitative: Describe barriers and facilitators to implementing a transitional care intervention for cognitively impaired older adults and their caregivers lead by advanced practice nurses (APNs)	Not reported	Retrospective study	(N = 15) patients transitioning from hospital to home	Two types of data were used to meet the aims of this analysis. Individual case summaries written by APNs for each enrolled patient-CG dyad were used as the primary source of data. Fieldnotes written by two of the study coinvestigators during the case conferences served as a secondary data source.	Three central themes emerged: patients and caregivers having the necessary information and knowledge, care coordination, and the caregiver experience. An additional category was also identified, APNs going above and beyond.

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
<p>Bryant- Lukosius, D., Carter, N., Reid, K., Donald, F., Martin- Misener, R., Kilpatrick, K., & DiCenso, A. (2015). The clinical effectiveness and cost- effectiveness of clinical nurse specialist- led hospital to home transitional care: a systematic review. <i>Journal of evaluation in clinical practice</i>, 21(5), 763-781.</p>	<p>Quantitative: What is the clinical effectiveness and cost- effectiveness of the Advanced Practice Nurse in transitional care.</p>	<p>Not reported</p>	<p>Retrospective Study</p>	<p>(N = 2463) Patients were comprised of post cancer surgery, post-partum, and Heart failure patients</p>	<p>10 electronic databases were searched during the timeline between 1980 to July 2013, and hand- searched reference lists and key journals for RCTs that evaluated health system outcomes of transitional care.</p>	<p>Retrospective study outcome suggests patients in categories of post-cancer surgery, diagnosed with heart failure, and post-partum were evaluated. It was found that transitional care was superior in reducing patient mortality on post-cancer surgical patients. For patients with heart failure, transitional care delayed time to and reduced death or re-hospitalization, improved treatment adherence and patient satisfaction, and reduced costs and length of re-hospitalization stay. For elderly patients and caregivers, transitional care improved caregiver depression and reduced re-hospitalization, re-</p>

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
						hospitalization length of stay and costs. For post-partum patients who were considered high-risk pregnant women transitional care maternal satisfaction with care and reduced maternal and infant length of hospital stay and costs
Buurman, B. M., Parlevliet, J. L., Allore, H. G., Blok, W., van Deelen, B. A., van Charante, E. P. M., ... & de Rooij, S. E. (2016). Comprehensive Geriatric Assessment and Transitional Care in Acutely Hospitalized Patients: The Transitional Care Bridge Randomized Clinical Trial. <i>JAMA internal medicine</i> , 176(3), 302-309.	Quantitative: What is the impact of the intervention of systematic CGA, followed by the transitional care bridge program, improved activities of daily living (ADLs) compared with systematic CGA alone.	Not reported	Meta-analysis	(N = 1070) 674 (63.0%) of whom enrolled were 65 years or older, acutely hospitalized to a medical ward for at least 48 hours with an Identification of Seniors at risk for re-hospitalization	This study was a double-blind, multicenter, randomized clinical trial conducted at 3 hospitals with affiliated home care organizations in the Netherlands between September 1, 2010, and March 1, 2014. All primary analyses were performed on an intent-to-treat basis. Descriptive characteristics were calculated using proportions or means and SDs, as appropriate.	Research Ongoing, results pending
Corbett, C. F., Setter, S. M., Daratha, K. B., Neumiller, J.	Quantitative: What are the most common	Not reported	Meta-analysis	(N = 101) participants who	Descriptive statistics were computed using	Results of the study identified more

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
J., & Wood, L. D. (2010). Nurse identified hospital to home medication discrepancies: implications for improving transitional care. <i>Geriatric Nursing, 31</i> (3), 188-196.	medication discrepancies identified by nurses during patients' hospital to home transition			receive home care services, the majority of participants (63%) were female, participants' average age was 73 years	SPSS 17.0. This analysis was based on data from a larger study testing the effectiveness of an intervention designed to enhance home care nurses' abilities to detect and resolve hospital-to-home transition-related medication discrepancies.	system-level discrepancies. The most common contributing factor for system-level discrepancies in the study was incomplete or inaccurate discharge instructions.
Courtney, M. D., Edwards, H. E., Chang, A. M., Parker, A. W., Finlayson, K., & Hamilton, K. (2011). A randomised controlled trial to prevent hospital readmissions and loss of functional ability in high risk older adults: a study protocol. <i>BMC health services research, 11</i> (1), 202.	Quantitative: What is the impact of innovative transitional care strategies to reduce unplanned readmissions and improve functional status, independence, and psycho-social well-being of community-based older people at risk of readmission.	Not reported	Randomized controlled trial	(N = 328) The inclusion and exclusion criteria reflect patients who are at high risk of hospital readmission after hospital discharge	Baseline data from the control and intervention groups were compared to check for comparability of the groups.	The outcome of the study supports the effectiveness of an innovative model of discharge planning and follow-up management of older adults at risk for hospital readmission; however, the trial was unable to examine the optimal components of the multi-faceted intervention on health and economic outcomes
Davidson, P. M., Dracup, K., Phillips, J., Padilla, G., & Daly, J. (2007).	Qualitative: What is the effect of Maintaining Hope in	Maintaining Hope in Transition	Cross-sectional analysis	Not reported	Not reported	Coping and adjustment to changes in life circumstances

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Maintaining hope in transition: A theoretical framework to guide interventions for people with heart failure. <i>Journal of Cardiovascular Nursing</i> , 22(1), 58-64.	Transition model, informed by transition theory, in assisting patients to cope with a diagnosis of HF and to guide development of nursing interventions?	Model				is fundamental to the human experience. The smoothness in transition of life circumstances can be facilitated by proficient nursing care and support. It is important that nursing be based on an assessment of individual needs, clinical condition, and available resources
Hernandez, A. F., Greiner, M. A., Fonarow, G. C., Hammill, B. G., Heidenreich, P. A., Yancy, C. W., ... & Curtis, L. H. (2010). Relationship between early physician follow-up and 30-day readmission among Medicare beneficiaries hospitalized for heart failure. <i>Jama</i> , 303(17), 1716-1722.	What is the associations between outpatient follow-up within 7 days after discharge from a heart failure hospitalization and readmission within 30 days.	Not reported	Observational analysis	(N = 30, 136) patients from 225 hospitals	Data was collected through linked Medicare inpatient claims data from January 1, 2003, through December 31, 2006, with data from the Organized Program to Initiate Lifesaving Treatment in Hospitalized patients with Heart Failure	Among patients who are hospitalized for heart failure, substantial variation exists in hospital-level rates of early outpatient follow-up after discharge. Patients who are discharged from hospitals that have higher early follow-up rates have a lower risk of 30-day readmission.

Author / Article	Qual: Concepts or phenomena Quan: Key Variables Hypothesis Research Question	Theoretical Framework	Design	Sample (N)	Data Collection (Instruments/tools)	Findings
Naylor, M. D. (2012). Advancing high value transitional care: the central role of nursing and its leadership. <i>Nursing administration quarterly</i> , 36(2), 115-126.	Qualitative: Describe the efforts of a multidisciplinary team to create a path from system fragmentation to integration for this vulnerable population through the design, testing, and translation of the Transitional Care Model (TCM).	Care Transitions Framework	Quasi-experimental study	Not reported	Data was collected on readmission rates 6, 26, and 52 weeks post hospital discharge.	Project results suggests that improvements in physical health, functional status, and quality of life were reported by patients who received TCM. Overall satisfaction with the care experience has increased among patients receiving TCM.
Tang, N., Fujimoto, J., & Karliner, L. (2014). Evaluation of a primary care-based post-discharge phone call program: keeping the primary care practice at the center of post-hospitalization care transition. <i>Journal of general internal medicine</i> , 29(11), 1513-1518.	Qualitative: Describe the impact of primary-care based program to identify and address problems arising after hospital discharge.	Not reported	Meta-analysis	(N = 371) discharges of adult patients with a primary care provider in the general internal medicine practice at the University of California San Francisco who were discharged home from the Medicine service.	Data reviewed involved appointment status in the EMR of all study patients to determine attendance rates. Data was also collected and reviewed regarding 30-day readmission rates.	The outcome suggests that centering a post-discharge phone call program within the primary care practice improves post-hospital care by identifying clinical and care-coordination problems early.

APPENDIX C:

MELEIS' TRANSITIONS: A MIDDLE-RANGE THEORY

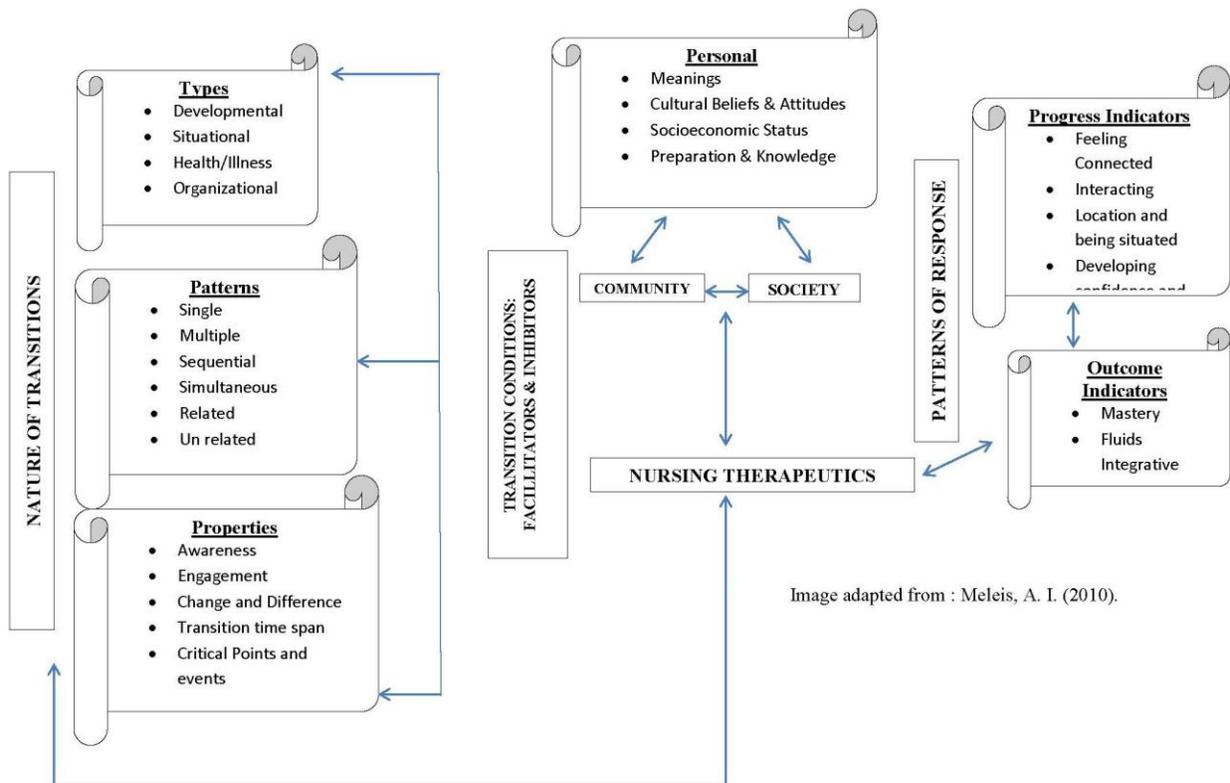


Image adapted from : Meleis, A. I. (2010).

APPENDIX D:
VETERANS AFFAIRS SOUTHERN NEVADA HEALTHCARE SYSTEM
LETTER OF SUPPORT



DEPARTMENT OF VETERANS AFFAIRS

VA Southern Nevada Healthcare System

6900 North Pecos Road

North Las Vegas, Nevada 89086

(702) 791-9000

Date: November 4, 2017

University of Arizona

Dr. Christy Pacheco, DNP, FNP-BC

In Reply Refer To: **593/**

Sharlynn Maucesa, MSN, RN has permission to perform a program evaluation of the current transitional care process with the VA Southern Nevada Healthcare System in partial fulfillment of the requirements for the Doctor of Nursing Practice at the University of Arizona College of Nursing.

Ms. Maucesa has access to program policies and procedures, databases, laboratory records, aggregate data/reports to complete this project. This program evaluation will be conducted at the VA Southern Nevada Medical Center. I understand that Ms. Maucesa will be conducting this program evaluation with IRB review from the University of Arizona.

Please contact me with any questions.

Regards,

Dr. Kimberly Falco, DNP, RN

VALOR and TTP Coordinator

NNEI and VANEPP Coordinator

Nursing Academic Affiliations Coordinator

Nursing Professional Services

VA Southern Nevada

Tel: [702.791.9000](tel:702.791.9000) x 15939

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APPENDIX E:
THE UNIVERSITY OF ARIZONA INSTITUTIONAL REVIEW BOARD (IRB)
DETERMINATION LETTER



Human Subjects
Protection Program

1618 E. Helen St.
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Date: March 27, 2018

Principal Investigator: Sharlynnne Anne Maucesa

Protocol Number: 1803406677

Protocol Title: Evaluation of the transitional care process post hospital discharge in the VA Southern Nevada Healthcare System.

Determination: Human Subjects Review not Required

Documents Reviewed Concurrently:

H SPP Forms/Correspondence: *Advisor Signature.pdf*

H SPP Forms/Correspondence: *determination_2-3_v2018_Maucesa_Submission2.pdf*

Other Approvals and Authorizations: *Maucesa - UA Letter 11.4.17_Site approval.pdf*

Regulatory Determinations/Comments:

- Not Research as defined by 45 CFR 46.102(d): As presented, the activities described above do not meet the definition of research cited in the regulations issued by U.S. Department of Health and Human Services which state that "research means a systematic investigation, including research development, testing and evaluation, designed to contribute to generalizable knowledge."

The project listed above does not require oversight by the University of Arizona.

If the nature of the project changes, submit a new determination form to the Human Subjects Protection Program (HSPP) for reassessment. Changes include addition of research with children, specimen collection, participant observation, prospective collection of data when the study was previously retrospective in nature, and broadening the scope or nature of the study activity. Please contact the HSPP to consult on whether the proposed changes need further review.

The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).

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