

TRANSITIONAL CARE: THE TIME IS NOW

by

Jill Krmpotic

A DNP Project Submitted to the Faculty of the

COLLEGE OF NURSING

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF NURSING PRACTICE

In the Graduate College

THE UNIVERSITY OF ARIZONA

2015

THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the DNP Project Committee, we certify that we have read the DNP Project prepared by Jill Krmpotic entitled “Transitional Care: The Time is Now” and recommend that it be accepted as fulfilling the DNP Project requirement for the Degree of Doctor of Nursing Practice.

Date: July 23, 2015
Brian R. Buchner, DNP, APRN, ACNP-BC, FAANP

Date: July 23, 2015
Laura McRee, DNP, ACNP, RNFA

Date: July 23, 2015
Ken Ota, DO

Final approval and acceptance of this DNP Project is contingent upon the candidate’s submission of the final copies of the DNP Project to the Graduate College.

I hereby certify that I have read this DNP Project prepared under my direction and recommend that it be accepted as fulfilling the DNP Project requirement.

Date: July 23, 2015
DNP Project Director: Brian R. Buchner, DNP, APRN, ACNP-BC, FAANP

STATEMENT BY AUTHOR

This DNP Project has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this DNP Project are allowable without special permission, provided that an accurate acknowledgment of the source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: Jill Krmptic

ACKNOWLEDGMENTS

I would like to give many thanks to my doctoral project advisor and committee members for their ongoing support, lightning speed responses to emails, guidance, and encouragement throughout my graduate education at the University of Arizona. Thank you Dr. Brian Buchner for providing patience and excitement towards my project. Your ability to provide feedback that encouraged me to dig deeper always amazed me. Your knowledge and expertise helped me grow as a researcher, person, and now as a practitioner. Dr. Laura McRee was with me since the very beginning and I will never forget sitting on a beanbag in her office during my first advisor appointment. Thank you for always encouraging me to live life during this stressful program. Dr. Ken Ota graciously allowed me to complete a significant amount of clinical hours with him, as he was the director of Transitional Care at Banner University Medical Center-Phoenix. His passion for Transitional Care never ceased to amaze me. I could only hope to one day have as much clinical knowledge and teaching ability as you possess.

I would also like to thank my family. My sister Kim I do not even know where to start with the thanks. In March of 2012, our lives changed as we were accepted into this program. No one will ever quite understand the journey we have been on these last three years, but I can tell you there is no one else I would have rather completed it with. Thank you for the shoulder to cry on, the little gifts throughout the program, the glasses of wine to heal the wounds, and for proof reading. Thank you to my parents, Mick and Deb Krmpotic. I will be forever indebted to you for providing me this education. Thank you for allowing me to come to your house on Saturdays and Sundays to work on homework. You have always been my number one cheerleaders no matter which adventure I choose to partake in, and graduate school was no different. I love you and thank you for everything. We can now vacation without having to find a Wi-Fi area, and watch Cornhusker football without homework. Thank you to my boyfriend, Brook. Your ability to make me smile even in the darkest of times was always welcomed. Thank you for studying with me even if you did not know how to pronounce the words. I also appreciate all the proof reading you did throughout this program. You are my rock and I love you.

Lastly, I would like to thank my friends. Dr. Jennifer Weitman and Rick Weitman you have been here since Jenn and I started nursing school back in 2007. Jenn your brilliant mind encouraged me to always do better in this program. You are my best friend and I do not know where I would be without you. Rick thank you for all the bear hugs, and allowing me to be a part of you and your wife's life. Ryan Hoffmann thank you for allowing your wife (Kim Krmpotic) to spend more time with me than you during these three years. Your encouragement and relaxed attitude was greatly appreciated. Dr. Tyah Haro I cannot express how grateful I was to have met you in this program. Your ongoing support, guidance, and ability to make me laugh made me survive this program.

DEDICATION

I dedicate this project to all the future Adult Gerontology Acute Care Nurse Practitioners who have a passion for transitional care. Also, I dedicate this to my ever-loving family who has been there on this roller coaster of graduate school thank you for being there to celebrate the small accomplishments and cry over the bumps in the road.

TABLE OF CONTENTS

LIST OF FIGURES	8
ABSTRACT.....	9
CHAPTER I: INTRODUCTION	10
Current Practice.....	11
History.....	11
Current Model at BUMCP.....	13
Significance to Healthcare.....	14
Mortality and Morbidity of Heart Failure	14
Cost Consequences of Heart Failure	15
Purpose and Aims	15
Conceptual Framework.....	16
Conclusion	18
CHAPTER II: LITERATURE REVIEW	19
Introduction.....	19
Literature Review Process	19
Transitional Care	19
Barriers to Utilization of Transitional Care.....	21
Implementation of New Consulting Service	22
Conclusion	23
CHAPTER III: METHODOLOGY	25
Introduction.....	25
Population Setting.....	25
Project Protocol.....	26
Ethical Issues	27
Data Analysis.....	28
Conclusion	28
CHAPTER IV: RESULTS	29
Introduction.....	29
Demographics.....	29
Descriptive Statistics.....	29
Conclusion	31

TABLE OF CONTENTS – *Continued*

CHAPTER V: DISCUSSION	33
Proposed Interventions.....	33
Study Limitations.....	37
Recommendations.....	37
Significance to the Doctor of Nursing Practice	38
Conclusion	39
APPENDIX A: SURVEY.....	40
APPENDIX B: EMAIL SCRIPT	45
APPENDIX C: CONSENT	47
APPENDIX D: EMAIL REMINDER TO STUDY POPULATION	49
APPENDIX E: INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL LETTER	51
APPENDIX F: LESSON PLAN	54
REFERENCES	56

LIST OF FIGURES

FIGURE 1. Goal Attainment Theory for Transitional Care 17

ABSTRACT

The TC program, designed to decrease preventable readmissions and support patients who have chronic illnesses including HF, at BUMCP has had a low referral rate. This low referral rate results in the program being unable to make an impact to decrease readmission rates in the HF population and increase quality of life among this patient population. The purpose of this project was to identify current barriers to referral and develop interventions directed at the identified barriers. An online survey was sent to a hospitalist group employed at BUMCP. Results revealed perceived barriers include decreased accessibility, limited number of accepted patient diagnoses, and lack of involvement in launch of TC. Recommended interventions include increased accessibility through 24 hours day, seven days week availability, abolishment of current accepted patient diagnoses, and implementation of Lewin's Change Theory to increase buy-in from physicians.

CHAPTER I: INTRODUCTION

Transitional Care (TC) is a care model designed to provide support to patients with chronic illnesses, such as heart failure (HF), between acuity levels of health care and across health care settings (Naylor & Keating, 2008). Adults age 65 and older are at a higher risk for gaps in transitions of care specifically after discharge from an acute care setting to home or other care facility (Naylor & Keating, 2008). In 2013, the Centers for Medicare and Medicaid Services (CMS) reported Medicare Part A (covering inpatient hospitalization for individuals over 65) served 6.5 million people costing 129.5 billion dollars (CMS, 2014). In the interest of promoting high quality of care for its enrollees and in hopes to reduce costs, CMS established public reporting outcome metrics in 2009 (James, 2012). CMS believes that public reporting would increase transparency of hospital care quality metrics for consumers and encourage quality improvement in hospitals (James, 2012). The Medicare Hospital Readmissions Reduction Program (HRRP) was established within the Affordable Care Act (ACA) to add incentives for hospitals to lower readmission rates (James, 2012). Readmissions are defined as a repeat inpatient admission to any acute care hospital within 30 days post discharge (James, 2012). Readmissions are generally thought to be preventable, an indication of poor quality of health care while hospitalized or failure to devise an appropriate plan for care post discharge. These incentive programs provide motivation to health care providers and acute care hospitals to improve clinical practice and develop interventions, such as TC models, to decrease the incidence of hospital readmissions and improve financial stability. The purpose of this project was to identify factors affecting TC referral and proposes interventions to minimize barriers. It

proposes a practice change at Banner University Medical Center Phoenix (BUMCP) to increase TC referrals through interventions directed at identified barriers.

Current Practice

History

With the goal of reducing readmissions in the HF population, Banner Health has complied with CMS Core Measures and provides best practice to each inpatient admitted with a diagnosis of HF detailed discharge instructions. Best practices include medication reconciliation, left ventricular function assessment, prescription or continuation of angiotensin-converting enzyme or angiotensin-receptor blockers for left ventricular systolic dysfunction, and smoking cessation counseling (CMS, 2011). This is one step that Banner Health has implemented to reduce preventable HF readmissions. In the most recent data from Medicare it is reported that BUMCP has a 22.7% unplanned readmission rate for HF, which compares with the national average of 22.7% (Medicare.gov, n.d.). For patients who have chronic co-morbidities such as HF it is necessary that patients be followed closely with frequent outpatient visits to carefully monitor the patient for clinical signs and symptoms of decompensation, improve patient education, and enhanced use of evidence-based practice (Braunschweig, Cowie, & Auricchio, 2011). In 2009, Dr. Ken Ota presented TC, a hospital based program, to the senior operation committee at BUMCP as a solution to decrease heart failure readmissions and the associated CMS penalties (K. Ota, personal communication, March 19, 2015). In 2011, he started the TC program as a solo provider (K. Ota, personal communication, March 19, 2015). During 2009 and 2011, Dr. Ota met with various leaders, specifically on the telemetry floors at BUMCP (K. Ota, personal communication, March 19, 2015). He also met with the cardiology committee and

hospitalists at BUMCP to introduce the concept of the TC program (K. Ota, personal communication, March 19, 2015). He created buy-in in the hospital setting by presenting the program as a product to improve patient care in post hospital settings (K. Ota, personal communication, March 19, 2015). There was a tremendous amount of push back related to fear of “losing patients” and “some providers took offense as if the program was put in place because they were not doing a sufficient job managing their patient’s chronic illnesses” (K. Ota, personal communication, March 19, 2015). As a part of community outreach, Dr. Ota met with home health agencies, hospice leaders, and skilled nursing facilities that receive consults from BUMCP (K. Ota, personal communication, March 19, 2015). He educated nurses, providers, and the community through formal meetings, and informal conversations. Dr. Ota has been featured in articles in the local paper to increase community buy-in and awareness of the TC program at BUMCP (K. Ota, personal communication, March 19, 2015). Recognizing the importance of home visits in a TC program, Dr. Ota added a nurse practitioner in 2012 to help with workload so that Dr. Ota may see patients initially in the hospital with follow up in their homes within 1-2 days of discharge by the nurse practitioner (K. Ota, personal communication, March 19, 2015). At this time, a social worker was also added to the team providing social services to improve quality of life and overall wellbeing (K. Ota, personal communication, March 19, 2015). Throughout the program, Dr. Ota studied the results of the program and published papers based on the results (K. Ota, personal communication, March 19, 2015). A retrospective review was conducted and found pre-enrollment to TC 30-day readmission rates for acute decompensated heart failure (ADHF) was 26.0%, while post enrollment rates were 4.1% (Ota, Beutler, Gerkin, Weiss, & Loli, 2013). In 2013, CMS started to reimburse for TC services and TC at BUMCP

continues to function as a multi-disciplinary program taking care of very complex, and chronically ill patients (K. Ota, personal communication, March 19, 2015). Readmission rate for patients who participated in the program is less than 10% within 30 days of discharge for all-cause conditions as compared to 28.0% who are not enrolled in the program (K. Ota, personal communication, March 19, 2015; Ota et al., 2013).

Current Model at BUMCP

Transitional Care at BUMCP consists of a board certified physician trained in family medicine, an adult nurse practitioner with a background in palliative care, and a master's prepared social worker with a strong foundation in counseling (K. Ota, personal communication, Aug 21, 2014). This team serves as a consulting service to the hospital, and accepts referrals for patients who are at high-risk for re-hospitalization (K. Ota, personal communication, Aug 21, 2014). The patient population that is referred must have Medicare as the primary insurance, and have a primary diagnosis of HF, myocardial infarction, pneumonia, and/or chronic obstructive pulmonary disease (K. Ota, personal communication, Aug 21, 2014). The patients that are referred to TC are very complex and often times have multiple co-morbidities and psychosocial issues making the multidisciplinary approach beneficial (K. Ota, personal communication, Aug 21, 2014). The TC model at BUMCP begins while the patient is still in the hospital, which includes a physical assessment and identification of potential medical and psychosocial issues (Ota, Beutler, Gerkin, Weiss, & Loli, 2013). The patients who are enrolled in the TC program are closely followed for 30-days post discharge by the TC team (Ota et al., 2013). The TC team has several different methods to follow the patient including: direct telephone contact, home visits for patients who are severely debilitated or have no transportation, clinic visits (if needed for

same day services), the outpatient observation unit for more aggressive medical management, and an extensive network of post-acute care physicians (Ota et al., 2013). The goal of this program is to have patients followed closely for 30-days and to provide them the correct tools and resources that will keep this vulnerable population stable and out of the hospital (Ota et al., 2013).

Significance to Healthcare

Currently BUMCP has a 22.7% unplanned readmission rate for heart failure, which compares with the national average of 22.7% (Medicare.gov, n.d.). Even though BUMCP readmits rate is on cue with the national average, minimizing the readmit rate is critical given the high healthcare utilization from a readmit (Suter, Gorski, Hennessy, & Suter, 2012). TC is a potential answer to this substantial, cost intensive problem at BUMCP. One of the main objectives for TC is to ensure the transition between hospitals and home happens seamlessly (K. Ota, personal communication, Aug 21, 2014). Through improved transitions of care, patients are less likely to experience adverse events such as medication discrepancies, suboptimal discharge instructions, missed follow-up appointments, and clinical decompensation. Transitional Care supports patients post discharge in their home environment and reduces hospital readmissions.

Morbidity and Mortality of Heart Failure

HF is a disease affecting approximately 5.1 million people in the U.S. and it is predicted to grow steadily to an estimated 8 million in 2030, largely attributed to increased longevity from medical advances and aggressive management of heart disease (American Heart Association [AHA], 2013; Go et al., 2013). In 2009 HF was listed a contributing cause in one out of nine

deaths (Go et al., 2013). HF is associated with high mortality. In 2009, 275,000 deaths were attributed to HF (Go et al., 2013).

Cost Consequences of Heart Failure

It is estimated that HF costs the nation nearly 32 billion dollars each year from indirect and direct cost, which is roughly 2% of the total health care budget (Braunschweig, Cowie, & Auricchio, 2011; Heidenreich et al., 2011). This number is projected to grow to 70 billion dollars by 2030, an average of 244 dollars from every U.S. taxpayer (AHA, 2013). Hospitalization is an especially costly component of HF treatment, accounting for nearly three-quarters of the total cost of treatment, whereas disease management including follow up appointments and chronic medications account for much lower of total cost (Braunschweig, Cowie, & Auricchio, 2011).

Purpose and Aims

Roughly 300 Medicare patients are admitted to BUMCP with HF annually (K. Ota, personal communication, Feb 12, 2015). Using the current readmission rate of 27%, about 81 of these patients will readmit within 30 days post discharge (K. Ota, personal communication, Feb 12, 2015). With 300 patients admitted annually, this equates to a manageable TC load of 25 patients a month (K. Ota, personal communication, Feb 12, 2015). Current referrals to TC at BUMCP are only 10-15 patients a month (K. Ota, personal communication, Feb 12, 2015). This data expresses a gap between patients who qualify for TC and those who are referred. The cause of this gap was previously unknown and this project identified barriers associated with referral. Barriers were identified through a survey of healthcare providers to determine cause of decreased referral. The second component of this DNP project will discuss interventions based on barriers identified.

Conceptual Framework

Imogene King developed the *Goal Attainment Theory* in 1960 using a systems approach (King, 1971). A systems approach can be defined as a holistic process that is dynamic in nature and outcomes are dependent upon the interdependence of the variables within the system (King, 1971). King's model has been selected for use with this study because of a close alignment between theory and TC. The TC model's main objective is goal attainment for both the patient and the health care system. King's framework depicts three dynamic interactive systems: individual, interpersonal, and societal (King, 1971). In this project, the personal system is the patient, the interpersonal system is the relationship and communication between the TC team and the patient, and the societal system is all of the other factors that influence goal attainment (Figure 1). Examples of variables in the societal system include education, family support, and economics.

Among the three systems, the interpersonal system has the greatest influence on the development of her theory. King suggests the major elements in the theory of goal attainment are detected in the interpersonal system, in which two people work together to maintain health in a state that permits function in roles (King, 1971).

The essence of *Goal Attainment Theory* is that the TC team and the patient come together to identify goals and develop a plan to achieve those goals. TC team/client interactions are critical to the King theory as well as TC approach. Information is exchanged, qualified and interpreted to ensure that each member of the dyad is equally engaged and that in the end goals are shared. King refers to these exchanges as transactions with the end goal of helping

individuals to maintain their health so they can continue to function in their respective roles in the community.

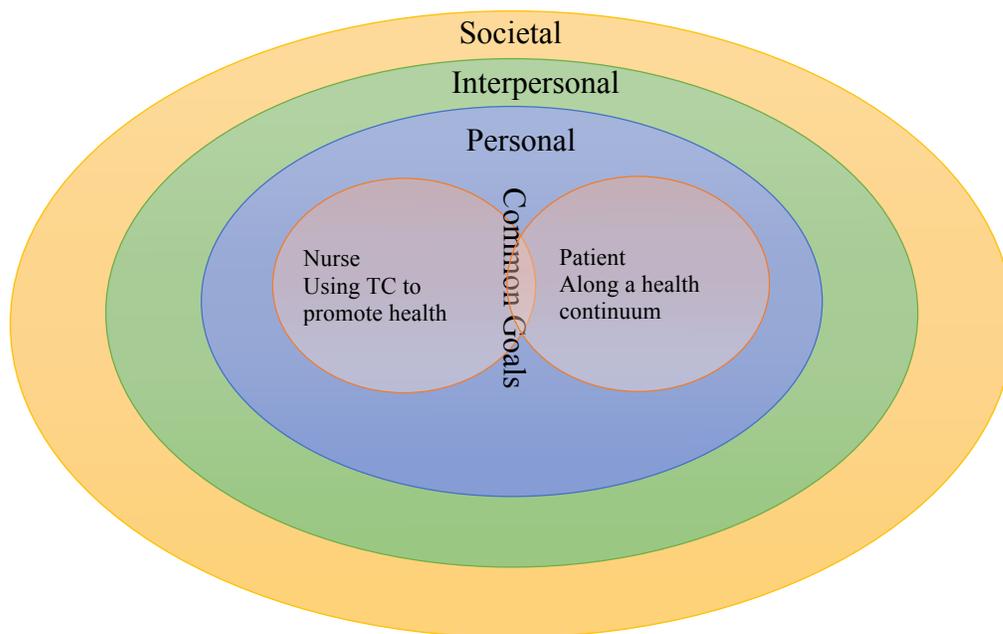


FIGURE 1. Goal Attainment Theory for Transitional Care.

(Adapted from *Toward a theory for nursing: General concepts of human behavior*, I. M. King, 1971, Hoboken, New Jersey: John Wiley & Sons Inc. Copyright [1971] by John Wiley & Sons Inc.)

Transitional Care offers many added benefits to help promote the dynamic interactive systems in Goal Attainment Theory. Specifically, TC offers highly individualized care by completing an initial needs assessment that addresses patient's medical and psychosocial needs (K. Ota, personal communication, March 19, 2015). This would be an example of fleshing out the personal component of King's theory providing a solid foundation for the beginning relationship. Transitional Care also completes home visits on all patients, which includes an assessment of a safe living environment, dietary education, and medication reconciliation (K. Ota, personal communication, March 19, 2015). The social worker for TC completes a

psychological and social evaluation and assists in accessing social barriers such as family issues, insurance, and state aide (K. Ota, personal communication, March 19, 2015). This is a good example of the societal phase of Kings' theory whereby independent variables could impact the process of goal attainment (reducing readmission) and need to be identified and addressed. Once the assessments are completed, the interpersonal relationship in Kings Theory can begin as the patient and the healthcare provider create common goals for managing a HF in the outpatient setting.

Conclusion

Transitional Care is an innovative method created to aid patients with chronic illness such as HF in transitions of care. The ACA has highlighted transitions in care as an opportunity for improvement in the current healthcare model. The current TC program at BUMCP lacks appropriate referral, and utilization. These are project-identified barriers associated with referral to the TC program and will discuss interventions directed at identified barriers to improve the use of TC.

CHAPTER II: LITERATURE REVIEW

Introduction

An extensive search of the literature was conducted to reveal TC effectiveness, barriers to utilization of TC, and strategies for successful implementation of a new consulting service. This literature review exhausted three scholarly search engines to find the most relevant and current literature to support the primary purpose of this project: to determine factors effecting TC referrals in the HF population at BUMCP with interventions designed based on identified barriers. This chapter distinguishes a need for TC, barriers to utilization, and methods for successful implementation.

Literature Review Process

The databases searched were Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed and MEDLINE (ProQuest). The search terms used were selected to allow for an exhaustive search of the literature. An ancestry search of high quality articles was done to assess for related articles that met inclusion criteria. This process was repeated until a point of saturation was reached. Duplicate articles were retrieved among databases and ancestry search was repetitive.

Transitional Care

In a meta-analysis of 18 studies from 1966-2003 Phillips et al., (2004) concluded that programs that included comprehensive discharge planning as well as post discharge support resulted in a 25% reduction in the risk of readmission to the hospital for HF patients. The meta-analysis did not support the assumption that more intensive post discharge support improves outcomes and suggested more study is needed to determine the duration, intensity and method of

interventions needed to produce the desired result (Phillips et al., 2004). Feltner et al., (2014) in a later meta-analysis conducted from 2007-2013 concluded home visiting programs and/or multidisciplinary HF clinics together with structured telephone support reduce readmission and mortality. Because the usual care planning for post hospital discharge seems to be inadequate with the high-risk HF population, clinicians and researchers have tested a number of models over the years to improve patient outcomes. Transitional Care is among those tested and is defined as care provided to ensure coordinated transfer of care from one level of care to another (Coleman & Berenson 2004).

Naylor (1999) at the University of Pennsylvania has conducted research in transitional care over the past 20 years. In her early work Naylor studied 239 HF patients aged 65 or over who had been hospitalized and received transitional care intervention through the use of advance practice nurses in a randomized control trial (RCT) that captured data for 52 weeks post hospitalization (Naylor et al., 1999). Data elements included time to first readmission or death, actual number of hospitalizations, functional status, cost of care, and patient satisfaction. Using a Cox regression incidence density ratio at a confidence level of 95%, Naylor found that the time to first hospitalization was longer in the TC intervention group (Naylor et al., 1999). At the 52-week interval, the intervention group had lower readmission rates despite the intervention only occurring for 90 days post initial hospitalization. The study concluded that TC applied to high-risk patients post hospitalization could have a very positive impact on patient outcomes and cost (Naylor et al., 1999).

Although the benefit of TC is well documented in the literature, adoption of these types of programs has been slow. The main challenge seems to point to funding as hospitals at this

time are still operating in a volume-based world. Readmission penalties, transparency of information and value-based payment as well as a host of other initiatives are likely to change the incentives; however, it is a slow process. In more recent work Naylor et al. (2011) sought to apply earlier learning using TC in a Medicare “at risk” population. Going directly to the source of funding and collaborating with an insurance payer who has inherent incentives to decrease cost may speed the adoption of TC. The study reviewed 155 patients who received TC, compared them with a matched control group, and compared cost of care (Naylor et al., 2011). The study did account for and subtract out the cost of the intervention. A \$439 saving per member per month ($P < 0.026$) was demonstrated at the three-month interval (Naylor et al., 2011). Further study over the course of the year was not statistically significant however in looking at total cost of care over the 52 week interval did result in a \$2170 reduction as was statically significant ($P < 0.037$) (Naylor et al., 2011).

Barriers to Utilization of Transitional Care

Drawing conclusions from the review of the literature is difficult for several reasons. Inadequate description of the intervention is the single most common finding. Seemingly, small nuances of individual programs could have significant implications. In a recent meta-analysis, Hansen et al. (2011) concluded that there is no single intervention that can be associated with a reduced 30-day readmission rate. Another factor that is not well described in the literature is the chronicity of the illness in HF patients. Studying a population who is typically older and increasingly frail in any kind of longitudinal has proved to be difficult. Brand et al. (2004) in a study of 166 HF patients found no difference in readmission rates after being enrolled in a TC program. A limitation of early nurse led heart failure programs was the failure to include patients

with comorbidities (Cline et al., 1998; Fonorow et al., 1997; Rich et al., 1995). Excluding patients with comorbidities from a study may produce bias toward a healthier sample and limit applicability to the population today.

Feltner et al. (2014) discussed the access to TC as a potential barrier. Access to TC is an important factor into utilization of TC. Patients, who live in rural settings often have limited access to specialty care, therefore are excluded from programs such as TC (Feltner et al., 2014). Also, patients may prefer to have their entire healthcare needs take place at one office such as a primary care clinic, creating another barrier to TC (Feltner et al., 2014). In addition, HF is a common chronic illness therefore; many physicians are implementing HF clinics within their own practice to manage their own patients (Cline, Israelsson, Willenheimer, Broms, & Erhardt, 1999). Healthcare providers who are already applying certain principles of TC such as patient education and nurse directed follow up tend to not see the need of involving TC (Cline et al., 1999).

Implementation of New Consulting Service

Radwany et al. (2009) discussed five key strategies for optimal growth of a new palliative care program over five years. The key strategies include planning, education, communication, accessibility, and evaluation (Radwany et al., 2009). During the planning phase, a multidisciplinary advisory board was created to conduct ongoing strategic planning and program evaluation (Radwany et al., 2009). Planning also consisted of site visits to other palliative care programs to evaluate and obtain successful practices (Radwany et al., 2009). Education was accomplished via grand rounds, nursing grand rounds, and community education with the objectives to increase knowledge about palliative care and services offered by the palliative care

team (Radwany et al., 2009). This helped create recognition of the program therefore increased referrals and even had family members directly request the program (Radwany et al., 2009). Next was communication, which included meetings with key stakeholders on a regular, schedule that emphasized continual feedback and promotion of coordinated and cost effective patient care (Radwany et al., 2009). Providers were available 24 hours a day seven days a week to promote increased accessibility (Radwany et al., 2009). Evaluation was the final strategy for successful implementation and encompassed data collection and surveys to health care providers for suggestions to improve (Radwany et al., 2009). Utilization of these key strategies increased consultation significantly. Specifically in 2003, the palliative care team was receiving 289 referrals and in 2007 over 1300 were received, indicating significant growth (Radwany et al., 2009).

In another article, Meier (2005) discussed ten steps to growing palliative care referrals. The steps included items such as planning for growth, accessibility, and recruit people with different backgrounds to make the team more diverse, and engage key stakeholders who have a good reputation with the hospital (Meier, 2005). It is important to note the referral process can change and should adjust to meet the needs of the institute (Meier, 2005). When reviewing these articles one can see that many of the same points are echoed in both articles.

Conclusion

After completing a thorough review of the literature, salient points are as follows:

- 1) Transitional care addresses quality of care and economic aspects
- 2) Barriers to TC include but are not limited to no single intervention is proven to decrease hospital readmission, the HF population is associated with elderly and frail

adults, accessibility, physicians having own HF clinics therefore wanting to treat the patients themselves, and patients wanting to keep all of healthcare needs at one office.

- 3) Successful implementation of new consulting services needs to incorporate planning, education to the people who will be using the service, communication, increased accessibility, and constant evaluation.

CHAPTER III: METHODOLOGY

Introduction

A practice gap was identified in the underutilization of the TC program at BUMCP. In an effort to close this practice gap barriers were identified and interventions developed to help increase the number of referrals to the TC program. An extensive search of literature revealed TC as an effective method for managing HF and other chronic conditions. This project identified barriers to referral, and discusses potential interventions to increase referral. Specifically this project surveyed hospital providers of likely barriers to TC referral, and developed specific interventions directed at identified barriers.

Population Setting

This project focused on one large hospital in Phoenix, Arizona BUMCP. This is a Level 1 trauma hospital located in downtown Phoenix that has 733 inpatient beds and has roughly 61,700 ED visits each year (Banner Health, 2013). BUMCP is one of the largest acute care hospitals in the State of Arizona and has a large population of patients presenting with acutely decompensated heart failure (ADHF). The study was conducted online via the use of email and SurveyMonkey.

The target population that was studied is hospitalists who are employed at BUMCP as a part of Banner Medical Group (BMG). Hospitalists were the chosen population for several reasons: ease of accessibility (email in Banner system), already employed by Banner therefore allegiance to Banner run programs, and majority of current referrals are hospitalists. Currently there are 27 physicians and 2 nurse practitioners employed by BMG who work on the hospitalist service at BUMCP. Cardiologist and primary care providers were not chosen due to

inconsistencies of different groups and coverage schedules in the providers who rounded at BUMCP. The surveys were only provided in English. Inclusion criteria for study participants included hospitalists employed by BMG at BUMCP, English speaking and ability to read English. Exclusion criteria for study participants included all other providers at BUMCP, non-English speaking, and inability to read English.

Project Protocol

The purpose of this project was to identify barriers to TC referral at BUMCP and develop interventions based on these barriers to increase referral of TC. An online survey was conducted to identify barriers. The barriers of TC referral in the literature review guided the development of the survey. The complete survey was 21 questions (Appendix A) and took approximately 15 minutes to complete. However if the study participants answered no to a question that had follow up questions associated with the primary question they did not see the follow up questions and moved forward with the survey. Therefore, the maximum number of questions was 21 and the minimum number of questions was 17. There were three demographic questions included in the survey. The researcher deemed it necessary to collect demographic data to understand if perceived understanding of TC and likelihood to refer to TC were related age, total years of practice, or years in current role.

The lead hospitalist of BMG, Dr. Mark Villanueva, distributed the email script that was approved by Internal Review Board (IRB) (Appendix B). This email informed the potential study participants of the study and included the link to the survey via SurveyMonkey. The initial page of the survey is the consent. The providers needed to click *next* after they had read the consent. They were then brought to the first question stating they had received the study information and

consent materials (Appendix C). At this point study participants clicked *I agree* and proceeded to the survey or clicked *I disagree* and were led to a thank you page. All materials were in English and the participants could choose to leave study at any time.

Respondents were given two weeks to complete the survey. A two-week response time was chosen in light of potential work schedule conflicts or potential time off. Traditionally hospitalists groups operate on a schedule where providers work for seven days then have seven days off. The survey response time of two weeks reflects this work schedule. In hopes to increase response rate the researcher sent out a reminder email one week into the survey time period (Appendix D). The researcher analyzed common themes from the survey results. After the themes were identified, the researcher developed potential interventions directed at the most recognized barriers. The purpose of this project was to identify barriers and develop interventions based on identified barriers to increase referral to TC.

Ethical Issues

The University of Arizona Institutional Review Board approved this Doctorate of Nursing Practice project and survey prior to implementation (Appendix E). There was no personal identified information collected for the survey process. Demographic information that was deemed necessary was collected in three questions. Study participation was voluntary and if participants chose to be a part of the study, they were able to exit the survey at any time. During and after the study the research was retained on a password-protected computer. The data will be kept for six years in the Office of Nursing Research, at the College of Nursing at the University of Arizona. The survey software that was utilized is SurveyMonkey. The survey information will

be stored through this website, which will be on a password-protected account. There was no conflict of interest and the IRB determined this project was minimal risks to participants.

Data Analysis

Data were analyzed with Microsoft Excel for Mac 2011 version 14.3.6. Frequencies were analyzed for demographic questions. The survey had different types of questions including open-ended questions, yes and no questions, and Likert scale questions. The data analysis for the open-ended questions included identifying common themes and comparing results. Frequencies were summarized for yes and no questions. The data analysis for Likert scale questions included calculating the mean.

Conclusion

This section summarizes how barriers to referral of TC were identified and how the information will be used to develop potential interventions directed at specific barriers identified. This project conducted a survey to the hospitalists who are employed by BMG at BUMCP to identify specific barriers related to referral of TC. Then use the data from the surveys to create interventions.

CHAPTER IV: RESULTS

Introduction

Upon University of Arizona IRB approval (Appendix C) the project was started and Dr. Mark Villanueva distributed the survey to the BMG hospitalists on Wednesday June 17, 2015. The survey concluded on July 1, 2015, yielding three responses. This chapter will discuss the results of the survey, statistical analysis of the data, and how this relates to the project aims.

Demographics

Demographics were collected that included age group, years in current role, and total years as healthcare provider. Of the study participants 66% (n=2) classified themselves as 25-34 years of age. Of the study participants 100% (n=3) have been practicing as a health care provider for four to seven years. Of the study participants 66% (n=2) have been in their current role of medical doctor, doctor of osteopathic medicine, nurse practitioner, or physician assistant for four to seven years. And of the study participants, 33% (n=1) have been in their current role for eight to ten years.

Descriptive Statistics

Descriptive statistical analysis begins on Question 5, as Questions 1 through 4 were consent and demographic questions as described above. The responses were coded to complete statistical analysis. Likert scale responses were assigned numerical values: *Strongly Disagree* and *Very Unlikely* (1), *Disagree* and *Somewhat Unlikely* (2), *No Opinion* and *Neither Unlikely or Likely* (3), *Agree* and *Somewhat Likely* (4), *Strongly Agree* and *Very Likely* (5). Question 5 was a self-assessment of how the study participants perceived their understanding of TC. One study participant responded *Strongly Agree*, one responded *Agree*, and one responded *Strongly*

Disagree. The mean for question 5 is 3.33. Question 6 explored the main reason study participants referred to TC responses included: “safe discharge,” prevent readmissions, prevent readmissions, and ensure good follow-up. Question 7 sought to discover the main reason why study participants did not make a referral to TC responses included “Not available,” “compliance” and “patients were not accepted.” Question 8 was designed to evaluate if study participants were invited to participate in the launch of TC in 2009. All study participants responded *No* to this question, therefore were not directed to answer question 9 or 10 which were follow up questions to understand if the study participants attended launch and if they felt it was helpful. Question 11 sought to discover what study participants felt would be most helpful in ordering a referral to TC responses included “assistance from ancillaries,” “medications” and “if the program accepted a wider range of diagnoses and a list of accepted diagnoses.” Question 12 sought to find if study participants were likely to make a referral to TC. Two study participants responded *Very Likely* and one study participant responded *Somewhat Likely*. Mean of question 12 is 4.67. Question 13 sought to discover if study participants were able to articulate the benefits of TC, responses included “medication management,” “direct contact with health care provider” and “improves peace of mind for patient and provider, health support, improved health literacy.” Question 14 assessed if study participants felt that patients would prefer to keep all of their care at one healthcare office and therefore would be resistant to TC. All study participants responded *No* to this question therefore were not directed to answer question 15, which was designed to evaluate why study participants felt patients might feel this way. Question 16 sought to discover if there was a concern in referral to TC among the study participants, all study participants responded *Disagree*. Since all study participants responded *Disagree* they were not

directed to answer question 17, which was a follow up to question 16 to explore why there was a concern. Question 18 sought to discover if study participants felt that TC provides benefits to the HF population such as individualized goal planning, medication management, home visits, and 24 hours a day access to healthcare provider. Two study participants responded *Agree* and one responded *Strongly Agree*. The mean for question 18 is 4.33. Question 19 was designed to evaluate if study participants felt TC overshadowed other care providers. Two study participants responded *Disagree* and one responded *Strongly Disagree*. The mean for question 19 is 1.67. Question 20 sought to discover if decreased TC referral was a result of TC leadership, and therefore would make more referrals due to recent changes. Two study participants responded *No opinion* and one responded *Agree*. The mean for question 20 is 3.33. Question 21 was designed to explore what leadership qualities study participants felt it was necessary for the director of TC to possess; responses included “experience in outpatient and inpatient care,” “experience and vision” and “communication, availability, reliability, dedication.”

Correlation studies to determine if study participants perceived understanding of TC and likelihood to refer to TC correlated with age, number of years in current role, and total years in practice were unable to be completed due to small sample size.

Conclusion

The specific aims of this project include identifying current barriers to referral to TC at BUMCP and then analyze barriers to propose potential interventions. Although the sample size for the survey was small, barriers could be identified. The barriers selected for this project include decreased accessibility, limited number of accepted patient diagnoses, and lack of

involvement in the launch of TC. Interventions directed at these barriers will be discussed in the discussion chapter.

CHAPTER V: DISCUSSION

Transitional Care offers a solution to help decrease preventable HF readmissions. This online survey identified barriers to referral to the TC program at BUMCP. For proper utilization of TC at BUMCP, these barriers must be addressed. This chapter will discuss proposed interventions based on survey data, study limitations, recommendations, and significance to DNP.

Proposed Interventions

The barriers that were identified in the online survey include decreased accessibility, limited number of accepted patient diagnoses, and lack of involvement in the launch of TC. In order to address the barriers it is important to completely understand the objections and brainstorm all possible interventions to assure the applied solutions will adequately respond to the identified barriers. Not all proposed interventions would be not implemented; the implementation of changes would be based on consistency of organizational culture at BUMCP, technology options, TC workload, and other unforeseen factors that may develop as the program develops.

To address accessibility, the researcher proposes expanded availability of TC coverage to 24 hours a day, seven days a week, with access to the TC team through pager, 24-hour message line and the hospital electronic order-entry system (Radwany et al., 2009). These options are recommended to provide the referral source multiple access points to the TC team. In addition, it provides a way for the TC team to be conveniently accessible to the referring physician without actually having to be physically present in the hospital especially for night referrals. Radwany et al., (2009) describes a follow up process once the patient has been seen to the referral source to

complete the feedback loop and improve relationships therefore improving accessibility to the TC team. This daily follow up will be electronic, written, or verbal to nurses and referring providers (Radwany et al., 2009). The feedback loop will close daily with an email, text, or phone call from a TC member to all referring providers thanking them for their referral, informing them if the patient was enrolled in the TC program, and the patients' plan of care in the TC program. In addition, visibility will be improved by participating in multidisciplinary rounding or daily rounding on telemetry floors and in the observational unit. Rounds have been found to improve communication within the healthcare team (Mower-Wade & Pirrung, 2010). Rounds on the floors will be completed with a member of the TC team, the floor nurse, and the case manager. On the observational unit, rounds will be conducted with observation physician, nurse, case manager, and charge nurse. Rounds will discuss barriers to discharge and will identify if patients qualify for TC. Once these patients are identified, the primary RN will be responsible for contacting internal medicine doctor for orders for a formal consult to TC. These rounds will make the TC team more visible and accessible.

The second barrier of limited number of accepted patient diagnoses will be addressed by removing referrals based on diagnosis type. Currently the patient diagnoses that are accepted by TC include HF, myocardial infarction, pneumonia, and chronic obstructive pulmonary disease. These diagnoses are shown to have vulnerable patient populations who are likely to readmit. The focus will be shifted to patients who are at high risk of readmit regardless of diagnosis. Once referrals are received, the TC team will utilize a risk stratification tool such as LACE index scoring to determine which patients will benefit most and accept consultations as appropriate. The LACE index is a validated tool that identifies patients who are likely to readmit within 30-

days of discharge (Van Walraven et al., 2010). There are four parameters the TC team will follow to calculate a score. These parameters include length of stay, acuity of admission, comorbidities, and number of emergency department visits within a month (Van Walraven et al., 2010). A score of 1 to 19 is calculated based on this information (Val Walraven et al., 2010). The higher the number the more at risk a patient is for readmission (Val Walraven et al., 2010). The risk to adopting this practice is that the practice could be overwhelmed with low acuity patients and prevents the team from seeing the most vulnerable. TC at BUMCP is currently receiving 10-15 consults a month, yet have the ability to see roughly 25 patients a month therefore with the new change the researcher suggests a census cap of 25 patients a month and method to prioritize patients. The first four diagnosis originally listed have prioritization followed by a score of 17-19 on the LACE index, mood disorders, and osteoarthritis. These diagnoses have been chosen based on their likelihood to readmit in 30-days (Elixhauser & Steiner, 2010). A process for referral back to case management or lower acuity service teams will need to be established if the TC team received so many referrals and are unable to keep up. An ongoing educational plan to ensure the entire healthcare team is aware of the benefits of TC in addition to presenting empiric data that demonstrates positive impact on readmissions will help ensure ongoing success.

The third barrier is lack of participation at the original launch of TC. The researcher recommends using an evidenced based Kurt Lewin's Change Theory to determine how buy in and support can be achieved. This theory describes three distinct phases to the change process. The first of these is the *unfreezing* phase (Lewin, 1951). In this segment of the process, the goal is to create disequilibrium between driving forces and restraining forces causing the individual to let go of old practices (Lewin, 1951). Examples of driving forces are decreased readmission,

increased quality of life, lower costs, and assistance with complex patients. Examples of restraining forces include limited admission diagnoses, limited hours, and lack of knowledge about outcomes of the programs. The goal in this phase is to provide information and education to create dissonance. The next stage in Lewin's Change Theory is *changing* (Lewin, 1951). The goal is to create a change in thought, feeling and behaviors (Lewin, 1951). This must occur both in the TC team and in the providers who are referring. The referring physicians' thoughts, feelings, and behaviors will be positively influenced by expanded admission diagnosis, availability of provider, and empiric data that demonstrates success of the program. The key to this phase is to show the referring providers how TC can help. In this phase, the providers will be informed that all patient diagnoses are no longer a factor in enrollment of patient into TC. Providers will be informed of the new process of using the LACE index to risk stratify the patients. The last phase in the Lewin's Change Theory is the *refreezing* phase to solidify the change in behavior as a new habit (Lewin, 1951). This is established by the feedback loop and constant evaluation of the program. Evaluation is necessary of any new program or any change to understand if the methods to improve referrals were effective (Radwany et al., 2009). Collection of data points including readmission rates of patients enrolled in program and those who are not will serve as one method of evaluation. The second method of evaluation will be completed by tracking number of referrals to TC on month-to-month basis. These data points will evaluate if TC is being referred more often due to interventions therefore confirming *refreezing* has been established. All referring providers at BUMCP will attend an educational session that will be grounded by Lewin's Change Theory; this educational class will function as

the re-launch of TC (Appendix F). If providers are unable to attend, TC staff will complete this one-on-one with providers and post online.

Study Limitations

The most significant limitation of this study is the sample size. The survey was sent to 29 healthcare providers who are employed by BMG as hospitalist at BUMCP. Only three responses to the online survey were received limiting the ability to fully understand potential barriers. Also with the small sample size, it is difficult to draw conclusions if the demographics correlate to understanding and likelihood to refer to TC. Another limitation of this study is no direct contact with study participants. The survey and the reminder email were both sent from Dr. Villanueva's account the lead hospitalists at BUMCP. This is a limitation as the research survey was sent to study participants by their manager. Although it was stated participation was voluntary study participation could have been altered due to Dr. Villanueva's leadership status. An additional limitation is time constraints. The survey was implemented during a very busy season for the hospital. BUMC-P was experiencing an overload of patients several times during the survey period. Since providers were extremely busy with patient care, it is likely they did not have time in the workday to complete the survey. Although these limitations exist, the survey could still be conducted resulting in valuable data on current barriers to TC at BUMC-P.

Recommendations

In future research the researcher would recommend incorporating different specialties in the population. This would provide the opportunity for a broader spectrum, and allow input from multiple groups. This data would be beneficial to understand perceived barriers from a larger population. It would also be recommended that for the researcher to distribute the survey

therefore leadership involvement would not be necessary. Another proposal would be to set up the survey on several computers in the hospitalist office in hopes to receive more responses. This would decrease the likelihood that providers misplaced the link to the survey in full email inboxes, or became too busy throughout the day and simply forgot. During this time researcher could discuss the purpose of the survey with the study participants. It would also provide the study participants' access to the researcher directly if they were to have any questions, comments or concerns. Finally, it would be recommended having the survey period open for longer in hopes to capture more responses, with additional reminder emails. With only two emails sent out (initial and reminder) it is likely some providers did not see the email, or forgot. Including these recommendations for future studies, the researcher would be more likely to capture responses that would identify what the greatest perceived barriers are to referral of TC at BUMCP.

Significance to the Doctor of Nursing Practice

The Doctor of Nursing Practice (DNP) has multiple roles in the health care arena including clinician, collaborator, researcher, and educator. This project encompasses the DNP's ability to collaborate, research and educate the healthcare industry to make a practice change. The project generates and disseminates nursing knowledge to eliminate the identified practice gap of decreased number of referrals due to decreased accessibility, limited number of diagnoses accepted, and lack of involvement in initial launch of TC. Chronic illness such as HF has recently been scrutinized by the ACA and this project has identified an opportunity to improve patient outcomes through proposed interventions of increasing accessibility, eliminate restrictions on patient diagnoses, and implement Lewin's Change Theory to establish buy-in

from physicians. This project highlights the DNP's unique role in bridging the gap in transitions of care.

Conclusion

This study offers insight to current barriers to referral to TC at BUMC-P. The information gathered during this study will provide a foundation for future interventions directed at overcoming these barriers and increase referrals to TC at BUMC-P. This project ultimately focuses on improving outcomes for high-risk HF patients by proper utilization of TC to decrease preventable readmissions, improve health outcomes, and enhance patient and family caregiver experience.

APPENDIX A:
SURVEY

Transitional Care Survey

Demographics

1. I have received the study information and the consent materials, and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study. I have read the consent and agree to participate.
 - a. I agree
 - b. I disagree
2. Age group
 - a. 18-24
 - b. 25-34
 - c. 35-44
 - d. 45-54
 - e. 55-64
 - f. 65-74
3. How many years practicing in current role, e.g., MD, DO, NP, PA . . . ?
 - a. 0-3 years
 - b. 4-7 years
 - c. 8-10 years
 - d. Greater than 10 years
4. How many years have you been practicing total?
 - a. 0-3 years
 - b. 4-7 years
 - c. 8-10 years
 - d. Greater than 10 years

Survey

5. Please indicate how strongly you agree or disagree with the following statement: I have a good understanding of Transitional Care.

1	2	3	4	5
Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree

6. What is the main reason that you refer to the Transitional Care program?

7. What is the main reason that you do **not** refer to the Transitional Care program?

8. Were you invited to participate in the launch of Transitional Care?

- Yes
- No
- Was not practicing at BGSMC at time of launch

9. If yes to questions #10, did you attend the launch of Transitional Care?

- Yes
- No

10. If yes to question #11, how helpful was the launch of Transitional Care to you as a provider.

1	2	3	4	5
Very Unhelpful	Somewhat Unhelpful	Neither Unhelpful or Helpful	Somewhat Helpful	Very Helpful

11. What would be most helpful to the provider in ordering a referral to Transitional Care?

12. Please indicate how likely you are to consult Transitional Care?

1	2	3	4	5
Very Unlikely	Somewhat Unlikely	Neither Likely or Unlikely	Somewhat Likely	Very Likely

13. Please list some of the added benefits Transitional Care provides for its patients?

14. Do you believe patients would prefer to keep their care at one healthcare office therefore would be resistant to Transitional Care?

- a. Yes
- b. No

15. If yes to question #16, why?

16. Please indicate how strongly you agree or disagree with the following statement: There is a concern among of the providers in referring to Transitional Care.

1	2	3	4	5
Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree

17. If you agree or strongly agree to question #18, why is there this concern?

18. Please indicate how strongly you agree or disagree with the following statement: Transitional Care adds individualized goal planning, medication management, home visits, 24 hours a day access to health care provider, etc. for the patient diagnosed with heart failure.

1	2	3	4	5
Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree

19. Please indicate how strongly you agree or disagree with the following statement: Transitional care manages patient care therefore not allowing other healthcare providers to participate in patient care.

1	2	3	4	5
Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree

20. Please indicate how strongly you agree or disagree with the following statement: I will make more patient referrals due to Transitional Care leadership changes.

1	2	3	4	5
Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree

Please list qualities necessary for a successful medical director of Transitional Care.

APPENDIX B:
EMAIL SCRIPT

Fellow Colleagues,

There is a Doctor of Nursing Practice student conducting a research project to fulfill partial requirements for her degree. Participation is voluntary please see below.

Hello, my name is Jill Krmpotic MSN, RN. I am a doctoral student at the University of Arizona. I am conducting an online research email survey to identify potential barriers to referral to Transitional Care at Banner University Medical Center-Phoenix. The link below will take you to SurveyMonkey on the first page will be a cover letter explaining the complete details of the project at the end of the cover letter participants will click next. This will direct you to the consent document where it states that you have read and understand and agree to participate buttons will appear that say 'I agree,' 'I do not agree.'

An Institutional Review Board responsible for human subject's research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Thank you for your time and consideration,

Dr. Mark Villanueva and Jill Krmpotic

APPENDIX C:

CONSENT

Hello, my name is Jill Krmpotic MSN, RN. I am a doctoral student at the University of Arizona. I am conducting an online survey to identify potential barriers to referral to Transitional Care at Banner University Medical Center-Phoenix.

Study participants will answer a 23-question survey (including one consent question and five demographic questions) that will help identify specific barriers to referral of Transitional Care at Banner University Medical Center-Phoenix. The survey link will be included in this email where if participants consent to participate they will be able to complete the survey via the link to Survey Monkey. There will be no personally identifiable information. The time to complete the survey is approximately 15 minutes. The survey will be open for two weeks with a reminder email after one week. There will be no follow up with uncompleted surveys.

Participation in this survey is voluntary and you may refuse to participate in this study. If you decide to participate in the study, you may leave the study at any time. No matter what decision you make, there will be no penalty to you and you will not lose any of your usual benefits. Participating or not participating will not affect your employment at Banner. As a result of participating in the study, there are no direct benefits. Your decision will not affect your future relationship with the University of Arizona. If you are a student of employee of University of Arizona, your decision will not affect your grades or employment status.

There are no risks, side effects or discomforts to participating in this study. There are no direct benefits.

Efforts will be made to keep your study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law.

Also, your records may be reviewed by the following groups:

- The University of Arizona Institutional Review Board

For questions, concerns, complaints about the study you may contact Jill Krmpotic, MSN, RN jkrmpotic@email.arizona.edu 480-861-8465

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program at 520-626-6721 or online at <http://ocr.arizona.edu/hssp>

An Institutional Review Board responsible for human subjects at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Thank you very much for your time and consideration
Jill Krmpotic MSN, RN
480-861-8465
jkrmpotic@email.arizona.edu

APPENDIX D:
EMAIL REMINDER TO STUDY POPULATION

Colleagues,

The purpose of this email is to remind you that there is one week left to voluntarily participate in the study that is being conducted by the Doctor of Nursing Practice student; Jill Krmpotic. Please remember while your participation is greatly appreciated, it is completely voluntary to complete the study. The link is provided below for your convenience.

An Institutional Review Board responsible for human subject's research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Thanks in advance,
Dr. Villanueva

APPENDIX E:
INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL LETTER



Human Subjects
Protection Program

1618 E. Helen St.
P.O. Box 245137
Tucson, AZ 85724-5137
Tel: (520) 626-6721
<http://hspp.arizona.edu/hspp>

Date: June 11, 2015
Principal Investigator: Jill Anne Krmpotic

Protocol Number: 1506901192
Protocol Title: Transitional Care: The Time is Now

Level of Review: Exempt
Determination: Approved

Documents Reviewed Concurrently:

Data Collection Tools: *Final TC Survey.docx*
HSPF Forms/Correspondence: *J. Krmpotic F107.docx*
HSPF Forms/Correspondence: *J. Krmpotic F200 June 4th.docx*
HSPF Forms/Correspondence: *Signature page.pdf*
Informed Consent/PHI Forms: *Consent of Study Participants v2015-06-06.pdf*
Other Approvals and Authorizations: *Dr. Ota Letter of Support.pdf*
Other Approvals and Authorizations: *Dr. Villavieva letter of support.pdf*
Other Approvals and Authorizations: *Jill Krmpotic DNP Project Letter of Support 5.6.15.docx*
Recruitment Material: *Email to Participants 6-4-15.docx*
Recruitment Material: *Reminder Email from Dr. V.docx*

This submission meets the criteria for exemption under 45 CFR 46.101(b). This project has been reviewed and approved by an IRB Chair or designee.

- ◆ The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).
- ◆ All research procedures should be conducted in full accordance with all applicable sections of the Investigator Manual.
- ◆ Exempt projects do not have a continuing review requirement.
- ◆ This project should be conducted in full accordance with all applicable sections of the IRB Investigators Manual and you should notify the IRB immediately of any proposed changes that affect the protocol.
- ◆ Amendments to exempt projects that change the nature of the project should be submitted to the Human Subjects Protection Program (HSPP) for a new determination. See the Investigator Manual, 'Appendix C Exemptions,' for more information on changes that affect the determination of exemption. Please contact the HSPP to consult on whether the proposed changes need further review.
- ◆ You should report any unanticipated problems involving risks to the participants or others to the IRB.

- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HSPP Office. If subjects will be consented, the approved consent(s) are attached to the approval notification from the HSPP Office.

APPENDIX F:
LESSON PLAN

Lesson Plan

Objective: 1. at the conclusions of the education session the referring provider will be able to demonstrate the impact of TC at BUMCP on readmission rates compared to non-TC patients

Information Covered

- Create dissonance by presenting data that is contrary to current knowledge base (*unfreezing*)
 - Readmissions currently at 22.7 % which is national average although patients enrolled in TC have less than 10% readmission rate for 30-days
- Quantify cost impact (*unfreezing*)

Objective: 2. after completing the education session referring providers will be able to articulate the new admission criteria and referral logistics

Information Covered

- Admission criteria (*changing*)
 - HF, MI, Pneumonia, COPD have priority followed by patients who are risk stratified by LACE index.
- Referral logistics (*changing*)
 - 24-hour seven days a week accessibility via pager, 24-hour message line, and hospital electronic order-entry system
 - Referring providers will be contacted after patient is seen to ensure feedback loop is established

Evaluation metrics include program growth as measured by increase enrollment and provider satisfaction as measured by an online survey (*refreezing*).

REFERENCES

- American Heart Association [AHA]. (2013). Costs to treat heart failure expected to more than double in 2030. Retrieved October 15, 2014, from <http://newsroom.heart.org/news/costs-to-treat-heart-failure-expected-to-more-than-double-by-2030>
- Banner Health. (2013). About Banner Good Samaritan Medical Center: Fast facts. Retrieved from <http://www.bannerhealth.com/Locations/Arizona/Banner+Good+Samaritan+Medical+Center/About+Us/Fast+Facts.htm>
- Brand, C. A., Jones, C. T., Lowe, A. J., Nielsen, D. A., Roberts, C., King, B. A., & Campbell, D. A. (2004). A transitional care service for elderly chronic disease patients at risk of readmission. *Australian Health Review*, 28(3), 275-284.
- Braunschweig, F., Cowie, M. R., & Auricchio, A. (2011). What are the costs of heart failure? *Europace*, 13(Suppl 2), ii13-ii17.
- Centers for Medicare and Medicaid Services [CMS]. (2014). *CMS fast facts overview*. Retrieved February 12, 2015, from <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/CMS-Fast-Facts/index.html>
- Cline, C. M., Israelsson, B. Y., Willenheimer, R. B., Broms, K., & Erhardt, L. R. (1998). Cost effective management programme for heart failure reduces hospitalisation. *Heart (British Cardiac Society)*, 80(5), 442-446.
- Coleman, E. A. & Berenson, R. A. (2004). Lost in transition: challenges and opportunities for improving the quality of transitional care. *Annals of Internal Medicine*, 141(7), 533-536.
- Elixhauser, A., & Steiner, C. (2013). Readmissions to US hospitals by diagnosis, 2010.
- Feltner, C., Jones, C. D., Cené, C. W., Zheng, Z., Middleton, J. C., & Jonas, D. E. (2014). Transitional care interventions to prevent readmissions for persons with heart failure. *Ann Intern Med*, 160, 774-784.
- Go, A. S., Mozaffarian, D., Roger, V. L., Benjamin, E. J., Berry, J. D., Borden, W. B., ... & Stroke, S. S. (2013). Heart disease and stroke statistics--2013 update: a report from the American Heart Association. *Circulation*, 127(1), e6.
- Hansen, L. O., Young, R. S., Hinami, K., Leung, A., & Williams, M. V. (2011). Interventions to reduce 30-day rehospitalization: A systematic review. *Annals of Internal Medicine*, 155(8), 520-528.
- Heidenreich, P. A., Trogon, J. G., Khavjou, O. A., Butler, J., Dracup, K., Ezekowitz, M. D., ... & Woo, Y. J. (2011). Forecasting the future of cardiovascular disease in the United States a policy statement from the American heart association. *Circulation*, 123(8), 933-944.

- James, J. (2012). Medicare hospital readmissions reduction program. Retrieved from http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=102
- King, I.M. (1971). *Toward a theory for nursing: General concepts of human behavior*. New York: Wiley
- Lewin, K. (1951). *Field theory in social science; selected theoretical papers*. D. Cartwright (Ed.). New York: Harper & Row.
- Medicare.gov. (n.d.). *Hospital compare*. Retrieved February 12, 2015, from <http://www.medicare.gov/hospitalcompare/details.html?msrCd=prnt3grp1&ID=030002&stCd=AZ&stName=ARIZONA>
- Meier, D. E. (2005). Ten steps to growing palliative care referrals. *Journal of Palliative Medicine*, 8(4), 706-708.
- Mower-Wade, D., & Pirrung, J. M. (2010). Advanced practice nurses making a difference: Implementation of a formal rounding process. *Journal of Trauma Nursing*, 17(2), 69-71.
- Naylor, M. D., Brooten, D., Campbell, R., Jacobsen, B. S., Mezey, M. D., Pauly, M. V., & Schwartz, J. S. (1999). Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized clinical trial. *JAMA*, 281(7), 613-620.
- Naylor, M. D., Aiken, L. H., Kurtzman, E. T., Olds, D. M., & Hirschman, K. B. (2011). The care span: The importance of transitional care in achieving health reform. *Health Affairs (Project Hope)*, 30(4), 746-754. doi:10.1377/hlthaff.2011.0041 [doi]
- Naylor, M. & Keating, S. A. (2008). Transitional care: moving patients from one care setting to another. *The American Journal of Nursing*, 108(9 Suppl), 58.
- Naylor, M. D. & Sochalski, J. A. (2010). Scaling up: bringing the transitional care model into the mainstream. *Issue Brief (Commonw Fund)*, 103, 1-12.
- Ota, K. S., Beutler, D. S., Gerkin, R. D., Weiss, J. L., & Loli, A. I. (2013). Physician-directed heart failure transitional care program: a retrospective case review. *Journal of Clinical Medicine Research*, 5(5), 335.
- Phillips, C. O., Wright, S. M., Kern, D. E., Singa, R. M., Shepperd, S., & Rubin, H. R. (2004). Comprehensive discharge planning with postdischarge support for older patients with congestive heart failure: A meta-analysis. *JAMA*, 291(11), 1358-1367.
- Radwany, S., Mason, H., Clarke, J. S., Clough, L., Sims, L., & Albanese, T. (2009). Optimizing the success of a palliative care consult service: How to average over 110 consults per month. *Journal of Pain and Symptom Management*, 37(5), 873-883.

- Rich, M. W., Beckham, V., Wittenberg, C., Leven, C. L., Freedland, K. E., & Carney, R. M. (1995). A multidisciplinary intervention to prevent the readmission of elderly patients with congestive heart failure. *New England Journal of Medicine*, 333(18), 1190-1195.
- Suter, P. M., Gorski, L. A., Hennessey, B., & Suter, W. N. (2012). Best practices for heart failure: A focused review. *Home Healthcare Nurse*, 30(7), 394-405.
- Van Walraven, C., Dhalla, I. A., Bell, C., Etchells, E., Stiell, I. G., Zarnke, K., ... & Forster, A. J. (2010). Derivation and validation of an index to predict early death or unplanned readmission after discharge from hospital to the community. *Canadian Medical Association Journal*, 182(6), 551-557.