

A NEEDS ASSESSMENT FOR A PRIVATE PRACTICE BASED TRANSITIONAL
CARE PROGRAM FOR HEART FAILURE

by

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As members of the DNP Project Committee, we certify that we have read the DNP Project prepared by Joseph Charles DeBoe entitled “A Needs Assessment for a Private Practice Based Transitional Care Program for Heart Failure” and recommend that it be accepted as fulfilling the DNP Project requirement for the Degree of Doctor of Nursing Practice.

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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.

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SIGNED: Joseph Charles DeBoe

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ABSTRACT

INTRODUCTION: While transitions of care (TOC) programs are known to decrease readmissions for heart failure (HF), significant policy and resource challenges inhibit the implementation of hospital based TOC programs, thus novel models of TOC are urgently needed. The purpose of this study is to evaluate the need and readiness of a private practice based TOC program led by DNP-prepared nurse practitioners.

METHODS: In this descriptive study, cardiology providers from a private practice in the Southwest (N=14) participated in a survey on HF TOC. The practice's electronic medical records (EMR) database was queried for patient demographic data along with other HF measures (N=3175).

RESULTS: There were 1,827 females (57.5%) and 1,348 males (42.5%) with the mean age being 75.1 years +/-11.1. The 70-79 year age bracket represented 41.0% of all HF patients. The most common ICD-10 code for HF was [I50.32] Chronic Diastolic Congestive Heart Failure (N=986), which translates into 31.0% of the total HF population. Almost 30% of the providers (N=4) acknowledge that they never document their HF readmissions in the practice's EMR. Nearly 65% percent of respondents "strongly agree," that HF patients discharged from the hospital require a specific plan of care, while 86% of providers (N=12) either "somewhat agree" to "strongly agree" in the need for a TOC program for HF patients within their cardiology practice. Over 71% (N=10) of the providers "strongly agree" with a DNP-led TOC program for HF.

CONCLUSION: This study provides encouraging results for the future implementation of a cutting edge private cardiology practice based TOC program for HF in Tucson, AZ. The study

results clearly indicate the need and readiness for the Tucson-based private practice TOC program for HF. The DNP prepared nurse practitioner is thoroughly prepared to take the lead in designing, implementing and evaluating such a program and this unique role was supported by the practice. Importantly, the results of this study may provide the foundation for future studies examining the effects of private practice based TOC programs for HF.

CHAPTER ONE: INTRODUCTION

Background Significance

It is estimated that more than 6.5 million of Americans older than the age of 20 have symptomatic heart failure (HF) and approximately 20% of asymptomatic individuals older than age 40 have some evidence of myocardial dysfunction (American Heart Association [AHA], 2017). Current projections show that the prevalence of HF will increase 46% from 2017 to 2030, resulting in greater than 8 million people over the age of 18 in the United States developing HF (AHA, 2017). There are an estimated 960,000 new cases of HF reported annually based on community trends and the number of patients hospitalized for HF and at this point in time, 1 in every 8 deaths reported are due to HF (AHA, 2017). Hospital readmission rates, patient mortality rates and monetary expenditures will also continue to rise unless there are sufficient interventions targeted toward the management of HF.

Self-management is a critical component of maintaining clinical stability for patients with chronic illness. This is evident in the context of HF, which is the leading cause of hospitalization for older adults (Bidwell et al., 2015). Treatment non-adherence is one of the major causes for HF admissions and mortality (Vasilevskis et al., 2016). Effective clinical management involves appropriate medications, clinic visits as well as supporting physical and emotional needs (Naylor, 2008). It can be difficult to manage a large number of HF patients that require the amount of self-care and treatment plans necessary to facilitate positive outcomes (Bellam et al., 2015).

Current initiatives in reducing readmission rates and appropriately using resources play an important role in health care delivery (Bellam et al., 2015). Current research shows that self-

care and at home caregiver management of HF has not resulted in ideal outcomes for most patients, thus creating a need for a thorough reevaluation of the current HF treatment model (Bidwell et al., 2015). Riles et al. (2014) found that patients reported difficulties in understanding the medication and treatment protocol and these data suggest that patients need more education and understanding of how to manage their illness.

Transitions of care (TOC) refers to the movement a patient will make between health care settings and/or health care practitioners as their condition or care needs change during the course of their illness (Coleman & Berenson, 2004; Haynes, 2013). One major roadblock in the care of HF patients is patient education and transition of care (TOC) prior to discharge from the hospital (Naylor et al., 2004). The Center for Medicare and Medicaid Services (CMS) impose stiff penalties on 30-day hospital readmissions that result from chronic illness such as HF (CMS, 2017). Further, CMS is now reimbursing for TOC in practice. As such, the question that should be evaluated is whether TOC programs should be implemented solely by hospitals or shared by private practices when the patient transitions from hospitals to home or care facility occur. As a first step, his project will explore the need and potential benefits of implementing a TOC program for the HF patient that is managed by the primary HF provider and their practice.

Heart Failure in Southern Arizona

HF in Southern Arizona (specifically Pima County) has an alarming mortality rate of 26.8/100,000 residents with the state average being 18.9/100,000 (Arizona Department of Health and Human Services [ADHHS], 2016). Pima County currently has the second largest number of HF mortality rates in the state and at this time, there is no searchable data that has been documented locally on HF management and education within the hospital or practice setting.

Current research suggests on average (in the United States) 39% of HF patients have low health literacy and it is suggested that health care professionals need to recognize the consequences of this problem and should adopt strategies that could minimize the detrimental effect on the patient outcomes (Cajita, Cajita, & Han, 2016).

Transition of Care

Transition of Care (TOC), is the movement a patient will make between health care settings and/or health care practitioners as their condition or care needs change during the course of their illness (AHA, 2015). The transition from hospital to home or care facility is a complicated process with multiple opportunities for inadequate communication and discharge planning which results in an inefficient treatment approach (Naylor, 2008). At the root of communication problems, teams from the hospital, home care, skilled facility, and outpatient clinics are constantly challenged to provide team-to-team communication and coordination without particular compensation (Tingley, Dolansky, & Walsh, 2015).

In chronic diseases such as HF, diabetes and stroke, a successful TOC enhances patient experiences, improves health and quality of life outcomes, and represents prudent use of set resources (Naylor, 2008). Transitional care includes a range of time-limited services designed to ensure health care continuity and prevent poor outcomes among at-risk populations as they move from one level of care to another, among multiple health care team members, and across settings, such as hospitals to homes (Naylor, 2008). Mary Naylor's TOC model (Appendix A), was built upon her work from the 1980's and 1990's in which the nurse practitioner (NP) led the patient's comprehensive discharge planning (Haynes, 2013). Naylor's model focuses on interventions aimed at easing the transition for older adult patients as they move between hospital and home

settings, utilizing NP's as the patients transitional care manager (Naylor, 2008; Bradway et al., 2012; Naylor et al., 2004). NP patient management with TOC has been shown to help decrease the 30-day CMS readmission penalties for the hospitals while providing a smooth and successful transition for the patient from the hospital setting (Naylor, 2008; Bradway et al., 2012; Naylor et al., 2004; Naylor, 2012; Naylor et al., 2017). David and colleagues (2014), described that the addition of a cardiology nurse practitioner to a medical team caring for cardiac patients recovering from HF hospitalizations had a positive impact on 30-day emergency department readmission and hospital 30-day readmission, which would suggest that cardiac specific NP's may be an important addition to the cardiac medical team to prevent HF readmissions (David et al., 2014).

Following a treatment plan for any HF patient can be difficult. Medication and treatment adherence has been identified as a modifiable factor (Matsuoka et al., 2016). Health literacy education and intervention for the management of HF patients during TOC has a high potential for increasing medication and treatment adherence in HF patients. Nurse practitioners are uniquely prepared to meet the challenges of complex HF patient care because of their education and training in nursing and medicine. This dual training allows nurse practitioners to see patients through both sides of care in a holistic manner (David et al., 2014; Munro & Taylor-Panek, 2007). Specifically, a Doctor of Nursing Practice (DNP) prepared NP explicitly focuses on clinical aspects of nursing with an emphasis on innovative knowledge and leadership to improve health outcomes through integrating current research findings and state-of-the-art quality improvement programs into practice (Dracup, Cronwett, Meleis, & Benner, 2005).

Practice Based Transitional Care Model and Reimbursement

Current transitional care models are mostly employed in the hospital setting or based within the hospital (Naylor, 2008; Naylor, 2012). However, to our knowledge, no studies have examined a private practice based transitional care model. Effective January 2013, transitional care management (TCM) has become a billable service by CMS to providers who provide TOC/TCM services to patients (CMS, 2017). TCM includes services provided to a patient whose medical problems require moderate or high-complexity medical decision making during transitions in care from an inpatient hospital setting to the patients community setting such as their home or skilled nursing facility (SNF) (CMS, 2017). In order for the provider to bill for TCM services, an interactive contact must be made with the patient and/or caregiver, as appropriate, within two business days following the patient's discharge to the community setting (CMS, 2017). The interaction may be a telephone call, e-mail or a face-to-face consultation with the patient in office (CMS, 2017). This initial interaction can be with the provider or a member of the clinical staff that has the ability to make prompt interactive communication addressing patient status and needs beyond scheduling follow-up care (CMS, 2017). After the initial encounter, the patient must be seen once within the timeframe specified by the current procedural terminology (CPT) codes outlined below:

- CPT Code 99495 – Transitional care management services with moderate medical decision complexity (face-to-face visit within 14 days of discharge) (CMS, 2017)
- CPT Code 99496 – Transitional care management services with high medical decision complexity (face-to-face visit within 7 days of discharge) (CMS, 2017)

As of January 2014, TCM can also be provided via telemedicine services and can be billed under the aforementioned CPT codes (CMS, 2017). Based on these CPT codes for TCM the relative value unit (RVU) and current conversion factors, the CMS allowance or payment for code 99495 performed within the outpatient office is \$164.00 and for code 99496 performed in the office the payment is \$231.12 (CMS, 2017). If TCM is performed in the hospital setting the reimbursement for TCM is \$135.00 and \$197.76 respectively (CMS, 2017).

The benefits of a TOC program are many. It would enable the practice to generate revenue that would have a higher reimbursement rate for the clinician as well as create favorable outcomes for each patient. Considering all factors, the creation of a practice based TOC program would be a unique, one of a kind model that would enhance care delivery in the transitional phase of patient care.

CHAPTER TWO: PURPOSE

The purpose of this project is to provide a need assessment on TOC in HF patients cared for by a private cardiology practice in Southern Arizona (Pima Heart Associates, P.C.) and the data from this project will be used to determine if there is a sufficient need to develop and implement a TOC program for the practice. The potential practice improvement goals of this needs assessment are to create less hospital readmissions and provide an educational foundation for HF patients in the management of self-care and treatment compliance as well as decreasing costs associated with HF readmissions. Future studies could evaluate the effect of such a program on the HF patient hospital readmission, knowledge and self-management and health care cost. The results of this project could also help create a unique, practice-based TOC model that would enhance care delivery in the transitional phase of patient care.

Project Question

Is there a need and readiness for a TOC program for HF patients cared for by Pima Heart Associates, P.C.?

Aims

1. Describe the HF population cared for by Pima Heart Associates, P.C.
2. Determine the current practice of documenting HF readmissions by Pima Heart Associates, P.C.
3. Determine Pima Heart provider's perceptions of a TOC program, to include perceptions of:
 - a. A need for a TOC program for HF patients.
 - b. The elements of a TOC program for HF patients.

- c. Facilitators and barriers to implementing a TOC program for HF patients.
- d. A DNP led TOC program for HF patients.

Theoretical Framework

The Ottawa Model of Research Use (OMRU) is the theoretical framework used to implement this project. The OMRU offers a comprehensive, interdisciplinary framework of elements that affect the process of getting valid clinical research findings applied in practice (Appendix, B). The purpose of the OMRU is to assist facilitators to implement valid research into practice (Rycroft-Malone & Bucknall, 2011).

Drs. Graham and Logan developed the OMRU due to the lack of practical models used to translate research into practice (Graham & Logan, 2004; Rycroft-Malone & Bucknall, 2011). They wanted to assemble a useful framework by assembling diverse aspects of frameworks in a simple fashion. At the time of the development of the OMRU, Dr. Graham and Dr. Logan realized that there was a significant amount of work directed to transferring research into practice both in the hospital setting and in the research units with which they were associated (Rycroft-Malone & Bucknall, 2011).

The OMRU is comprised of six elements that are essential to the process of research use: the research-informed innovation, the potential adopters, the practice environment, implementation interventions for transferring the research findings into practice, the adoption of the innovation, and the health-related and other outcomes (Graham & Logan, 2004; Rycroft-Malone & Bucknall, 2011). The key point to the OMRU is the prescriptive part of the model. This portion of the model is a process of assessing, monitoring, and evaluating (AME) all of the

aspects of the six fundamental steps for research use (Graham & Logan, 2004; Rycroft-Malone & Bucknall, 2011).

AME is the key measurement tool of the OMRU. This process involves three key steps of evaluation. The first step in the AME process is conducting an assessment of the three fundamental elements. This first step is where the innovation is assessed as well as potential adopters and practice environment (Rycroft-Malone & Bucknall, 2011). The second step involves the monitoring of the implementation interventions and its adopters. Ongoing monitoring of the process and degree of use following the implementation interventions is necessary (Graham & Logan, 2004; Rycroft-Malone & Bucknall, 2011). The final step of AME is the evaluation of outcomes. This step is crucial to review the impact of the innovation and to monitor the success of the implementation.

The OMRU employs a deliverable model that focuses on a multidisciplinary team approach to implementing a new clinical or research change (Graham & Logan, 2004). The OMRU may be applied at any level in the approach to healthcare, (multidisciplinary team or individual) organizational (unit, department, hospital), or health care system. As it pertains to this proposal, the organizational factors that need to be addressed would be discussion and collaboration with the local cardiology group who manages a large number of HF patients. The dialogue would consist of presenting the synthesis of evidence on TOC and how a TOC can be fiscally advantageous for the practice and local hospitals. This synthesis would include researching the importance of TOC in HF as well as their current patient educational tools and treatment adherence rates.

After the data and support of evidence are delivered to the potential adopters (cardiology group), the three sub elements from the OMRU would be put into place. The three elements include: 1) the awareness of the specific practice innovation (TOC needs assessment), 2) the intent to adopt the innovation and 3) the concerns in regards to the improvement or change in care for the HF patient (Rycroft-Malone & Bucknall, 2011). The proposed TOC needs assessment will be formatted to the flow of the OMRU's six elements for implementation of innovation (Appendix B). The first element will be assessing the innovation by studying the barriers and support for implementing the TOC needs assessment in HF management. This process will involve the meta-analysis and implementation with adopters (cardiologist) and the practice environment. In the monitoring phase there will be evaluations of the data and the results will determine whether or not there is a need for TOC implementation and self-care improvement in the HF patient population. The assessment of the innovation will tell us whether or not there is a need to improve the TOC of the HF patient in Southern Arizona. This evaluation is important in order to identify the impact of the adoption on outcomes, to determine whether the efforts to promote the innovation adoption were worth it and to ensure that professional standards of practice are met (Graham & Logan, 2004; Rycroft-Malone & Bucknall, 2011).

Synthesis of Evidence

A synthesis of evidence was developed by searching databases including: PubMed, CINAHL and Embase. Several searches were performed using a combination of search terms including: articles published in English, transitions of care, health literacy, heart failure, self-care, congestive heart failure and CHF. The search yielded 37 articles. The search was limited to research studies, abstracts and articles published within the past 15 years (2001-2016). Articles

considered for inclusion were those that involved an assessment of TOC in HF, adult HF patients and HF self-care. Articles were narrowed down by relevance to project question and aims. 14 articles were selected for synthesis and further exploration.

A recent study on TOC described the immediate post-discharge period as being termed the “vulnerable phase” of HF (Gheorghiade, Vaduganathan, Fonarow, & Bonow, 2013). As the patient is transitioning, increased pulmonary congestion, deteriorating renal function, and worsening neuro-hormonal abnormalities contribute to early readmission (Gheorghiade et al., 2013). The study also suggested that an early post-discharge visit has been recommended for all patients, however, there is some uncertainty as to which patients should be targeted and what should be evaluated or treated during this visit (Gheorghiade et al., 2013). Research currently recommends that HF management and TOC should focus on fluid management and intensive monitoring strategies, however, a more comprehensive approach is needed (AHA, 2015; David et al., 2014; Gheorghiade et al., 2013; White & Hill, 2014). Early assessment of clinical deterioration (prior to discharge and during TOC) as well as close monitoring of signs and symptoms of congestion is critical in the post-discharge period (Tingley et al., 2015). Gaps to TOC include, but are likely not limited to, failure to recognize deterioration in clinical status prior to discharge, medication mismanagement, poor handoff communication between providers and staff, lack of hospital to home discharge planning and lack of follow up appointments (Vasilevskis et al., 2016).

The hospital to home (H2H) and the patient navigator program (PNPG) emphasize the implementation of a team-based approach to TOC (David et al., 2014; Tingley et al., 2015; Vasilevskis et al., 2016; White & Hill, 2014). H2H is a quality improvement program sponsored

by the American College of Cardiology (ACC) and Institute of Healthcare Improvement (IHI). H2H was established with the goal of reducing hospital readmission rates (AHA, 2015). The focus of the H2H program has been three-fold and includes early follow-up after discharge, medication management, and patient signs (AHA, 2015). Forty-nine percent of participants in H2H have reported a decrease in hospital readmissions in HF patients (AHA, 2015; Vasilevskis et al., 2016). The PNPG is exclusively designed to focus on the unique needs of patients discharged after hospitalization for HF (AHA, 2015; Tingley et al., 2015). The PNPG program encourages the team approach to care by engaging with administrators, physicians, and nurses to collaborate together to improve TOC. This approach centered on the development of culturally patient centered care during the vulnerable period after discharge (AHA, 2015; Tingley et al., 2015).

The most important discovery within the synthesis of evidence was Naylor's work on TOC in HF patients (Naylor et al., 2004; Naylor, 2008; Bradway et al., 2012). In (2004), Naylor and colleagues performed a study on TOC in HF hospitalizations in older adults and the results were highly favorable towards NP's leading and managing TOC in the study population. Naylor's TOC model did not only delay hospital readmissions but avoided them, showing significant reductions in total readmissions (Naylor et al., 2004). Also, the results of the study should increase our understanding of patient management strategies needed to improve clinical outcomes for an increasing population of elders living longer with multiple, debilitating conditions while reducing overall costs (Naylor et al., 2004). This randomized clinical trial (RCT), employed a comprehensive TOC intervention by NP's for elders hospitalized with HF versus a standard discharge approach (Naylor et al., 2004). At 52 weeks, intervention group

(TOC) patients had fewer readmissions (104 vs 162, $p=0.047$) and lower mean total costs (\$7,636 vs \$12,481, $p=0.002$) (Naylor et al., 2004). The study results provided statistically significant data that showed a reduction in the total number of readmissions, and decreased healthcare costs which demonstrates great promise for improving clinical and economic outcomes when an NP is used for TOC (Naylor et al., 2004; Bradway et al., 2012).

Common themes discovered in the synthesis to improve TOC, was the importance of clinicians to treat beyond clinical congestion by addressing comorbidities, precipitating factors, social circumstances that contribute to worsening HF and NP's providing TOC (AHA, 2015; David et al., 2014; Gheorghiade et al., 2013; Riles et al., 2014; Tingley et al., 2015; Vasilevskis et al., 2016; Naylor et al., 2004; Bradway et al., 2012). Strengths of the evidence include the importance of post-discharge follow up, focus on diuresis and fluid management, importance of team communication during transition, patient education and importance of home discharge planning (AHA, 2015; Bellam et al., 2015; David et al., 2014; Gheorghiade et al., 2013; Riles et al., 2014; Vasilevskis et al., 2016; Naylor et al., 2004). Identified weaknesses in the literature include: selection bias, small sample size in some articles, not enough long term data and lack of data in some articles on readmission rates. Gaps were also identified in the synthesis of the literature. Gaps in the studies include: variable times for follow up appointments, consistent participants for the team based approach to TOC, time frames for early assessment prior to discharge, rates of success of TOC when led by an advanced practice provider and lack of TOC programs managed by private practices.

CHAPTER THREE: METHODS

Design

This DNP project will use a descriptive study design in order to characterize the need for and the perceptions of a TOC program for HF patients at Pima Heart Associates, P.C., in Tucson, Arizona. A descriptive study design is appropriate because there is only one study group with no comparison group (Polit & Beck, 2012).

Project Setting

The project will take place in Tucson, Arizona at Pima Heart Associates, P.C. This is a private cardiology practice that sees approximately 3,000 HF patients per calendar year.

Study Participants

The evaluation of the number of HF patients that are managed by Pima Heart Associates, P.C., will be gathered by using the number of patients that were diagnosed with any form of HF via the HF ICD-10 codes from the practice database from the beginning of ICD-10 (October 1, 2015) to May 31, 2017. There will also be a data collected on the NYHA classification, HF comorbidities, Left ventricular ejection fraction (LVEF) and the practice hospital readmission rates. There will be no patients contacted for this study. Study participants will consist of 25 providers from the practice (18 physicians and 7 nurse practitioners) who will participate in a survey.

Data Collection and Analysis

Aim 1

Describe the HF population cared for by Pima Heart Associates, P.C. To describe the HF population the following data will be collected from the Pima Heart's electronic records

database NEXTGEN®: Number of patients that were diagnosed with any form of HF via the HF ICD-10 codes from the years 2015-2017, NYHA classification, HF comorbidities, patient sex, LVEF and hospital readmission rates. As appropriate, data will be summarized using mean, +/- SD, and frequency. The data will be downloaded and organized into Microsoft Excel. The Excel file will be kept secure on a devoted USB drive that will be both password protected and encrypted. The USB drive will be kept in a locked drawer in the principal investigator's home during the study.

Aim 2

Determine the current practice of documenting HF readmissions by Pima Heart Associates, P.C.

Aim 3

Determine Pima Heart provider's perceptions of a TOC program, to include perceptions of: a) A need for a TOC program for HF patients, b) The elements of a TOC program for HF patients, c) Facilitators and barriers to implementing a TOC program for HF patients and d) A DNP led TOC program for HF patients.

Data collection for Aims 2 and 3 will occur through a single survey using Likert type items, which will be constructed by adapting pertinent questions from the literature on TOC and HF (Naylor et al., 2004; Naylor, 2008; Bradway et al., 2012; Naylor, 2012; Naylor et al., 2017). The survey will consist of 10 questions and will take approximately 5-7 minutes to complete. The survey can be viewed in Appendix C.

The principal investigator's DNP committee will review surveys for face validity. A link to Qualtrics that includes the survey and disclosure statement will be sent to every Pima Heart

provider via secure email. The link will contain a disclosure notice (Appendix D). Participants can then choose to anonymously complete the survey. Qualtrics is a leading global provider of data collection and analysis products, where surveys can be easily created and distributed (Qualtrics, 2016). By using Qualtrics, anonymous links to the survey can be sent to protect confidentiality by ensuring that specific data is not tied to the respondent (Qualtrics, 2016). Security is maintained by the use of high-end firewall systems, Transport Layer Security encryption, and safeguards to follow HITECH and HIPAA rules (Qualtrics, 2016). Before the initiation of the survey, a notice will be placed on the bulletin boards in the break room of each Pima Heart location indicating the upcoming survey from Qualtrics as well as some background information on the project. This notice will inform staff to expect a link to a survey on HF transitions of care via Qualtrics in their email. It will also explain that participation is completely voluntary and if completed results will be anonymous. They will have two weeks to complete the survey. A reminder notice will be sent after one week to inform participants that they have one more week to complete the survey.

Resources and Budget

No budget is required for this project; I (Joseph DeBoe) will collect all data and printed flyers will be at no cost. There will be no compensation for subjects participating in the survey.

Ethical Issues

University of Arizona Institutional Review Board (IRB) approval will be needed to complete this project. Alexandre Benjo, MD, PhD, granted site approval for Pima Heart Associates, P.C. The three key ethical principles addressed in this project include: respect for persons, beneficence, and justice. There will be no personal patient information used during data

collection from the EHR. A disclosure statement will be added to every email sent to the participants prior to them completing the survey in Qualtrics and the project poses no risk. Respect for persons will be maintained because participants will maintain autonomy. The survey will be sent out to every provider at Pima Heart and they will have the choice on whether to respond or not anonymously via Qualtrics. Autonomy is maintained because participants can choose to participate freely and withdraw at any time (Varelius, 2006). Participants will not be asked to provide their name or other identifying information. Data security will be maintained by data collection via Qualtrics, limited access to the computer used to analyze data, and collection of only the minimum necessary subject identifiers. Beneficence refers to acting in kindness to benefit others (Sundean & McGrath, 2013). Overall, the goals of healthcare providers conducting research are to promote good and do no harm. Because the survey is being sent to participants that can voluntarily respond, there is minimal to no risk. Justice is maintained because surveys are distributed fairly and equally to every provider and all data will be treated equally.

CHAPTER FOUR: RESULTS

Description and Demographics of the Heart Failure Population

Patient data was collected from the Pima Heart Associates, P.C. electronic medical records (EMR) database NEXTGen®. The date range for demographic data collection began on the first day of instillation of ICD-10 coding which was October 1, 2015 and ended on May 31, 2017. This range provided 3,175 patients for evaluation via ICD-10 codes for HF. Table 1 provides the demographic data of patient sex and age of the HF population cared for by the practice. There were 1,827 females (57.5%) and 1,348 males (42.5%) and the mean age was 75.1 years +/-11.1.

TABLE 1. *HF Patient Demographics*

Female	(N=1827) 57.5%
Male	(N=1348) 42.5%
Age Range	32 years—101 years
Mean Age	75.1 years (SD=11.1)

Table 2 provides the characteristics and averages of age groups of the HF patients. The age range was broken down into decades starting with the 30-39 year old group and ending with the 100-year plus group. The smallest group of patients was the 30-39 year old group, representing only 0.06% of the population (N=2). The largest group was the 70-79 year old group, representing 41.0% of the overall HF population (N=1298).

TABLE 2. *HF Patient Age Breakdown*

			Male	Female
30-39 years	(N=2)	0.06%	(N=2) 100%	(N=0) 0%
40-49 years	(N=11)	0.30%	(N=7) 64%	(N=4) 35%
50-59 years	(N=336)	10.5%	(N=198) 59%	(N=138) 41%
60-69 years	(N=861)	27.1%	(N=371) 43%	(N=490) 57%
70-79 years	(N=1298)	41.0%	(N=515) 40%	(N=783) 60%
80-89 years	(N=415)	13.1%	(N=199) 48%	(N=216) 52%
90-99 years	(N=247)	7.8%	(N=55) 22%	(N=192) 88%
100+ years	(N=5)	0.15%	(N=1) 20%	(N=4) 80%

Males=(Median=126.5; IQR=324.75) Females=(Median=165; IQR=417.5)

ICD-10 Heart Failure codes by patient are represented in Table 3. Out of the 3,175 patients, the most common code/diagnoses for HF is [I50.32] Chronic Diastolic Congestive Heart Failure (N=986). This translates into 31.0% of the total HF population. The next four highest utilized ICD-10 codes are [I50.3] Unspecified Diastolic Congestive Heart Failure (N=469) and [I50.2] Unspecified Systolic Congestive Heart Failure (N=464), followed by [I50.33] Acute on Chronic Diastolic Congestive Heart Failure (N=425) and [I50.31] Acute Diastolic Congestive Heart Failure (N=395). The percentages of HF patients coded with these four ICD-10 codes are 15.0%, 14.6%, 13.4% and 12.3% respectively. The least used ICD-10 code was [I50.4] Unspecified Combined Congestive Heart Failure (N=14), which represents 0.4% of the HF population.

TABLE 3. *HF ICD-10 Codes by Patient*

(I50.2) Unspecified systolic CHF	(N=464)	14.6%
(I50.21) Acute systolic CHF	(N=25)	0.80%
(I50.22) Chronic systolic CHF	(N=39)	1.2%
(I50.23) Acute on chronic systolic CHF	(N=13)	0.40%
(I50.3) Unspecified diastolic CHF	(N=469)	15.0%
(I50.31) Acute diastolic CHF	(N=395)	12.3%
(I50.32) Chronic diastolic CHF	(N=986)	31.0%
(I50.33) Acute on chronic diastolic CHF	(N=425)	13.4%
(I50.4) Unspecified combined CHF	(N=14)	0.4%
(I50.41) Acute combined CHF	(N=19)	0.6%
(I50.42) Chronic combined CHF	(N=21)	0.7%
(I50.43) Acute on chronic combined CHF	(N=17)	0.5%
(I11.0) CHF due to hypertension	(N=288)	9.1%
Total number of CHF patients	(N=3175)	100%

CHF=Congestive Heart Failure

The data on New York Heart Association (NYHA) classification, HF comorbidities, Left Ventricular Ejection Fraction (LVEF) and hospital readmission rates were unable to be collected via the NEXTGen® EMR.

Heart Failure Transitions of Care Survey

The Heart Failure Transitions of Care Survey was sent to 25 Pima Heart providers on June 19, 2017 and was available until July 3, 2017. There was a 56% survey response rate (N=14). Table 4 and Table 5 outline the professional degree and years of practice of each survey participant. Of those who responded to the survey, 50% (N=7) had an MD degree, 28.6% (N=4) were nurse practitioners with a Master's degree (MS/MSN), and 21.4% (N=3) were nurse practitioners with a Doctor of Nursing Practice (DNP) degree.

TABLE 4. *Professional Degree Held*

#	Answer	%	Count
1	MD	50.00%	7
2	DO	0.00%	0
3	DNP	21.43%	3
4	MS/MSN	28.57%	4
	Total	100%	14

(Median=3.5; IQR=5.5)

TABLE 5. *Number of years practicing cardiology*

#	Answer	%	Count
1	0-5 years	28.57%	4
2	5-10 years	14.29%	2
3	11-20 years	35.71%	5
4	20 or more years	21.43%	3
	Total	100%	14

(Median=3.5; IQR=2.5)

With respect to work experience, providers who have been in cardiology practice between 11-20 years represented the largest group (35.7%, N=5), followed by those with 0-5 years of experience (28.6%, N=4) and those with more than 20 years of cardiology practice (21.4%, N=3). There were two participants with 5-10 years of experience (14.3%, N=2).

The percentage of heart failure patients per provider is presented in Table 6. Of the 14 respondents, 50% (N=7) described their HF patient load as being greater than 30% of all patients within their practice. The next three categories (0-5%, 6-10% and 11-20%) of percentage HF patients per each provider had a 14.3% (N=2) response rate followed by the 21-30% group having (N=1) only one provider.

TABLE 6. *Percentage of Practice Dedicated to Heart Failure (Per Provider)*

#	Answer	%	Count
1	0-5%	14.29%	2
2	6-10%	14.29%	2
3	11-20%	14.29%	2
4	21-30%	7.14%	1
5	30% or more	50.00%	7
	Total	100%	14

(Median=2; IQR=3)

Table 7 presents each provider's current practice of documenting HF readmissions. Almost 30% of the providers (N=4) acknowledge that they never document their HF readmissions in the practice's EMR; where as 57% of the providers (N=8) state they document readmissions at least 50-75% of the time.

TABLE 7. *Frequency of Provider Documentation of Heart Failure Readmissions*

#	Answer	%	Count
1	Always	7.14%	1
2	75% of the time	28.57%	4
3	50% of the time	28.57%	4
4	25% of the time	7.14%	1
5	Never	28.57%	4
	Total	100%	14

(Median=4; IQR=3)

Although readmission data could not be extracted from the practice's EMR, the providers indicated an estimate of their HF readmission rates (Table 8). Fifty percent of respondents reported their HF readmissions between 0-5% of the time during the CMS 30-day penalty window. Another 42.9% (N=6) stated their HF readmissions were between 6-10% within the aforementioned timeframe. Only one provider stated their HF readmissions were between 11-20%.

TABLE 8. *Percentage of HF Readmissions According to Provider*

#	Answer	%	Count
1	0-5% of the time	50.00%	7
2	6-10% of the time	42.86%	6
3	11-20% of the time	7.14%	1
4	21-30% of the time	0.00%	0
5	More than 30% of the time	0.00%	0
	Total	100%	14

(Median=1; IQR=6.5)

With respect to the questions about transitions of care, almost 65% of respondents strongly agree that HF patients who are discharged from the hospital require a specific plan of care in order to achieve favorable outcomes (Table 9).

TABLE 9. *Providers Belief in a Specific Plan of Care for HF Patients After Hospital Discharge*

#	Answer	%	Count
1	Strongly agree	64.29%	9
2	Agree	21.43%	3
3	Somewhat agree	14.29%	2
4	Neither agree nor disagree	0.00%	0
5	Somewhat disagree	0.00%	0
6	Disagree	0.00%	0
7	Strongly disagree	0.00%	0
	Total	100%	14

(Median=1; IQR=4.5; “average” response is strongly agree)

None of the providers who took the survey chose “strongly disagree or disagree” when asked about the need for a HF post discharge plan of care. Providers’ thoughts on having a TOC program for HF patients provided by the practice are listed in (Table 10). Eighty-six percent of providers who responded to the survey (N=12) either “somewhat agree” to “strongly agree” in the need for a TOC program for HF patients within the cardiology practice.

TABLE 10. *Providers Belief in a Need for a TOC Program*

#	Answer	%	Count
1	Strongly agree	35.71%	5
2	Agree	21.43%	3
3	Somewhat agree	28.57%	4
4	Neither agree nor disagree	14.29%	2
5	Somewhat disagree	0.00%	0
6	Disagree	0.00%	0
7	Strongly disagree	0.00%	0
	Total	100%	14

(Median=2; IQR=4; “average” response for the question was agree)

Overall, the providers agree with the importance of the eight Transitional Care Model Components described by Dr. Mary Naylor. For this particular question, patient and caregiver well being have been split into two separate categories according to a recent update to Naylor’s TOC model (Naylor, 2014; 2017). A majority of the respondents (>50%) believe that 8 of the 9 components are important. Table 11 describes the participant’s responses to the question asking which areas of HF transitions of care they feel are important in order to prevent hospital readmissions and achieve the most favorable patient outcomes. Providers were to select which of the 9 components they felt were most important for TOC and HF. Every provider believed that patient education and continuity of care were the most important components to achieve favorable outcomes during the transition of care. Ninety-three percent (N=13) “strongly agree” that patient engagement is key to successful transition followed by complexity of medication management and caregiver engagement (78.6%, N=11). Seventy-one percent agree that accountability of the providers and support team is of high importance followed by patient well-being and caregiver education at 64% (N=9). Only 36% (N=5) of the clinicians reported the well being of the caregiver as being important for successful care transition.

TABLE 11. *Providers Belief In Each Component of Naylor's TOC Model*

#	Answer	%	Count
1	Patient engagement	92.86%	13
2	Caregiver engagement	78.57%	11
3	Complexity of Medication Management	78.57%	11
4	Patient education	100.00%	14
5	Caregiver education	64.29%	9
6	Continuity of Care	100.00%	14
7	Accountability (clinician, team and/or organizational)	71.43%	10
8	Patient well-being	64.29%	9
9	Caregiver well-being	35.71%	5
	Total	100%	14

(Median=11; IQR=4.5)

The results of supporting a TOC program within the practice ran by DNP prepared nurse practitioners are listed in (Table 12). Over 71% (N=10) of the providers “strongly agree” with a DNP-led TOC program for HF and 14.3% (N=2) “somewhat agree” in having a DNP-led program provided by the practice. Only two providers chose either “neutral” (N=1) or “somewhat opposed” (N=1) in regards to having a DNP-led TOC program for HF.

TABLE 12. *Provider's Support of a DNP-led TOC Program for HF*

#	Answer	%	Count
1	Strongly support	71.43%	10
2	Somewhat support	14.29%	2
3	Neutral	7.14%	1
4	Somewhat opposed	7.14%	1
5	Strongly opposed	0.00%	0
	Total	100%	14

(Median=1; IQR=5.5)

CHAPTER FIVE: DISCUSSION

Overall Project Purpose and Key Findings

The overall purpose of this project was to determine if there was a need and readiness for a TOC program for HF patients cared for by a private cardiology practice versus a traditional hospital based model for HF TOC. Transitioning from the hospital to the community or home setting can be a challenge considering how quickly HF patients can become symptomatic. Effective management of heart failure is essential in preventing recurrent hospitalizations and reducing the length of stay in the hospital setting (White & Hill, 2014). For many years, researchers have studied methods for reducing HF readmission rates in order to decrease the burden of hospitalization and reduce cost for health care systems (White & Hill, 2014). Currently, readmission rates for HF remain high and seem unrelenting. As a result, CMS introduced reimbursement penalties for facilities with readmission rates greater than the national average of 24.7% (CMS, 2015; CMS, 2017). At this time, the financial penalties fall entirely on the hospitals without any recourse to anyone else caring for the patient once they are discharged from their stay. A hospital based TOC program is important for favorable patient outcomes as well as helping to decrease the penalties that CMS can impose to facilities that have HF readmissions greater than the national average. However, to our knowledge, no studies have examined a private practice based transitional care model. The question then becomes, could a private practice based TOC program for HF further reduce the rates of readmission? One of the goals of this study was to see if a private practice was willing to implement a TOC program along with examining a need for one within the community. Another goal for this project was to

describe how unique a private practice based TOC program could be along with proving what many advantages are possible with the implementation of such a program.

This study was designed as a descriptive study in order to characterize the need for an HF TOC program as well as evaluate the provider perceptions of instilling such a program within their practice. HF patient demographic data was collected for this study's first two Aim's by performing a query of a private cardiology practices EMR database. Data for Aim 3 was collected via an anonymous survey to cardiology providers over a two-week period. The results of the data collection were analyzed using current statistical methods such as mean, +/- SD, and frequency.

The results of the study indicate a need for a TOC program within the community evaluated (Tucson, Arizona). The data collection from the EMR shed light on how many HF patients are seen and cared for by the cardiology practice. Seeing over 3,000 HF patients in any calendar year should paint a picture of need based on total patient volume alone. Results from the TOC provider survey indicate a strong agreement with the importance and need for a TOC program for the practice.

Discussion of Results According to Project Aims

Aim 1

Patient demographic data that was collected for Aim 1 gave us a keen insight on the particular HF patient population that was studied. We were not surprised with the average age and HF diagnosis via ICD-10 coding. Most patients with HF average in age between 70-79 years and the majority of patients have chronic diastolic CHF (AHA, 2017). Data collection did show us an interesting fact in regards to the number of female patients (57.5%) being greater than

number of male patients (42.9%). This was slightly surprising to us however; current studies show that female's average life expectancy in the United States is still higher than males (AHA, 2017). Average life expectancy could be the contributing factor in the difference of the sexes in regards to the local HF data. We were pleased to have over 3,000 patients in the EMR database to evaluate the variables of interest. The ability to gather reliable data on a large number (N=3175) of patients will provide powerful data for future studies. Of the variables of interest for this study, we were only able to collect age, sex and ICD-10 codes. However, we were not able to collect New York Heart Association (NYHA) classification, HF comorbidities, Left Ventricular Ejection Fraction (LVEF). Perhaps the most important variable not able to be captured in the EMR was hospital readmission rates due to HF exacerbation. Due to the nature of dictation and lack of an advanced sorting feature of the NextGEN® EMR, it was virtually impossible to obtain the aforementioned variables. However, this does not mean that providers do not chart this particular data. Most providers dictate NYHA class, LVEF and any potential readmissions in the HPI section of their office note. Unfortunately, the EMR software is unable to extract any data from dictated portions of provider's notes. Without being able to collect this data, we could not paint an accurate picture of patient HF class or LVEF. The NYHA class of each patient gives us a reliable picture related to each HF patient's symptoms and data on LVEF gives us an idea of how efficient the heart muscle is contracting in each particular patient (Gheorghide et al., 2013; McCance et al., 2014; White & Hill, 2014). These two categories can be critical in whether or not a patient has an increased potential of being readmitted to the hospital with HF exacerbation.

Aim 2

Perhaps the most important variable not captured within the EMR was the hospital readmission rates due to HF exacerbation. We do know that current Southern Arizona HF 30-day readmission rates were at 21.2% (Q4 2015-Q1 2017), with the largest hospital in Southern Arizona having a 21.1% HF readmission rate (Centers for Medicare and Medicaid Services, Health Services Advisory Group [HHS], 2017). As mentioned previously, the current national average of 30-day HF readmissions is 24.7% (CMS, 2017). The ability to collect data from the practices EMR would have provided a better understanding of HF readmissions the practice actually has. In the future, if private practices were held financially accountable for HF readmissions, the ability to query an electronic database would be critical. Considering the provider's responses to the survey on their HF readmissions (Table 8) and the practice seeing over 3,000 HF patients in any given year, it is highly unlikely that the provider responses are accurate with an overall local readmission rate for HF at greater than 21%.

Aim 3

With respect to recruitment for the project, the provider response rate was successful as evidence by the 56% response rate to the survey. Because online survey responses average less than 30% (Hamilton, 2003), we anticipated a response rate of around 30% due to provider availability and initial interest of the project. Having greater than 50% of the providers respond, gave us a more comprehensive indication of the practice's belief in TOC for HF. Furthermore, we believe the survey gave us a much better response versus provider focus group discussion, considering the time it would take to organize and align a group session with the providers demanding schedules.

The results collected for Aim 3 gave us a strong perspective on what the providers overall perception is for a need for a TOC program for HF patients as well as their thoughts on the elements of a TOC program. The survey results also gave us an idea of their feelings on what the potential facilitators and barriers are to implementing a private practice TOC program as well as their opinions of a DNP led TOC program for HF patients.

Provider's strongly agreed with the need for a transitional care program for HF. According to the current literature, transitional care management is one of a few evidence-based models of care that has a body of evidence supporting its effectiveness (Naylor et al., 2013). This belief of TOC was reflected in the majority of the providers who participated in the survey. We were pleased to see the support of a private practice based TOC for the HF population. The providers as a whole seem to believe in the need for a TOC program with a DNP-prepared nurse practitioner leading the implementation and operation. The positive responses not only generate an interest in a DNP driven private practice TOC, they also depict the provider knowledge of the importance of the eight core transitional care components described by Naylor (2004; 2008; 2012; 2013; 2017). Although we were satisfied with the encouraging results in favor of TOC, we were somewhat surprised at the level of positivity in regards to the interest in implementing a practice-based TOC program as well as having a DNP-prepared nurse practitioner operating and overseeing the process. Considering most private practices carry a large amount of overhead expenditures, we thought it might be tough to garner a favorable response from providers when it comes to adding extra staff to their already sizeable operational costs. It is possible that the new CMS reimbursement policy (CMS, 2017) could have influenced the positive responses to the question of a DNP led TOC program. As previously mentioned, the current CMS guidelines are

rather profitable for seeing TOC patients in the outpatient setting. The providers could have figured in how fiscally advantageous it could be by hiring another nurse practitioner to operate a specific TOC for the practice. It is also quite possible that the providers were thinking that a DNP nurse practitioner could follow the TOC model and bill for their own services while contributing to the total overhead expenditures for the practice as a whole.

Project Findings in Relation to Framework and DNP Essentials

The findings from this study have provided excellent data and practical information related to the (OMRU) framework and the Doctor of Nursing Practice Essentials. This TOC study is in alignment with the OMRU's six elements for implementation of innovation (Appendix B). The first element was to assess the innovation by studying the barriers and support for implementing the TOC needs assessment to the provider's within the practice. This process allowed us to evaluate the synthesis of evidence as well as discuss project implementation with the providers (adopters) in their practice environment. The project then followed the OMRU monitoring phase by evaluating the HF patient demographic data as well as the survey results. The study data demonstrated a need and readiness for TOC program implementation. It also provided the importance to electronically capture the variables of interest. In assessing this innovation, it has shed light on the rather large need to improve the TOC of the HF patient in Southern Arizona. This project (and its evaluation) was important in order to identify the impact of the TOC program on HF outcomes, to determine whether the efforts to promote the DNP-led private practice TOC would be worth pursuing as well as the analysis of the TOC model as it relates to meeting the requirements of professional standards of practice (Graham & Logan, 2004; Rycroft-Malone & Bucknall, 2011).

This study also adhered to the Doctor of Nursing Practice Essentials (I-VII). The content analysis of this study identified impacts on health care delivery, advocacy and quality improvement (Zaccagnini & White, 2016). This study examined a need and readiness for a TOC program for HF in Southern Arizona (DNP Essential I) by using key elements of the OMRU and Dr. Naylor's model for TOC (DNP Essential II). The data collected from the study also contributes to the potential for TOC improvement for HF patients by developing a private practice based TOC model (DNP Essential's III, IV, and VII). Focusing on readmission rates and TOC reimbursement, the data from the study gave us an insight in how to utilize this knowledge for targeting reduction in readmission rates while alleviating the financial burden on hospitals (DNP Essential V). Inter-professional collaboration between physicians, nurse practitioners, patients and caregivers is an essential part of this study in order to have a successful transition of care from hospital to home (DNP Essential VI). Lastly, this study provided insight on how unique and important a private practice HF TOC program (led by DNP prepared nurse practitioners) would be for the future of HF management (DNP Essential VIII).

Strengths, Limitations and Implications for Future Practice

There were a number of strengths and limitations that became apparent during the course of this project. The ease of querying the NextGEN® EMR for a large number of patients was a significant strength. Another strength of this study was that we were able to quickly identify what variables of interest we were not able to obtain (HF readmission rates, NYHA class, LVEF and HF comorbidities). Being able to capture this data would paint the most accurate picture of the HF population cared for by this practice. Another strength of the study was the high provider response rate to the TOC survey. A survey response rate of greater than 50% helped ensure that

survey results are representative of the target population (Polit & Beck, 2012). As mentioned earlier, recent literature states that the average online response rate to any survey is around 30% (Hamilton, 2003). We found that the responses gave us an accurate picture of the providers thoughts in each area evaluated in the survey. Even with the excellent rate of response, the survey had several limitations. The majority of the survey was a subjective picture of what the provider's thoughts and feelings were towards HF TOC and the elements presented in the questions. While it was beyond the scope of this study, no questions were asked about the provider's preferences of what they would like included in a TOC program.

This study was a first attempt to identify the need for a TOC program for HF that is private practice based. As mentioned previously, we are unaware of the existence of private practice based TOC programs for HF. The practice implications from this study are several. First, a practice based TOC program could provide an additional revenue stream for the practice due to the current CMS reimbursement for TOC. Second, this practice based TOC model could help improve patient outcomes by offering patients outpatient office visits and or interactive communication within two business days following the patient's discharge to the community setting. Furthermore, the patient would not have to interact with a separate care manager from the hospital when they could have their own primary cardiology team aid them in the appropriate care transitions. These factors alone could reduce 30-day hospital readmission rates. Lastly, the DNP practitioner-researcher is thoroughly prepared to take the lead in designing, implementing and evaluating a TOC program for HF within a private practice setting. The DNP nurse practitioner can use their knowledge as practitioner-researchers to lead initiatives to close the current research-to-practice gap in transitional care (Dracup et al., 2005; Haynes, 2013).

Additional studies that potentially could arise from this research would be performing pilot studies using private practice based TOC programs. Also, future studies could measure the difference in hospital readmission rates between hospital based TOC programs and the DNP-led private practice model. In addition, further studies are also needed to guide the development, implementation and evaluation of DNP-led private practice based TOC programs for HF.

Summary

Currently, there are substantial gaps in the HF patient's transition from the hospital to the community. This is partly due to the complexity of our health care system, which can result in multiple transitions among care settings and providers. These complex transitions may affect readmissions, patient outcomes and overall patient satisfaction. Further studies of transitional care programs are needed in order to maximize patient outcomes. The goals of this study were to examine the need and readiness for a unique DNP-led private practice based TOC program for HF. We used local HF demographic data along with provider surveys in order to examine the need and readiness for a distinctive TOC program. We found that we were able to query a large database to retrieve important patient information related to HF and that the providers from the practice indicated a strong need and readiness for a TOC program for HF. The DNP prepared nurse practitioner is thoroughly prepared to take the lead in designing, implementing and evaluating such a program and they will be able use their knowledge base to lead initiatives to close the current research-to- practice gap in transitional care for HF. The results of this study may provide the foundation for future studies examining the effects of a private practice based TOC program for HF.

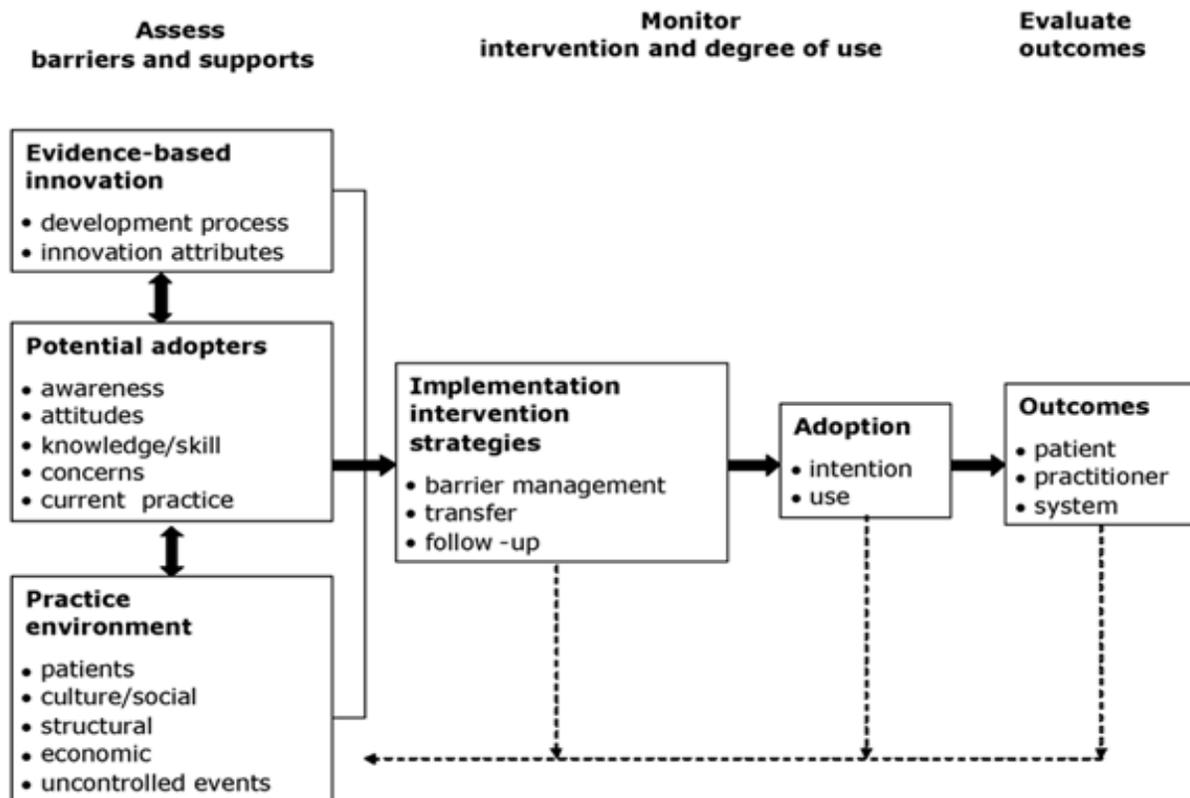
APPENDIX A:

DR. MARY NAYLOR'S MODEL FOR TRANSITIONAL CARE



Adopted from (Naylor, 2008)

APPENDIX B:
THE OTTAWA MODEL OF RESEARCH USE (OMRU)



Adopted from (Graham & Logan, 2004)

APPENDIX C:
HEART FAILURE TRANSITIONS OF CARE SURVEY

1. Which type of professional degree do you hold?

MD
DO
DNP
MS/MSN

2. How many years have you been practicing cardiology?

0-5 years
6-10 years
11-20 years
20+ years

3. On average, what percent of your patient population is dedicated to heart failure?

0-5%
6-10%
11-20%
21-30%
30% or more

4. On average, how often do your heart failure patients get readmitted to the hospital within the 30-day CMS penalty readmission window?

0-5% of the time
6-10% of the time
11-20% of the time
21-30% of the time
More than 30% of the time

5. How often do you document (in the practice's EHR) a patient's hospital readmissions due to heart failure exacerbation?

Always
75% of the time
50% of the time
25% of the time
Never

6. In your professional cardiology practice, do you believe that a specific plan of care for heart failure patients that are recently discharged from the hospital is required to achieve favorable patient outcomes?

Strongly Agree
Agree
No Opinion
Disagree
Strongly Disagree

7. Do you feel there is a need for a transition of care program for heart failure patients cared for by the practice?

Strongly Agree
Agree
No Opinion
Disagree
Strongly Disagree

8. Which areas of heart failure transitions of care do you feel are important in order to prevent hospital readmissions and achieve the most favorable patient outcomes? Select all that apply

Patient Engagement
Caregiver Engagement
Complexity of Medication Management
Patient Education
Caregiver Education
Continuity of Care
Accountability (clinician, team and/or organizational)
Patient well-being
Caregiver well-being

9. Would you support the implementation of a transition of care program for heart failure patients within your practice versus a hospital-based transition of care program?

Strongly Support
Somewhat Support
Neutral
Somewhat Opposed
Strongly Opposed

10. Would you support a DNP-prepared nurse practitioner led transition of care program for heart failure patients as a part of your practice?

Strongly Support
Somewhat Support
Neutral

Somewhat Opposed
Strongly Opposed

APPENDIX D:
SURVEY DISCLOSURE NOTICE

Thank you in advance for your participation in this survey. My name is Joseph DeBoe and I am a Doctorate of Nursing Practice student at the University of Arizona. This survey is a component of my DNP Project titled: Heart Failure Transitions of Care: A Needs Assessment for Pima Heart Associates, P.C.

The purpose of the study is to determine if there is a need for a transitional care program for heart failure patients cared for by the practice. The data collected will be analyzed and compiled as a component of my final DNP Project submission. The results of this study may benefit practice standards in regards to reducing hospital readmissions due to heart failure, helping achieve the most favorable patient outcomes and provide information on how to maximize revenue for the practice in regards to transitional care management.

Information collected through this survey is voluntary and the information will be kept anonymous and confidential. No contact information will be gathered during the survey and there is no risk associated with participating in the survey. The password-protected survey is 10 questions long and should take approximately 5-7 minutes to complete.

By clicking "I agree" below you are indicating that you have read and understood this consent form and agree to participate in this research study.

Thank you for your participation.

Sincerely,

Joseph DeBoe, BSN, RN, CCRN

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