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UNIVERSITY OF SAN DIEGO  
Hahn School of Nursing and Health Science  
DOCTOR OF PHILOSOPHY IN NURSING

EXAMINING RELATIONSHIPS BETWEEN ETHNICITY, PALLIATIVE CARE  
AND READMISSIONS IN THE HEART FAILURE POPULATION

By

Deanna Johnston

A dissertation presented to the  
FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE  
UNIVERSITY OF SAN DIEGO

In partial fulfillment of the  
Requirements for the degree  
DOCTOR OF PHILOSOPHY IN NURSING

May 2018

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UNIVERSITY OF SAN DIEGO

Hahn School of Nursing and Health Science

DOCTOR OF PHILOSOPHY IN NURSING

CANDIDATE'S NAME: Deanna Johnston

TITLE OF DISSERTATION:

Examining the Relationships Between Ethnicity, Palliative  
Care and Readmissions in the Heart Failure Population

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## **Abstract**

**Specific Aim:** The aim of this dissertation is to analyze the relationships between ethnicity, palliative care consultation and readmissions in the heart failure population at a community hospital that serves a large diverse population.

**Background:** Hospitals struggle with preventing readmissions. There are many interventions that can be implemented to help prevent readmissions, and Palliative Care (PC) is one of those interventions. PC has many benefits including symptom management, improved communication through the healthcare continuum, understanding of illness and treatment options, and can be provided in conjunction with curative treatments.

Heart failure is one of the most common readmission diagnoses. It is estimated that over 8 million people will be diagnosed with heart failure by 2030. Improving readmission rates among the heart failure population is a priority for all hospitals and palliative care may help improve readmission rates. Scant existing research suggests that readmissions and use of PC varies among different ethnic groups.

**Methods:** Using a retrospective correlational design, patient demographic information, diagnosis and readmission data was gathered from the hospital's electronic health record (EHR) for all patients admitted with a primary or secondary diagnosis of heart failure, between January 2016 and June 2016, and analyzed for relationships between the receipt of PC, ethnicity and all cause readmission within the time frame examined.

**Results:** The researcher analyzed 330 for relationships between receipt of a PC consultation, ethnicity, and readmissions. No statistically significant relationships were

found between the primary variables of ethnicity, PC consult, and readmissions, however the relationship between age and readmission was statistically significant.

**Conclusion:** This dissertation increases knowledge related to the background; use and definition of PC; relationships between PC, ethnicity, and readmissions; and adds to the available published literature. The lack of strength of associations suggests the need for future research to identify additional variables and their possible relationships between PC and readmissions, ethnicity and readmissions, and PC and ethnicity in the HF population. The significance of age and readmissions should be further analyzed.

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## **Dedication**

This dissertation is dedicated to my family and friends. First and foremost, my grandparents for your continued support and encouragement through life's trials, obstacles and changes. Your positivity and support has helped me continue in my personal, professional and scholarly journeys. Your belief that I could complete this journey was inspiring and encouraging.

Second to my siblings and parents for your support, encouragement, and continued tolerance of my lack of available time/vacation time. Although life has been tough, we have grown stronger together and I cannot express my appreciation enough. I cannot forget my nieces and nephews who are my inspiration and keep me grounded and young at heart. I hope that the completion of this dissertation will encourage and inspire you to do great things in your future.

Finally, to my friends without whom I could not have completed this. Your continued inspiration, support and ability to keep me laughing through this process has been integral to my success.

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First and foremost, I would like to express my sincere appreciation and gratitude to my dissertation committee, Dr. Fry-Bowers, Dr. Bush, and Dr. Etland for your continued encouragement, support and ability to keep me focused and on track. I cannot express how much each of you have inspired me to continue through this process and desire to grow in my professional career.

A special thank you to Dr. Fry-Bowers, my dissertation chair, for your knowledge, support and patience. Through this process I have learned a great deal from your expertise and am encouraged to continue growing in research and writing. I have appreciated your mentoring through this process, including helping increase my appreciation for policy and the impact nursing can have on changing policy.

To all the professors in the PhD program at USD. You each have inspired me in different ways and I truly appreciate all your knowledge, expertise, encouragement and positivity through this program. I cannot imagine learning and growing more with any other team of professors.

I cannot forget my work team at Sharp and the support that you have provided. Your support and patience has contributed significantly to my success. To my fellow CNSs, your inspiration through my career and encouragement of my ability to succeed in this process has been priceless. To my leadership team, Director, managers and leads, your support, positive thoughts and encouragement have been greatly appreciated throughout this process.



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## **Chapter 1**

### **Introduction**

Currently, Palliative Care (PC), heart failure (HF) and readmissions are three important topics of focus within the medical field and health policy. Preventing readmissions of HF patients has been a key target of policy change, including the Affordable Care Act (ACA). Modifications to health policies include the Hospital Readmission Reduction Program (HRRP) and increased penalties for hospitals with higher than expected readmission rates through the Centers for Medicare and Medicaid Services (CMS). Even with increased penalties for readmissions, rates between 2007 and 2015 decreased by less than five percent (Zuckerman, Sheingold, Orav, Ruhter & Epstein, 2016).

Hospitals serving higher numbers of ethnically diverse and lower-income patients are more likely to incur penalties from HRRP than other hospitals (Boccuti & Casillas, 2017; Gilman et al., 2014; Sheingold, Zuckerman, & Shartzter, 2016). Many undocumented immigrants and members of ethnic minority groups have persistent challenges in accessing health care. They often receive care from community hospitals or rely upon hospital emergency departments for routine treatment resulting in fractured care, which may lead to increased penalties (Call et al., 2014; Galarneau, 2011).

The most common condition included in the HRRP targeted diagnoses that contributes to increased readmission rates is HF. The median percentage of hospital readmissions related to HF among hospitals with greater than 29 percent of patients funded by Medicaid was 23.3 percent (CMS, 2014). Projections indicate that the incidence of HF will increase 46 percent by 2030 resulting in eight million people having

an HF diagnosis. Approximately half of all patients who are diagnosed with HF will die within five years of diagnosis (Centers for Disease Control and Prevention, (CDC), 2015). Patients diagnosed with HF experience significant morbidity as well as a steep decline of quality of life in the end stages of the illness, and HF is one of the most common reasons for a hospital readmission. Palliative care is one intervention that has been considered by many national organizations, including the National Institute for Health (NIH), National Center for Biotechnology Information (NCBI) and CMS, to help decrease readmissions and mortality.

Palliative Care is a term for specialized care that provides emotional, physical, and spiritual health care to patients and may include symptom management, improved communication throughout the healthcare continuum, understanding of illness and treatment options, and can be provided in conjunction with curative treatments (Billings & Pantilat, 2001; Center to Advance Palliative Care, n.d.; National Palliative Care Research Center, 2013; O'Connor, Moyer, Behta, & Casarett, 2015). Providing quality care for patients with chronic illnesses is a challenge at all phases within the continuum of the illness. Palliative Care can be provided to any patient with any chronic illness at any time throughout the trajectory of the illness. Palliative Care is most effective early in the chronic illness and differs from hospice care, which is specific to the end-of-life period.

Essential to providing quality care is preventing patients from being readmitted into the hospital, and while little research has been done to describe the effect PC can have on preventing readmissions, evidence has revealed that patients with a PC consult while hospitalized had a readmission rate of 10.3 percent as compared to 15 percent for

patients who did not receive PC (O'Connor et al., 2015). Moreover, research indicates that PC services may increase the ability of hospitals to provide quality care for HF patients. Yet, availability of services may not lead to better quality of care for some, as evidence suggests that there is a decreased use of PC and hospice services by minority populations, (Faigle, Ziai, Urrutia, Cooper & Gottesman, 2017; Johnson, 2013; Karim, Bailey & Tunna, 2000; Quinones-Gonzalez, 2013; Sharma, et al, 2015).

### **Palliative Care and Palliative Care Consultation**

Palliative Care is a system of care that provides a multitude of interdisciplinary services or programs to help with symptom management, understanding prognosis and disease process, understanding treatment options, providing psychosocial assistance and care to patients and their families, and clarifying the goals of treatments or goal directed therapies. These interventions can be used in conjunction with curative or life-sustaining treatments and in discussion regarding resuscitation status (Billings & Pantilat, 2001; “National Palliative Care Research Center”, 2013; O'Connor et al., 2015).

The Center to Advance Palliative Care defines PC as specialized medical care for people with serious illness. This type of care is focused on providing relief from the symptoms and stress of a serious illness. The goal is to improve quality of life for both the patient and the family. Palliative care is provided by a specially trained team of doctors, nurses, and other specialists who work together with a patient's other doctors to provide an extra layer of support. It is appropriate at any age and at any stage in a serious illness, and it can be provided along with curative treatment. (Center to Advance Palliative Care, n.d.)

The modern concept of PC has evolved since the 1960s in the United States. Over the years the concept has taken on different meanings to individuals, institutions, and/or cultures. There are multiple definitions in the literature for PC. For clinicians, the definition that each person applies to the concept originates from their training, mentors, school, and the hospital or system in which they work. With the transformations in the meaning of PC, the tasks and role of PC practitioners in relation to how the health care is delivered also varies. While the term “palliative care” has been used interchangeably with end-of-life care and hospice, it can be more accurately viewed as an approach to care in which hospice and end-of-life care reside. In summary, PC is an approach to the care of a patient utilizing a dedicated team of specialists for any chronic illness to improve management of symptoms and communication across the care continuum.

### **Heart Failure**

Heart Failure is defined as a lack of ability of the heart and pump to supply enough blood to the other organs (CDC, 2017). Heart Failure is one of the most common chronic illnesses in the United States with 5.7 million Americans over the age of 20 diagnosed in 2015 (CDC, 2017). Patients with HF experience severe symptom burden and decreased quality of life as the illness progresses to the late stages. These patients are commonly readmitted to the hospital due to exacerbations of the illness in the latter stages of the disease, which can lead to increased burden on the family and/or caregiver. This leads to a possible incongruity in care between the hospital, cardiac specialist office visits, and home care services. With each hospitalization there can be an increase in stress, caregiver burden, and psychosocial distress. Care for these patients should be highly individualized and specialized to meet the specific needs associated with the



symptoms and trajectory of the illness and continue during curative treatments as well as at the end-of-life.

### **Heart Failure and Palliative Care**

Although HF is one of the leading causes of mortality and admission into the hospital, there is a paucity of research related to the use of PC in the HF population. Only one percent of all articles published in the leading cardiology journal addressed PC, only two percent of HF related conference sessions discussed PC and only 0.3% of the 45 billion dollars directed toward HF research was dedicated to research in PC (Xie, Gelfman, Horton, & Goldstein, 2017). Within the HF population, PC has most commonly been studied during the latter stages of the illness when there is a higher need for symptom management and an increase in the burden of the illness on the patient and family. Little research examines the use of PC in the inpatient setting when patients are admitted within the earlier stages of the illness, which may support early goal-directed therapy discussions with the patient and family and ultimately help prevent readmissions.

### **Ethnicity**

Disproportionate Share Hospitals (DSH) provide a disproportionate amount of care to low-income patients or are located within a rural area, have greater than 100 beds, and have greater than 30 percent of their net revenues from local and state government sources for the indigent population (Health Resources and Services Administration, 2017). Frequently, the populations served by DSH include minority and low-income Medicare and Medicaid enrollees. Historically, Medicaid and Medicare have been the primary source of health insurance for low-income and minority populations, with minorities accounting for 18% of Medicare enrollees and over 50% of enrollees having a

yearly income less than \$25,000 (Henry J. Kaiser Foundation, 2016, 2017).

Disproportionate Share Hospitals have low financial margins and because of their historical missions, cultural competencies and experience in serving lower-resourced communities are sometimes the only sources of primary, secondary, and emergency services for the low-income, Medicaid, and vulnerable populations. Researchers, led by the director of the Department of Health and Human Service's Division of Health Financing Policy, found that readmission rate odds were seven percent higher for safety-net hospitals or DSH than for other hospitals. With this variation in readmission rates, 40% of the disparities in readmissions were not explained by the model used in this study (Sheingold et al., 2016). The study also found that the odds of a readmission for DSH were 16% to 17% higher than the odds ratio of readmissions for low-DSH hospitals. Clinical and socioeconomic factors explained approximately 60% of the observed differential in readmission rates between DSH hospitals and other large hospitals that provide similar services to a higher number of insured patients (Sheingold et al., 2016). After adjusting for socioeconomic status, race, and dual eligibility, the odds ratio of readmissions decreased. This suggests that socioeconomic status and possibly ethnic background can increase the risk of readmissions.

Moreover, socioeconomic status was found to influence readmissions in 6,832 hospitalizations for 4,646 separate patients in an urban teaching hospital (Hu, Gonsahn & Nerenz, 2014). Researchers concluded that patients who were male, black and unmarried were more likely to be readmitted into the hospital after a recent admission (Hu, Gonsahn & Nerenz, 2014). Patients with a lower education level, patients residing in high poverty or low-income households, and patients who had a diagnosis of HF and acute myocardial

infarction (AMI) were found to be more likely to be readmitted than patients with a higher level of education or living in higher income households.

The Centers for Medicare and Medicaid Services estimates that minority and vulnerable populations are 30% more likely to be readmitted to the hospital within 30 days as compared to their white counterparts. The main disparities in care and readmissions result from language barriers, a decreased likelihood that they have a primary care provider and receive routine care, lower levels of health literacy, lack of adequate culturally appropriate education materials, socioeconomic challenges, and comorbidities (Betancourt, Tan-McGrory, & Kenst, 2015). Given these findings, it is possible that there is a relationship between the number of readmissions and the race or socioeconomic status of the patient.

Southern San Diego has a documented minority population varying from 57% to 96% across a range of zip codes with close proximity to the border with Mexico (United States Census Bureau, 2015). These statistics do not include the undocumented immigrants that are served by the hospitals with close proximity to the border with Mexico, including this study's hospital setting. Low-income and ethnic minority populations, and undocumented immigrants face numerous challenges when accessing care, including the coordination of care between inpatient and ambulatory care settings for chronic conditions (Call et al., 2014; Galarneau, 2011). With little previous research examining the relationships between ethnicity, PC consult, and readmission rates, this study will address a current gap. Heart failure is one of the most common chronic illnesses resulting in one of the largest readmission rates amongst all disease processes. With more information on the possible relationships between PC consults, ethnicity, and

readmissions within the HF population, hospitals can focus resources, including PC services, to prevent readmissions, especially among an ethnic minority population.

### **Readmissions**

The ACA added a provision to the Social Security Act, section 1886(q), defining a readmission as a rehospitalization within 30 days of a previous admission to a hospital. Readmissions are currently thought to result from the complex relationships between the community, hospital, and patients (Joynt & Jha, 2012). Possible causes of readmissions include complications from previous treatments, lack of follow-up care in the community after a hospitalization, inadequate quality of care or coordination of care, and patients with worsening conditions later in the disease process (Lu, Huang, & Johnson, 2016). Other possible causes of readmissions may include lack of resources within the hospital or community to care for the later stages of illnesses, decreased reimbursement for care based on payer mix, and availability of hospital care within a close distance.

“Section 3025 of the Affordable Care Act added section 1886(q) to the Social Security Act establishing the Hospital Readmissions Reduction Program (HRRP), which requires CMS to reduce payments to IPPS [Inpatient Prospective Payment Systems] hospitals with excess readmissions” (CMS, 2016, p 21). Payment penalties for hospitals who underperform in the quality measures started receiving a two percent reduction in reimbursement rate in 2014 and three percent reduction starting in 2015 (CMS, 2016). These penalties lead to a possible loss of millions of dollars in reimbursement for hospitals. The medical conditions defined in this measure are AMI, HF and pneumonia (PN) (CMS, 2016, p 21). However, CMS has extended the diagnoses to include chronic obstructive pulmonary disease (COPD) and hip/knee replacements. With a reduction in

payments for patients readmitted to the hospital, hospitals can potentially lose millions of dollars. The CMS Quality Strategy document (2016) states that unnecessary readmission rates are currently approximately 18.8% for Medicare and 14.4% for all payer groups and estimates are that readmissions may cost the Medicare Program over \$17 billion annually. A report by the Medicare Payment Advisory Commission (MedPAC) stated that in 2015 the overall rate of potentially preventable readmissions was 10.5%, with the rate for HF patients at 16.4% (MedPAC executive summary, 2017). In particular, California had a total all cause readmission rate of 13.53% in 2015, with Medicare patients at 14.94% and Medi-Cal patients at 14.86% (California Health and Human Services Agency (CHHS), 2017).

### **Heart Failure, Palliative Care and Readmission**

Patients discharged with a diagnosis of HF and AMI are more likely to be readmitted (Hu et al., 2014). The average incidence of recurrent hospitalization in patients with HF over 55 years of age was 6.6 per 1,000 patients per year (CDC, 2016). In 2012, at least one quarter of readmissions were patients with HF among hospitals where a third of the patients were covered by Medicaid (CMS, 2014).

Between June 2010 and June 2013 there was less than a two percent improvement for readmissions for the following categories: Medicine, Surgery/Gynecology, Cardiorespiratory, Cardiovascular and Neurology (CMS, 2014). The median rate of readmissions for cardiovascular diseases dropped from 14.2% in 2010 to 13.9% in 2013. That is a reduction of 0.3 percentage points. The range of hospital-wide readmission rates for July 2012 through June 2013 was 11% to 21.4% with approximately half of hospitals performing within one percentage point of the median rate of readmissions (CMS, 2014,

p 42). The Centers for Medicare and Medicaid Services states that Black and Hispanic patients with HF have higher rates of readmissions within 30 days than non-Hispanic White patients (CMS, 2014). By penalizing hospitals for high readmission rates, the HRRP aims to push hospitals to focus efforts and resources on preventing readmissions, especially in the chronically ill populations.

In recent research analyzing the effect of PC on readmissions, cardiac disorders, including HF, were among the top three reasons for PC consultation and admission and/or readmission to the hospital (Enguidanos, Vesper, & Lorenz, 2012; Evangelista et al., 2014; Fasolino & Phillips, 2016; Tangeman, Rudra, Kerr, & Grant, 2014). Although cardiac disorders are one of the leading causes for PC consultation and readmission, there is still a lack of research relating the two. Despite the imposition of penalties for hospitals within the HRRP, there has not been a concomitant increase in resources available for hospitals to implement interventions effective in preventing readmissions. Analyzing the possible relationship between PC and readmissions within the HF population will increase the knowledge and evidence known to make appropriate decisions in care and adequate acquisition of resources.

### **Study Purpose and Specific Aims**

The purpose of this study is to describe the background and definition of PC; examine the current literature related to PC and readmissions; and analyze the relationships between ethnicity, PC consult, and readmissions rates within the HF population at a 343-bed DSH located in Southern California between January 2016 and June 2016.

The specific aims of this study are as follows:

1. Define and analyze the concept of palliative care and the extent of the literature surrounding this topic, within the context of use and history.
2. Describe patient demographics including age, gender, language, origin of admission, diagnosis, prevalence of a Physicians Order for Life Sustaining Treatments (POLST)/advance directive on admission, patient-reported ethnicity and race, payer, the number of and reason for PC consults and the overall rate of readmissions among HF patients admitted to an acute care DSH in Southern California between January 2016 and June 2016.
3. Examine the relationships between ethnicity and all cause readmissions, while controlling for statistically significant covariates within HF patients admitted to an acute care DSH in Southern California between January 2016 and June 2016.
4. Examine the relationships between receipt of a PC consult, ethnicity and readmission in the HF population admitted to an acute care DSH hospital in Southern California between January 2016 and June 2016.

### **Content of this Dissertation: Overview of the Manuscripts**

The description of each manuscript and relationship to the aims of this dissertation study are addressed below.

#### **Manuscript 1: Heart Failure and Readmissions: A Systematic Review**

The objective of this manuscript is to describe and analyze the research literature related to PC and readmissions. This manuscript addresses a portion Aim #1. This manuscript comprises Chapter 2 of this dissertation.

#### **Manuscript 2: Palliative Care: A Concept Analysis**

The objective of this manuscript is to describe the history and the definition of the term PC. This manuscript addresses the remaining portion of Aim #1. This manuscript is included in Chapter 3 of this dissertation.

Manuscript 3: The relationships between ethnicity, PC consultation and readmission among the HF population in the Acute Care setting. The objective of this manuscript is to examine the relationships PC and ethnicity may have with readmission rates within the HF patient population. This manuscript addresses specific aim 2, 3, & 4 and comprises Chapter 4 of this dissertation.

Finally, Chapter 5 will provide a summary of this dissertation study and will include a discussion of policy implications of these findings, as well as recommendations for additional research.



## **Chapter 2**

### **Manuscript 1: Palliative Care and Readmissions: Systematic Review**

### **Abstract**

Hospital readmissions result from the complex relationships between the community, hospital, and patients, leading to a decrease in the ability to prevent readmission. Possible causes of readmissions include complications from previous treatments, lack of follow-up care in the community after a hospitalization, inadequate quality of care or coordination of care, and patients with worsening conditions later in the disease process. One intervention that has the possibility of decreasing readmissions is the provision of Palliative Care (PC) services. Palliative Care is a concept that has been around for generations. Palliative Care provides a multitude of interdisciplinary services or programs to help with symptom management, promotion of understanding the prognosis and disease process, understanding treatment options, providing psychosocial assistance and care, clarifying the goals of treatments or goal-directed therapies that can all be used in conjunction with curative or life-sustaining treatments, and discussion regarding code status. There has been little research conducted on the effect PC can have on readmissions. This systematic review analyzes the research currently available to determine whether PC has an effect on hospital readmissions.

*Keywords: Palliative Care, Readmission(s), Systematic Review*

## Introduction

Rates for unplanned readmissions were approximately 18.8% for Medicare and 14.4% for all payer groups and estimates are that readmissions may cost the Medicare Program over \$17 billion annually (Centers for Medicare and Medicaid Services, 2016). A report by the Medicare Payment Advisory Commission (MedPAC) stated that in 2015, the overall rate of potentially preventable readmissions was 10.5%, with the rate for patients with heart failure (HF) at 16.4% (Medicare payment advisory commission, 2017). Readmissions result from the complex relationships between the community, hospital, and patients, leading to a decrease in the ability to prevent readmissions (Joynt & Jha, 2012). Possible causes of readmissions include complications from previous treatments, lack of follow-up care in the community after a hospitalization, inadequate quality of care or coordination of care, and patients with worsening conditions later in the disease process (Lu, Huang, & Johnson, 2016). Other possible causes of readmissions can include lack of resources within the hospital or community to care for the later stages of illnesses, decreased reimbursement for care based on payer mix, and availability of hospital care within a close distance. One possible intervention to reduce the rate of readmissions is the use of a Palliative Care (PC) team to provide specialized care to patients who are admitted to the hospital at any point within their illness trajectory.

Palliative Care is an approach to the care of a patient utilizing a dedicated team or specialized care of any chronic illness. Palliative Care has been used interchangeably with end-of-life care and hospice, however it provides a different specialty of care. Palliative Care provides a multitude of interdisciplinary services or programs to help with symptom management, promotion of understanding the prognosis and disease process,

understanding treatment options, providing psychosocial assistance and care to patients and their families and clarifying the goals of treatments or goal-directed therapies that can all be used in conjunction with curative or life-sustaining treatments, and discussion regarding code status (Billings & Pantilat, 2001; National Palliative Care Research Center, 2013; O'Connor, Moyer, Behta, & Casarett, 2015).

The World Health Organization (WHO) defines PC as “an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual” (World Health Organization, n.d).

The Center to Advance Palliative Care defines PC as specialized medical care for people with serious illness. This type of care is focused on providing relief from the symptoms and stress of a serious illness. The goal is to improve quality of life for both the patient and the family. Palliative care is provided by a specially trained team of doctors, nurses, and other specialists who work together with a patient’s other doctors to provide an extra layer of support. It is appropriate at any age and at any stage in a serious illness, and it can be provided along with curative treatment. (Center to Advance Palliative Care, n.d.).

Over the years the concept of PC has taken on a different meaning to each person, institution and/or culture. There are multiple definitions in the literature for PC. The tasks and role of PC practitioners in practice varies substantially. Recent research has addressed inpatient and outpatient PC programs in non-academic center hospitals and the benefits of implementation of PC consultation earlier in care of chronic illnesses outside

of oncology (Bharadwaj, et al., 2016; Hughes & Smith, 2014; Meier, 2011; Provinciali et al., 2016).

The objective of this systematic review is to explore the current literature that has analyzed the relationship between PC and readmissions.

## **Methods**

### **Databases and search strategy**

The databases CINAHL, PubMed and Google Scholar were searched for studies including the terms Palliative Care and Readmission from any date to September 2017.

### **Eligibility**

The author reviewed the abstracts of studies with the terms “PC” and “readmission(s)” in the title and subsequently completed a full text review of those studies that contained data and outcomes specific to the relationship of PC and readmissions. Both qualitative and quantitative studies analyzing the relationship of inpatient PC consultation and readmissions were included. The term PC was analyzed to ensure the services were holistic and provided for any diagnosis in the inpatient setting. Hospice-specific studies were not included in the review; however, studies with PC consults related to end-of-life care were included. Outpatient PC services were not included due to the overlap and common use of the term PC for hospice services. Studies were thoroughly reviewed to ensure that the services being provided were not specific to hospice. The reference pages of each study were also reviewed for further studies.

**Study selection**

Studies with data directly related to the use of PC and its relationship with readmissions in the inpatient setting within the United States were selected for the data synthesis and results.

**Data synthesis**

Data were extracted by one reviewer. The data extracted included study design, setting, characteristics of participants, comparison groups, PC consult characteristics, and overall outcome in readmissions.

**Data comparisons**

Palliative Care intervention strategies were analyzed for composition and services offered. Data for patient demographics were extracted to assess for selection bias within the study. Detailed statistical analysis of the outcome of readmission rates was used to determine the relationship of PC and readmissions within the current literature.

**Results****Study selection**

After performing a search on each database, titles, abstracts, and full articles were reviewed and excluded based upon inclusion criteria (Figure 1). Eight studies were included in the final analysis (Table 1).

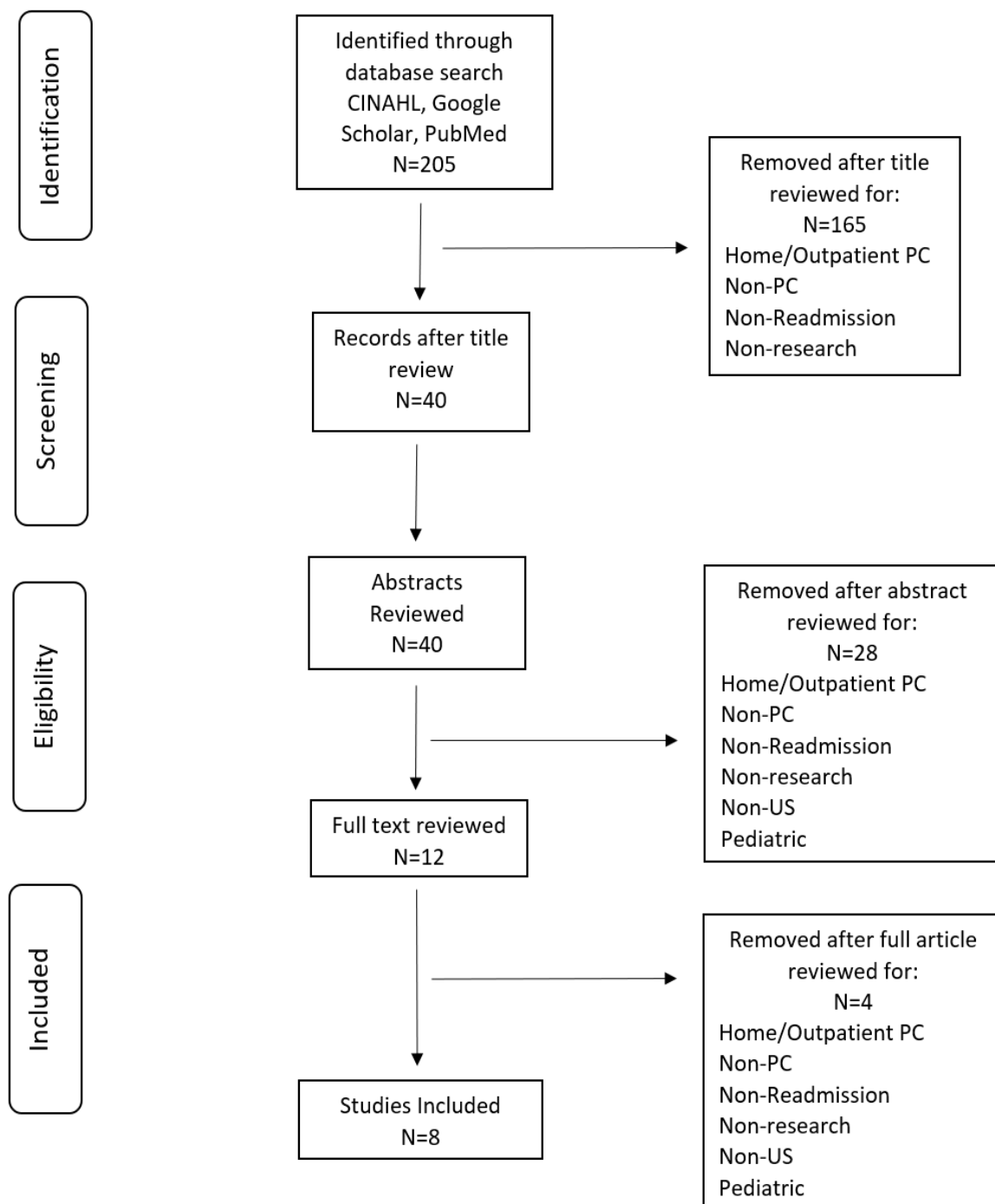


Figure 1. PRISMA chart of study inclusion

Table 1.

*Studies included in final analysis*

Author, Year	Methods/Study Design	Population, setting, sample	Results, main findings	Significance
Chuang, Kim, Blank, Southern, & Fausto (2017)	Retrospective cohort study using propensity score matching	Single-center study, academic acute inpatient setting, CHF patients, 8215 admissions with 356 PC consults and matched controls	No reduction in readmissions in the PC group, suggesting PC may not have the same effect on patients with CHF as other diagnoses	
O'Connor, Moyer, Behta, Casarett (2015)	Retrospective cohort study using propensity score matching	Large urban academic medical center; 53% male, 60% white, 11% oncology	4.1% had PC consult, AOR 0.66 for readmission rate; 10.3% readmission for PC consult; 15.0% readmission for usual care	PC consults showed to decrease readmissions
Zalenski, Jones, Courage, Waselewsky, Kostaroff, Kaufmann, etc. (2017)	Prospective assurance intervention with retrospective analysis using propensity score matching	Patients in an ICU, mean age 67.75, 44% male, 48% black, 7 participating hospitals in the Midwest and Texas,	Patient with PC consult had increases in DNR code status and hospice referrals, nonsignificant decrease in readmission rates	
Zhang, Barysaukas, Rickerson, Catalano, etc. (2017)	Retrospective analysis of goals-of-care outcomes and healthcare utilization after admission to the IPCU	Intensive palliative care unit at a Women's cancer center; symptomatic oncology patients with	50% of patients had a change in code status, 88% discharged alive with 49% to hospice, risk	An inpatient PC unit helps clarify goals of care, aids in appropriate hospice referrals and decreases



Bharadwaj, Helfen, Deleon, Thompson, Ward, etc. (2016)	Descriptive study using retrospective design measuring LOS, mortality, readmissions, saved ICU days, cost avoidance and hospice referrals	uncontrolled symptoms Community based nonprofit health care system, 12 hospitals in 2 states	of readmission was 4%. PC services within 48hrs of admission had decreased LOS, reduced costs and decreased mortality	hospital readmissions Early involvement of PC services emerged as advantageous to the net benefit
Lathrop, Gottfried (2015)	Quality assessment and performance improvement	Frail, 70 years or older living in a facility or 80 years or older living in the community, smokers or had history of smoking, and unable to rise and walk from a chair safely; Midwestern not-for-profit hospital with 398 beds	Readmission rates were 6.3% for those seen by the PC team and 10.3% for those who had an order, but were not seen	Refocusing PC consults from end of life care to earlier in the disease process improved readmission rates
Gagne Henderson, McCloskey, Walter, Rimar, Bai, Moritz (2017)	Observational prospective analysis of the effects of palliative interventions	Patients in a PCU or ICU in an urban teaching hospital	Patient with PC interventions had a decreased LOS, odds ratio of those without a consult was 4.4, costs were lowered by 54% for the	The Rothman/length of stay trigger for PC intervention may have the potential to bend the cost curve for health care

Wiskar, Celi, Walley, Fruhstorfer, Rush (2017)	Retrospective analysis of patients admitted with HF exacerbations using the Nationwide Readmission Database	Patients admitted with HF exacerbations throughout the US in 2013; 102,746 total patients who survived admission	intervention group 2.2% received a PC consult, patients with PC consult had decreased readmission rates for HF or any cause and a decreased cost during the follow up period after admission
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### Study characteristics and participants

Six of the studies were retrospective in design. The other two studies were an observational prospective study and a prospective quality assurance intervention with retrospective analysis of the data. The participants in all the studies had a PC consult within a hospitalization and were propensity matched with a control group for comparison. The majority of the patients were female and White, however Zalenski, et al. (2016) had a majority of Black patients within the study. Two studies focused on patients with HF (Chuang, Kim, Blank, Southern & Fausto, 2017; Wiskar, Celi, Walley, Fruhstorfer, & Rush, 2017), two studies had the majority of patients with septicemia (Bharadwaj, et al., 2016; Zalenski, et al., 2016), two studies focused on oncology patients (O'Connor et al., 2015; Zhang, et al., 2017), the other studies did not have a specific patient population identified, but used a trigger for a PC consult (Gagne Henderson et al., 2017; Lathrop, & Gottfried, 2015).

**Risk of bias within studies**

Selection bias from the use of a convenience sample was the main risk in all the studies. Another bias reported within the studies is the ability for providers to refuse a PC consult, thereby not allowing all appropriate patients to be captured in the data.

**Results of individual studies**

Bharadwaj et al. (2016) used a retrospective design to analyze length of stay (LOS), mortality, readmissions, saved intensive care unit days, cost avoidance, and hospice referrals at a 12-hospital system mainly based in Virginia. Seven hospitals were included for the final study. Overall, the study found that outcomes were improved when patients were seen by the PC team within 48 hours of admission. The study found that readmission rates at 30, 60, and 90 days after a PC consult decreased by 61.5%, 47.0% and 42.1% respectively. Approximately 69% of all hospice referrals were made by the PC consult team and thus, making the PC consults a possible cause for the decrease in readmission rates for those patients. This study concluded that PC made a significant improvement in readmissions.

Chuang et al. (2017) completed a study comparing 30-day readmission rates for patients admitted with an episode of heart failure exacerbation receiving a PC consult and those receiving usual care. The study took place at a single-center academic acute inpatient setting and 8,215 admissions were found from January 2011 through April 2014 with 356 patients receiving a PC consult; 356 matched controls were found for the comparison. The study found a 50.8% 30-day readmission rate for admissions including a PC consult and 36% percent for the control group. Although a PC consult was ordered, it may not have been completed during the hospitalization. Within the group that had a PC

consultation ordered, patients who had a completed consult had a lower readmission rate as compared to those with an incomplete consult, however it was not statistically significant. The study concluded that PC may not have the same impact on reducing readmission rates in the HF population as compared to other patients; however, there may be other confounding factors that affect readmissions that are not included in this study.

Gagne Henderson et al. (2017) used a Rothman Index score (RI) and LOS as criteria for a PC consult for patients admitted to an Intensive Care Unit or step-down unit. Only patients seen by a hospitalist were included in the intervention group. Patients seen by a private healthcare provider or specialist were not eligible to receive the intervention. The RI is a validated, disease-agnostic, continuous measure of patient condition using vital signs, laboratory, and quantification of nursing assessment. Initially, patient data were reviewed retrospectively to analyze the number of patients admitted to the intensive care unit who had an RI score that was identified to be a trigger for PC. After analyzing the data and determining an estimated number of patients who would meet the trigger criteria, a pilot program was initiated to utilize the RI score as an actual prospective trigger for PC. During the pilot program, readmission and LOS rates were compared for those who received a PC consult using the RI score and a control group who did not receive a consult. Ninety-six patients met the RI score for a PC consult within the pilot time frame. Fourteen patients received the intervention of a PC consult, 21 patients declined the intervention, 32 patients were in the control group, and 29 patients were receiving care from private or specialist attending providers care, therefore were not eligible for the intervention. The intervention group with a PC consult had a readmission rate of 3.8% as compared to 34.6% for the group who declined a PC consult. The RI

score and LOS used as triggers for PC consultation may be shown to decrease readmissions.

Lathrop and Gottfried (2015) implemented and analyzed a quality and performance improvement program that modified the daily work strategy of the PC team to decrease potentially preventable readmissions (PPR) for patients with a PC consult. The program also used four distinct characteristics to identify patients for a PC consult earlier in the hospitalization. These included the following: 70 years or older living in a facility, 80 years or older living in the community, smokers/history of smoking, and a Get Up and Go score of four (this test evaluates fall risk by objectively assessing functional skills of the patient). The goal of the study was to reduce the PPR rate from 15.7% to 13%. During the first month the PPR rate decreased to 8.3% that further decreased to 6.3% in the first quarter. However, patients who had a consult order and were not seen had a PPR of 10.3%. This change decreased readmissions from 15.7% to 6.3%. However, there was not a comparison group. This study focused on decreasing the readmission rate for PC consult based upon the quality of the PC consult provided.

O'Connor et al. (2015) completed a study to examine the possible impact of inpatient PC consultations on the 30-day readmission rates at a large urban academic center. This study was a retrospective data analysis of health record data for patients receiving PC consult and a matched usual care group. The study analyzed 34,541 admissions from August 2013 through November 2014 with 1,430 (4.1%) receiving a PC consult. Forty-two percent of the PC consults had a do not resuscitate order entered after the consult. Patients who received a PC consult also had a higher rate of hospice usage at 14.9%. Having a PC consult decreased the rate of readmissions after adjusting for a

propensity score as compared to usual care, 10.3% and 15% respectively. Readmissions were further decreased when consults included goals of care discussions; however, readmissions were not affected when consults involved symptom management alone.

Wiskar et al. (2017) conducted a study using a retrospective secondary data analysis design to analyze data in the Nationwide Readmission Database (NRD). The NRD gathers all hospital admissions from 22 states, tracks those patients through the hospital, and allows for the examination of data for readmission rates. A propensity score was used to match PC consult and usual care patients. The research identified 102,746 patients who survived a hospital admission for HF in the first three months of 2013. Of those, 2,287 (2.2%) received a PC consult while an inpatient. A nine-month follow-up period was used to analyze the relationship between readmissions and PC consultation for HF patients as well as all cause readmissions. The study found that after using a propensity score to match patients with a PC consult to those without a consult, patients with HF were less likely to be readmitted at 9.3% as compared to 22.4% for the comparison group. For a patient with a readmission for any cause, the rate was 29% for those with a PC consult and 63.2% for those without a consult.

Zalenski et al. (2017) performed a study that found only a slight decrease in readmission rates for patients with a PC consult versus those without a consult. The study focused on outcomes of patients in seven hospitals that screened positive for triggers qualifying for a PC consult using a screening tool in the ICU. Electronic records were reviewed for 30-day readmission rates and clinical and cost outcomes for those who screened positive for triggers for a PC consult and who did and did not receive a consult. During the study period, 1,923 patients were admitted to the ICU and of those, 1,134

(95%) were screened for PC consult. The study found that 431 (38%) of those patients screened for a PC consultation met the criteria identified to initiate a trigger for a consult; 405 patients were included in the final analysis with 161 (40%) receiving a PC consult. Readmission rates were not statistically significant for patients receiving a PC consult and discharged alive. There was not a statistical significance between readmission rates for those that received a PC consult and those that did not, 18.9% and 26.9% respectively. There was an increase in hospice referrals, which may have been a factor in the decreased readmission rates.

A study conducted by Zhang et al. (2017) analyzed goals of care outcomes and healthcare utilization after admission to an Intensive Palliative Care Unit (IPCU). In August and September of 2013, 74 patients diagnosed with cancer were admitted to the IPCU. The study analyzed the readmission rate of those on the unit who had curative intent treatments versus those with palliative intent treatments. The study found that 78% of patients who received palliative intent treatments were readmitted to the IPCU within one year of discharge; 85% of patients with curative intent treatments were readmitted to the hospital within one year of discharge, and 14% of those were readmitted to the IPCU. The low rate of readmissions could be attributed to an increase in goals of care discussions and transition to palliative/hospice focused treatments. The study found that cancer patients admitted to a specified PC unit were more likely to have goals of care discussions and hospice referrals and less likely to be readmitted.

### **Synthesis of results**

Overall, the studies found that PC consults have a relationship with readmissions within a variety of patient populations and diagnoses, including possibly reducing

readmissions. However, it is not clear if an increase in hospice referral plays a large part in that decrease. Most of the studies had a majority of White, female patients which may play a role in the use of PC and bias in patient selection based upon a convenience sample within the hospital settings used. Each study focused on a different patient population which could suggest that PC consults decrease readmissions for any diagnosis. However, with limited studies available directly linking a relationship between PC consults to readmissions, study results might not be generalizable.

## **Discussion**

### **Summary of evidence**

Overall, the studies available to be analyzed provided evidence that PC consultation may decrease readmissions into the hospital. Possible reasons for the decrease in readmissions in those who received a PC consult include the following: increase in advanced care planning conversations, increase in hospice referrals, improved patient and family communication with family conferences, and increased communication between caregivers related to symptom management and education. The studies described a variety of diagnoses, reasons for initiation of PC consultations and settings.

### **Limitations**

The largest limitation within the majority of the studies was the use of a retrospective design to analyze data. The main limitation of this systematic review is the limited availability of studies that truly summarize the effect PC can have on readmissions. The benefits and effects of PC on symptom management, communication amongst caregivers, and other outcome data have been studied thoroughly however, the



eight studies in this review were the only studies that analyzed the relationship of PC and readmissions (Billings & Pantilat, 2001; Costa & Othero, 2012; Dhiwali & Muckaden, 2015; Mann, & Welk, 1997; Meghani, 2004; Pavlish & Ceronsky, 2009). Of these eight studies, no study examined a large sample of Hispanics or other minority, non-White groups. These studies either did not report race or ethnicity or reported a breakdown that combined racial and ethnic definitions. Two studies stated Caucasian as the primary patient sample without using the specific term race or ethnicity. There was a lack of consistency in terminology in four of the studies in which race and/or ethnicity were specifically identified. Only one study had a primary diagnosis of HF.

### **Conclusions**

When relationships are analyzed for the use of PC and readmissions, PC is suggested to decrease overall readmission rates in an inpatient setting. There is limited research available to truly analyze the relationship between PC and readmissions that can be generalized to all patient populations. Most studies included participants who were White and female and had a limited number of minority patients. Two studies focused on HF as a primary diagnosis, and two studies focused on the oncology population. The other studies had a variety of patient diagnoses or did not state the specific diagnoses in the study. Each study had a different reason for initiation of consultation, what constitutes the completion of a PC consult, and had a variety of characteristics of the PC consult team including some studies that delineated the consult versus being seen by the team and provided with those specific services. With a lack of definition for PC consultation and use of the PC consultation, it is difficult to determine which use makes the biggest impact on readmission rates, if any. More research is needed to determine relationships between

PC consultation and readmission rates so that study results can be generalizable to all patient populations and levels of care.

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## Chapter 3

### Theoretical Model

Donabedian is best known for his work creating the Structure-Process-Outcomes Model of healthcare. In his original work, *Evaluating the Quality of Medical Care* (1966), he describes the definition of quality and the importance of measuring the quality of healthcare specifically related to the practitioner-patient interaction. The definition of quality can vary greatly depending on who is assessing and describing it. Quality of healthcare is typically defined by the values and goals of society and healthcare at the time.

In his original work, Donabedian (1966) described the individual steps to measuring quality including the three main components of structure, process, and outcome. The first step to measuring quality is to determine what to assess (Donabedian, 1966). Each component has benefits and limitations to the adequate measurement of quality, therefore each component should be taken into consideration and looked at as a continuum of care and antecedents leading to an intermediate end. Measuring the structure of healthcare includes the adequacy of facilities and equipment provided, the qualifications of the healthcare providers, the organization of the administration and the administrative structure, operations of the program, and the fiscal aspects of the organization (Donabedian, 1966). Another approach to measuring quality is to measure the process of the care itself. This includes not just the technology applied but also the question of whether “good” care is being provided. This can be difficult to measure. To adequately measure the process, the relevant dimensions, values and standards to be used need to be addressed (Donabedian, 1966). Donabedian (1966) addressed the need to

analyze both the technical and interpersonal processes when measuring quality.

Measuring outcomes as the main criterion of quality can be beneficial in that many outcomes tend to be distinct such as mortality, complications, and recovery. However, the relevancy of the outcome needs to be determined. Many outcomes may not be relevant to the purpose for which quality of care is measured. Limitations to the outcome measurement need to be addressed, as well as other factors that may influence the outcome. One limitation of using outcome as a measurement is that some outcomes are hard to define, for example patient satisfaction and physical disability (Donabedian, 1966).

Following his initial theoretical work, Donabedian (1990) elucidated seven pillars of quality: efficacy, effectiveness, efficiency, optimality, acceptability, legitimacy, and equity. He further explained that healthcare workers should take patient preference as well as social preferences into account when providing healthcare. In 1990, the Institute of Medicine utilized Donabedian's research and model to build a basis for the report entitled *Medicare: A Strategy of Quality Assurance* (Ayanian & Markel, 2016). In his later works, Donabedian described the need for quality assurance to be modified to remain current with the continuous evolution of the healthcare culture including the need to analyze the current terms of criteria, norms, and standards associated with quality (Donabedian, 1981; Donabedian, 1996). Donabedian's model continues to serve as the basis for other models which focus on explanation and analysis of quality.

The Structure-Process-Outcome Model (SPOM) (Donabedian, 1966) has been used in many research studies to help identify issues within a process, to apply a set model for measuring an outcome, and to define a process to measure an outcome.

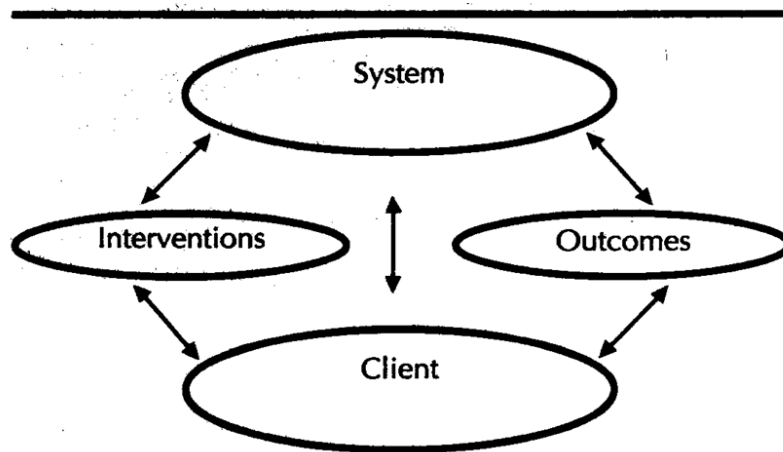
Kobayashi, Takemura and Kanda (2011) used the model to measure patient perceptions of nursing service quality. The study applied Donabedian's model to each of the items in a satisfaction survey to determine if patients' experiences could be confirmed. The authors placed satisfaction with comfort and surroundings in the structure category of the model, patient-practitioner interaction, expertise and skill in the process category and satisfaction in the outcome category. Using this model, the study was able to confirm patients' experiences and perceptions with nursing service.

Liu, Singer, Sun and Camargo (2011) used the SPOM to assess the quality of care provided to patients being boarded in the emergency department. The study utilized this model because it allowed them to conceptualize the underlying mechanisms contributing to poor quality of care for this patient population. The model was used to improve the process of care provided to boarded patients and to improve the care provided. They determined which aspects of the boarding process and care were driving perceptions of poor care. These are just two examples of the use of Donabedian's model to measure and improve the quality of healthcare provided in varying settings.

Since Donabedian's original work, emphasis on quality has changed from a linear focus on the association between structures, processes, and outcomes to a focus on the non-linear relationships between them. Through this shift of emphasis, it has been recognized that the components of structure, process, and outcome can affect each other in a non-linear pattern. The Quality Health Outcomes Model incorporates relationships between these variables, instead of assuming a linear relationship from beginning to end, rather this model includes multiple feedback loops and suggests fluid relationships

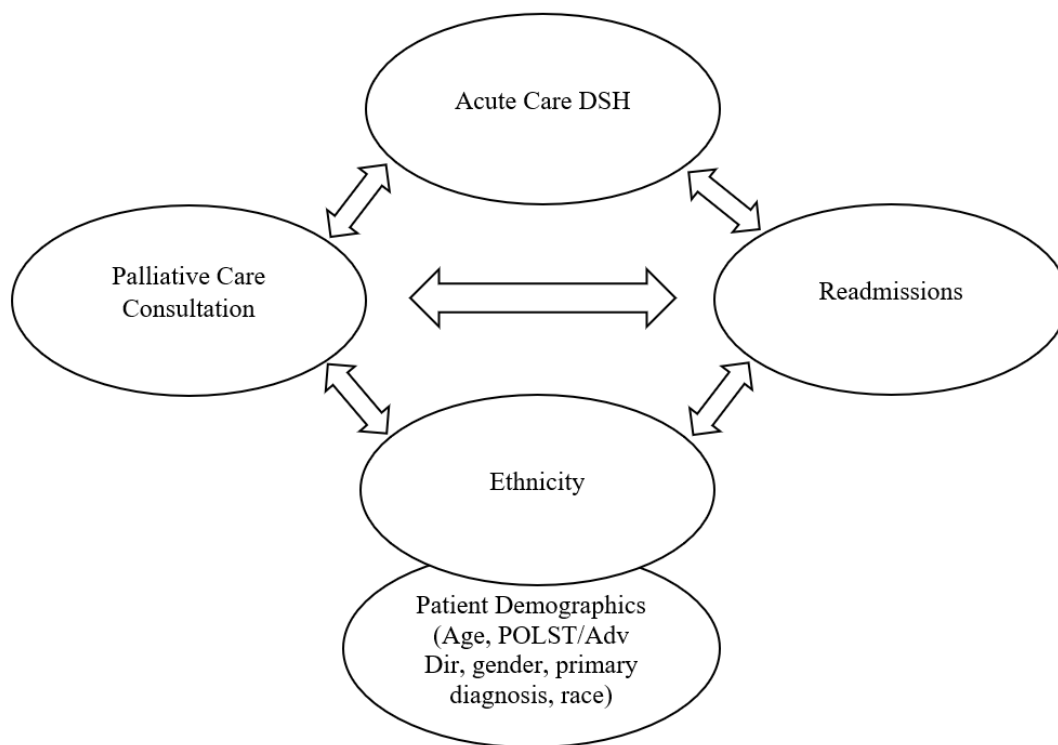


between the parts of the model: system, outcomes, client and interventions (Mitchell, Ferketich, & Jennings, 1998) (Figure 1).



*Figure 1.* Quality Health Outcomes Model

The QHOM will be used as the underpinning of this study to describe relationships between the self-identified ethnic background of patients (client), the use of PC services (intervention), and readmission (outcome) in a DSH (system) (Figure 2). This dissertation utilizes the QHOM because it allows for examining structure while also allowing for consideration of multiple relationships between the individual variables. As a result, this study fills a noted gap in the extant literature. Palliative Care, ethnicity, and readmissions may be related collectively and individually between each. The demographics may possibly be covariates within this study. Therefore, the relationship between the demographics and the other variables will be addressed within the framework. With the multitude of possibilities of relationships between all variables, the Quality Health Outcomes Model will allow for the analysis of the various relationships between all variables.



*Figure 2.* Theoretical Model: Relationships between Ethnicity, PC and Readmissions at an Acute Care DSH

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This section of this chapter aims to define and analyze the concept of palliative care to provide a basis for one of the main concepts of this dissertation.

**Manuscript 2: Palliative Care: A Concept Analysis**

### **Abstract**

Palliative Care (PC) is a concept that has been around for generations. The modern concept of PC has been evolving since the 1960s in the United States. Over the years the concept has taken on a different meaning to different individuals, institutions, and/or cultures. There are multiple definitions in the literature for PC. Because definitions may vary, the approach to PC and what it means has taken on many transformations throughout the health care field. The definition that each person applies to the concept originates from their training, mentors, school, and the hospital or system in which they work. With the transformations in the meaning of PC, the tasks and role of PC practitioners in relation to how the healthcare field delivers patient care also differs. Palliative Care has been used to represent end-of-life care, improving quality of life within any stage of a chronic illness, symptom management, or simply an approach to the care of a patient utilizing a dedicated team. With a variety of definitions, thoughts and personal perspectives on PC, it is important that the researcher state which definition of the concept they are to use within their research.

*keywords: Palliative care, concept analysis*

### **Aim**

The aim of this concept analysis is to define PC using the method by Walker and Avant (2007). The definition set forth in this concept analysis will aid in designing future research.

### **Definitions and Uses**

To truly understand and define PC, the terms will be separated and defined individually.

The term palliate has a history from the Latin word palliat- “cloaked” from the verb palliare, and from pallium “cloak” (Oxford English Dictionary, n.d.). As a verb it is described as “meaning make less severe or disguise the seriousness of” (Oxford English Dictionary, n.d.).

The word “Palliative” has multiple definitions in the Oxford English Dictionary (n.d.): 1. That relieves the symptoms of a disease or condition without dealing with the underlying cause; 2. That mitigates emotional pain or other distress; 3. That cloaks or conceals something; 4. A treatment that gives temporary or symptomatic relief; something that serves to alleviate or mitigate pain, disease, suffering, etc.

The word “care” was derived from the Latin word caritas which means Christian love of humankind; charity (Oxford English Dictionary, n.d.). Care is defined as “effort made to do something correctly, safely, or without causing damage: things that are done to keep someone healthy, safe, etc.: things that are done to keep something in good condition” (Merriam Webster’s Dictionary, n.d.). It is worth noting that in both dictionaries the term “care” is also defined as grief, sorrow, or cause for anxiety. “Care”

can also be used in terms of medicine as, “Charge; oversight with a view to protection, preservation, or guidance” (Oxford English Dictionary, n.d.).

Within Watson’s Theory of Human Caring, the terms *caritas* and *carative* are foundational terms. Watson was one of the founding members who created the International Association for Human Caring. This association discusses topics related to caring including discourse, definition, meaning, and varying theories of caring. Watson’s Theory of Human Caring has evolved over the years. Initially the principal aspects of the theory were caring can only be demonstrated and practiced interpersonally and effective caring promotes health and growth of the individual or family. The latest version of the theory involves the work of *caritas* processes including the process of developing and sustaining a helping, trusting, caring, relationship and administering sacred nursing acts of caring-healing by tending to basic human needs (Turkel, Watson, & Giovannoni, 2018).

The Attending Nurse Caring Model (ANCM) is a new model introduced by Watson and Foster (2003) utilizing The Theory of Human Caring as a guide in the creation and can be used as an example for transforming and advancing nursing practice. The ANCM states that nursing is becoming increasingly more dependent upon partnerships, coordination, new forms of communication, authentic, caring, and healing relationships and the spiritualizing of health. Throughout history nurses have been seen as caring for patients which is in some contrast to physicians who have been seen as curing patients (Watson & Foster, 2003).

Research on caring in the Nordic countries created the Theory of Caritative Caring in 2007, which states that love is connected to faith and hope and is the



fundamental basis for care. It focuses on defining how care and caritas create the foundation for healthcare. Caritative care is the basic motive for care and includes love, mercy, and charity (Levy-Malmberg, Eriksson, & Lindholm, 2008).

Definitions have also been laid out by healthcare professionals and organizations including the World Health Organization (WHO). The WHO defines palliative care on its website as “an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual” (World Health Organization, n.d.).

Palliative care can also be defined as specialized medical care for people with serious illness. This type of care is focused on providing relief from the symptoms and stress of a serious illness. The goal is to improve quality of life for both the patient and the family. Palliative care is provided by a specially trained team of doctors, nurses, and other specialists who work together with a patient’s other doctors to provide an extra layer of support. It is appropriate at any age and at any stage in a serious illness, and it can be provided along with curative treatment (Center to Advance Palliative Care, n.d.)

Based on the many definitions stated above there are also many different uses of the term “Palliative Care” throughout the United States. There has been a movement to differentiate PC from hospice care and discussion that it is difficult to define both individually when they provide similar care to patients in whole (Mann & Welk, 1997). There is a need for a specific definition for each concept when they are used in terms of treatments provided for patients who are not actively dying. Both describe the current

medical thought that PC simply provides symptom relief and does not take into consideration other aspects of palliation or uses of PC as a team approach to caring for an individual and family (Mann & Welk, 1997).

Another perspective of PC is that it includes a multitude of facets. These may be consultative services or programs initiated within the hospital setting or in an outpatient setting. Interdisciplinary services or programs are used to help with symptom management, promotion of understanding the prognosis and disease process, understanding treatment options, providing psychosocial assistance and care to patients and their families, and clarifying the goals of treatments. All can be used in conjunction with curative or life-sustaining treatments (Billings & Pantilat, 2001).

Palliative care is specialized care provided to patients with serious illnesses and includes symptom management and improving quality of life for the patient and family for any diagnosis of a serious illness. The care is provided by a team of doctors, nurses and other healthcare professionals and is offered to any patient throughout the illness along with curative treatments to ensure specialized care for these patients (National Palliative Care Research Center, 2013).

In the United States, hospice was established in the 1960s for patients within their last few months or weeks of life, while PC has been a relatively new specialty or service. Palliative care has primarily been seen as an academic, hospital-based discipline that is provided by an interdisciplinary team. Different from hospice, PC can be provided in conjunction with curative treatments at the earliest presentation of the illness (Billings & Pantilat, 2001).

Moraes's and Neto's works stated that PC does not hasten or delay death, but offers relief of symptoms, integrates psychological and spiritual aspects of care, offers support to the family during the disease process and after death, and is client-centered, not disease-focused (Costa & Othero, 2012).

There are also different uses of the concept outside the United States. Palliative care is a Modern Public Health Approach in Russia that started in the 1990s in St. Petersburg (Vvedenskaya, n.d.). The approach describes PC as specialized care for dying patients and aims to provide the best quality of life for the patient as well as the family and caregivers of the patient during the dying process (Vvedenskaya, n.d.). Russia has made great strides in implementing PC, however, it continues to evolve within the realm of dying patients and end-of-life care.

In Brazil, the definition of PC includes symptom management and improved quality of life for patients through an interdisciplinary approach and is still under development in the hospital and outpatient settings (Paiva et al., 2012).

Costa and Othero (2012) identify The Portuguese Association of Palliative Care in 2006 defining PC as an active solution for extended, advanced incurable, and progressive illness that attempts to prevent consequent suffering and to provide the best quality of life possible to dying persons and their families.

There are 922 services within 19 countries in Latin America with most services in Chile, Mexico, Cuba, Costa Rica, and Argentina and include home care and hospital support teams (International Association for Hospice and Palliative Care, 2012). Throughout Latin America the definition of PC still revolves around end-of-life issues with symptom management as the focus. The need for research using PC to focus on the

patient throughout the illness, not just focusing on end-of-life or at the time of dying, is evident when looking back on the use of the concept of PC throughout the world (Pastrana et al., 2009).

According to The Interdisciplinary Center for Palliative Medicine at the University Hospital of Würzburg, Germany, PC “has the intention to improve quality of life in patients with advanced critical illness and limited life expectancy by abatement of pain and other symptoms as well as providing psycho-social, spiritual and medical support” (University Hospital of Würzburg, 2014). Palliative care has been a familiar term in the Canadian, Australian, and British healthcare systems throughout the years.

Although there are many definitions of PC, there are consistent defining attributes included in the description of PC.

### **Defining attributes**

The first attribute of PC is compassion. When caring for a patient who is facing years with a chronic illness, the provider’s approach to care changes moving from a curative approach to a more supportive approach. Compassion is a sense of awareness of others’ needs and paying close attention to those needs when caring for them (Sawbridge & Hewison, 2015). Compassionate care is a foundational piece of PC and is described as not just sympathy, but related to justice (Rumbold, 2012). The compassionate person recognizes another’s loss and considers the other’s entitlement to that loss before creating a response within the care provided. Compassion is shared humanity, a core value for a healthy society and a traditional understanding of love within the Christian story of the Good Samaritan. This is imperative to the care of a patient with a chronic illness who may face years of admissions into the hospital. By providing compassionate care the

healthcare team can take more time to ensure that the patient and family understand the illness and the trajectory. They are also able to help the patient care for themselves at home and prevent re-hospitalizations.

The second attribute to PC is coordination of care. Oncology nurses' perspectives on providing PC to patients were studied with the definition given by the nurses as "genuinely relating to the human aspect of the illness experience and providing physician, emotional, and spiritual comfort and support" (Pavlish & Ceronsky, 2009). The nurses identified coordination of care as a distinctly important attribute of PC. When PC is offered to a patient with a chronic illness the coordination of care is imperative to ensure the patient has all the information needed to continue their life with the highest quality of life possible throughout the trajectory of the illness. Coordinating care between the entire health care team ensures that the patient has everything they need to maintain the highest quality of life throughout the illness. Care needs to be coordinated both within and outside the hospital setting.

The third attribute of PC is communication. Communication is "open therapeutic dialogue concerning advanced care planning, prognosis, and preferred treatment goals" within the healthcare team (Meghani, 2004, p. 158). Palliative Care will only be successful with communication between the caregivers/healthcare team themselves and communication with the patient and family. Communication encompasses the ability to teach the patient how to care for themselves, the disease process, and the importance of a support system. Another aspect of communication is honesty. In order to maintain hope, physicians and healthcare providers often do not want to be completely honest with

patients and families. However, withholding information or being dishonest in any way breaks the trust the patient and family have for the healthcare team.

The fourth attribute to PC is an interdisciplinary approach to the care. Throughout the literature it has been stated that an interdisciplinary approach to the care of the patient is essential to PC. An interdisciplinary approach must include the spiritual, psychosocial, and physical care of the patient, including the support system for the patient. Palliative Care as an interdisciplinary approach involves different disciplines by controlling symptoms while effectively communicating with the patient and family (Costa & Othero, 2012). The successful maintenance of the highest quality of life possible can only be accomplished if the care includes the caregivers of the patient as well as all aspects of the patient as a whole, not just symptom management and physical wellbeing. A study on the effectiveness of PC and symptom management in an outpatient setting in Brazil found that symptoms of patients with advanced cancer improved greatly with the interdisciplinary approach of PC (Paiva et al., 2012).

The basic attributes of PC are compassion, coordination of care, communication, and an interdisciplinary approach. Although these attributes seem to be very similar, they cannot exist alone in the care of a patient with a chronic illness. All of these attributes must exist to provide quality care, improve the quality of life of the patient and family and prevent further suffering throughout the illness.

### **Model case**

Mr. Jones is admitted to the hospital with exacerbation of Congestive Heart Failure (CHF). When he is admitted, the Emergency Department (ED) nurse notices the diagnosis and orders a consult for the PC team at the hospital. While the nurse is waiting

for the PC nurse to arrive she sits with the patient and his wife to explain who the PC team is, including the team members and the specialized care they can provide to Mr. Jones and his family. The patient is admitted to the Progressive Care Unit (PCU) for monitoring and extensive treatment when the PC nurse arrives the next morning. The PC nurse sits with the patient and his wife for over an hour, discussing CHF in detail. She answers all their questions, ensuring they understand what was discussed about the illness and provides information to take home. The social worker with the PC team explains the importance of an advance directive and supportive care offered in the community and reiterates the team approach to care of patients with chronic illness. Later that day the physician comes to see the patient and knowing that the PC team has seen the patient, he asks what they understood about the diagnosis. He explains the medications he is prescribing and asks if the patient is having any further symptoms. Before he leaves the room, he explains that the team will be by to see the patient every day and that they would appreciate if Mrs. Jones could be there for the conversations to ensure they both receive the support and information needed. The bedside primary nurse reiterates all the information given to the patient and wife throughout the day and refers to all the handouts that have been provided. This care progresses throughout the week and when the patient leaves, Mr. and Mrs. Jones explain to the healthcare team that they feel safe, supported, and empowered to be able to care for themselves at home and know what resources are available outside the hospital if needed.

### **Borderline case**

Mrs. Gonzalez is admitted to the hospital with an exacerbation of Chronic Renal Disease which she was diagnosed with three years ago. When she arrives to the ED the

physician tells her that she must be admitted to the hospital and explains that they have a PC team that will be seeing her throughout the hospitalization. Mrs. Gonzalez does not speak much English and she just nods. Mrs. Gonzalez's son later enters the room and the nurse explains what the physician had stated just a few hours earlier. The patient arrives to the PCU and expresses relief when later that evening she is assigned a nurse who speaks Spanish. The patient asks when the PC nurse will be seeing her and the primary bedside nurse states she does not know, but probably in the morning. The PC nurse arrives late the next morning, however does not speak Spanish. She tries her best to explain the disease process, trajectory of the illness, and ways to improve the quality of life, but the patient does not quite understand. The PC nurse leaves the room and the patient feels apprehensive and confused. The son comes in later in the day just as the physician is entering the room. The son speaks English and translates the information the physician is providing to the patient. However, the son does not understand medical terminology and has trouble identifying certain words the physician uses. When the social worker comes in the next day, the son and patient are relieved that she speaks Spanish, but still have a lot of questions that the social worker cannot answer. The primary nurse and social worker do their best to answer all the questions, but still leave the patient and son feeling uneasy. When the patient is ready to be discharged she is being cared for by a nurse who does not speak Spanish. The nurse asks for an interpreter and ensures that the son is at the bedside when the nurse provides the education to the patient. The patient and son feel more at ease when being discharged and are able to understand and explain what resources they have outside the hospital as well as the care



they must provide the patient while at home to relieve symptoms and prevent further hospitalizations.

### **Contrary case**

Mr. Smith is admitted to the hospital with Chronic Obstructive Pulmonary Disease (COPD). He is in severe respiratory distress and must have a breathing tube placed to help him breathe. The physicians briefly explain the procedure to the patient and wife prior to the procedure. However, the Smiths are in such distress they cannot comprehend what is happening. Mrs. Smith is escorted out of the patient's room and is asked to wait in the waiting room until they call her back. When she returns, her husband has a breathing tube and is in a medically induced coma to make him comfortable. She begins to cry. The nurse enters, barely acknowledges Mrs. Smith and prepares Mr. Smith to be admitted to the ICU. Throughout the next few days Mrs. Smith never leaves the bedside but, she is rarely acknowledged. When she asks questions, she receives short answers using medical terminology. Mr. Smith begins moving continuously, coughing with the breathing tube in place and grimacing. When this happens, the nurses increase the medication that is keeping him asleep without explaining anything to Mrs. Smith. A few days later Mr. Smith has the breathing tube removed but is still having difficulty breathing. He tells the nurses and physicians he is struggling and is in pain. Mrs. Smith tries to advocate for him by asking questions, but again is dismissed with short medical answers she still does not understand. The patient is moved to the PCU a few days later and shows signs of improvement but is still confused as to what is going on and what he can do at home to improve his symptoms. Mrs. Smith is anxious about taking her husband home because she has no idea what to do to help him. The nurse and physicians

treat his symptoms until he is ready to be discharged from the hospital, but when the nurse comes in to explain everything to the patient, the wife is not there. The nurse explains the discharge instructions to the patient, hands him a stack of papers, and calls his wife to say he is ready to go home. Mr. and Mrs. Smith leave the hospital to only return 4 days later with the same symptoms.

### **Antecedents and Consequences**

The main antecedent to PC is a diagnosis of a chronic incurable illness. Another antecedent that could be considered is acceptance of the chronic/incurable illness by the patient and/or support system. Any patient who is diagnosed with a chronic incurable illness can be provided PC. There is no distinction for insurance, ability to pay, age, or stage within the illness. In order for PC to be truly accepted and appreciated by the patient/support system there must be acceptance that the patient has a chronic/incurable illness that needs specialized treatment.

The consequences of PC are many including improved quality of life, increased knowledge of illness, resource acquisition, support, advanced care planning, increased coping, decreased hospitalizations, and symptom management/decreased suffering. Social support, symptom management, and psychological support are key aspects of good PC (Dhiliwal & Muckaden, 2015). According to the National Institute for Health and Care Excellence in the UK (2006) it is important in the care of patients with dementia using PC to include physical, psychological, social, and spiritual care to ensure the highest-level quality of life for the patient and the family (National Institute for Health and Care Excellence, 2006). “Integrating early access to PC for people with lung cancer has the potential to increase their understanding of their illness, facilitate coping, and

support symptom management” (Johnston, Buchanan, Papadopoulou, Sandeman, & Lord, 2013, p.436). Being able to identify patients with chronic illnesses early on in their disease process who would benefit from PC will improve their quality of life, increase their care options, and provide patient-centered care and caregiver empowerment (Jones, 2015).

### **Empirical Referents**

Empirical referents are classes or categories of actual phenomena that by their existence or presence demonstrate the occurrence of the concept itself and are the means by which one can recognize or measure the defining characteristics of the concept (Walker & Avant, 2007). The empirical referents for PC are similar if not the same as the attributes set forth previously. During the creation of the Quality Measure for Palliative Nursing questionnaire, five themes emerged: personal characteristics, communication skills, knowledge, relationship with patients, and providing comfort. These themes are similar to the defining attributes and could be considered empirical referents (Cameron & Johnston, 2015). This is the only instrument developed to measure PC; however, instruments have been developed to measure quality of life and compassion.

### **Summary**

The definition of PC has evolved throughout the years and is starting to become a more prominent concept throughout the world. However, the definition and use of PC varies greatly depending on the hospital setting, home setting, country, and individual provider’s experiences. Breaking down the concept of PC to create a definition for future research was the aim of this concept analysis. This definition can help guide future research and instrument development to be able to formally determine the effectiveness

of PC in any setting. Palliative Care can be provided by each individual caring for the patient or a team of healthcare providers. Each provider can provide compassion, symptom management per their expertise, communication between the healthcare team and patient and family, coordination of care through communication, and an interdisciplinary approach by providing information or referrals. Palliative Care is providing patient-centered care individualized to the patient who has the chronic illness and to their family. The operational definition set forth by this concept analysis is holistic care provided to a patient/family at any stage of a chronic illness utilizing compassion, communication coordination of care, and symptom management. Future PC research should focus on chronic illnesses and care throughout the continuum of the illness. The research should also provide a more comprehensive and cohesive definition of PC for use in policy, standardization of care, and cohesion within the healthcare field in regards to PC.

### **Conclusions**

The lack of clarity regarding the use of PC in the chronically ill has made it difficult to incorporate a standard definition into research and to compare different PC studies. More clarity and guidance into the use of PC is needed to ensure that it is adequately implemented, studied and compared.

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## **Chapter 4**

### **Manuscript 3: Examining Relationships between Ethnicity, Palliative Care and Readmissions in the Heart Failure Population in the Acute Care Setting**



## Abstract

**Background:** Palliative care consultations have been shown to improve symptom management and interprofessional care in the inpatient setting. Although outcomes of palliative care have been studied, there is little research relating palliative care to readmission rates. Moreover, few studies have examined palliative care and readmissions rates within the context of ethnicity.

**Objective:** The specific aim of this study is to examine the relationships between palliative care, ethnicity, and readmissions among patients diagnosed with heart failure at a medium sized community Disproportionate Share Hospital serving a large population of ethnically and racially diverse patients.

**Methods:** Using a retrospective correlational design, patient demographic information, diagnosis, and readmission data was gathered from the hospital's electronic health records for all patients admitted with a primary or secondary diagnosis of heart failure, between January 2016 and June 2016, and analyzed for relationships between the receipt of palliative care, ethnicity, and all cause readmission within the time frame examined.

**Results:** Three hundred thirty adult admissions between January 2016 and June 2016 were used in the analysis. Data are presented and analyzed by variable in relation to readmissions. There was no statistical significance found in the relationships between ethnicity, PC consult, and readmissions. There was also no significance found in other variables including payer, age, gender, primary diagnosis, and language.

**Conclusions:** The absence of a statistically significant relationship between readmission and patient ethnicity may reflect the possibility that hospitals struggle with prevention of readmissions regardless of primary ethnicity within the hospital population.

**Implications:** While a PC consult can be sought for the purpose of initiating advanced care planning discussions, other reasons identified include a need to prevent readmissions by providing symptom management, education regarding treatments, identifying available resources, and aiding in communication amongst healthcare providers.

## Introduction

Readmissions result from a multitude of causes, including the complex relationships between communities, hospitals and patients, complications from treatments, lack of follow-up care, and inadequate care coordination from the inpatient to the outpatient setting (Joynt & Jha, 2012; Lu, Huang, & Johnson, 2016). Palliative Care utilizes a dedicated team or specialized care for patients diagnosed with any chronic illness. Palliative Care provides a multitude of interprofessional services to aid in symptom management, promotion of understanding the disease process, understanding and navigating treatment options, psychosocial assistance, and care to patients and their families that can all be used in conjunction with curative or life-sustaining treatments (Billings & Pantilat, 2001; National Palliative Care Research Center, 2013; O'Connor, Moyer, Behta, & Casarett, 2015). Palliative Care can be provided throughout the illness trajectory and provides the patient the opportunity to transition to hospice during the end stages of the illness.

Heart Failure (HF) is one of the most common chronic illnesses in the United States with 5.7 million Americans over the age of 20 diagnosed in 2015 (Centers for Disease Control and Prevention (CDC), n.d.). Projections indicate that the incidence of HF will increase 46% by 2030 resulting in a total of eight million people diagnosed with HF (Centers for Disease Control and Prevention, n.d.). Patients with HF experience severe symptom burden and decreased quality of life as the illness progresses. These patients are commonly readmitted to the hospital due to exacerbations of the illness, which can lead to increased burden on the family and/or care giver.

Disproportionate Share Hospitals (DSH) provide a disproportionate amount of care to low-income patients or are located within a rural area, have greater than 100 beds, and have greater than 30% of their net revenues from local and state government sources for the indigent population (Health Resources and Services Administration, 2017). Frequently the main populations served by DSH are the Hispanic and African American populations. In addition, undocumented immigrants, who frequently experience challenges in accessing health care services, receive care from DSH and their emergency departments (Call et al., 2014; Galarneau, 2011). Readmission rate odds are 7% to 17% higher for safety-net hospitals or DSH than for other hospitals. With this variation in readmission rates, 40% of the disparities in readmissions were not explained by the model used in this study (Sheingold, Zuckerman & Shartzter, 2016). Clinical and socioeconomic factors explain approximately 60% of the observed differential in readmission rates between DSH hospitals and other large hospitals that provide similar services to a higher number of insured patients (Sheingold et al., 2016).

Unnecessary readmission rates are approximately 18.8% for Medicare and 14.4% for all payer groups and estimates are that readmissions may cost the Medicare Program over \$17 billion annually in unnecessary readmissions (Centers for Medicare and Medicaid Services (CMS), 2016). A report by the Medicare Payment Advisory Commission (MedPAC) stated that in 2015, the overall rate of potentially preventable readmissions was 10.5%, with the rate for HF patients at 16.4%. In particular, California had a total all cause readmission rate of 13.53% in 2015, with approximately 15% for both Medicare and Medi-Cal patients (California Health and Human Services, 2017). Patients discharged with a diagnosis of HF and acute myocardial infarction (AMI) are

more likely to be readmitted (Hu, Gosahn, & Nerenz, 2014). The average incidence of recurrent hospitalization in patients with HF over 55 years of age was 6.6 per 1,000 patients per year (CDC, n.d.). The Centers for Medicare and Medicaid Services estimates that minority and vulnerable populations are 30% more likely to be readmitted to the hospital within 30 days as compared to their White counterparts. The main disparities in care and readmissions result from language barriers, a decreased likelihood that they have a primary care provider and receive routine care, lower levels of health literacy, lack of adequate culturally appropriate education materials, socioeconomic challenges, and comorbidities (Betancourt, Tan-McGrory, & Kenst, 2015). The issue of higher rates of non-White readmissions is an ongoing focus for quality improvement throughout the U.S. Healthcare System.

In recent research analyzing the effect of PC on readmissions, cardiac disorders were among the top three reasons for PC consultation and admission and/or readmission to the hospital (Enguidanos, Vesper, & Lorenz, 2012; Evangelista et al., 2014; Fasolino & Phillips, 2016; Tangeman, Rudra, Kerr, & Grant, 2014). Although cardiac disorders are one of the leading causes for PC consultation and readmission, there is still a lack of research relating PC consultation, ethnicity, and readmissions. Approximately 50% of Hispanics in the United States had some form of heart dysfunction with one in 20 Hispanics having clinically significant HF (Mehta, et al., 2016). Individuals who have lower incomes and are members of an ethnic or racial minority group have an increased risk of cardiovascular disease (American Heart Association, 2017).

Ethnicity can encompass shared social identification, group boundaries, ancestry, religion, education, economic boundaries, experiences, traditions, and language (Ahmad

& Bradby, 2007; Bradby, 1995; Bradby, 2003; Dein, 2006; Ferdman, 1992; Senior & Bhopal, 1994). Ethnicity differs from race in that race is typically defined as distinct populations whereas ethnicity is a term typically used for a culture of people from a geographic region and includes their heritage, religion, and customs (Live Science, 2012). The United States utilizes both race and ethnicity on national and state political and census surveys and the healthcare system utilizes race and ethnicity as a main category for analysis and comparison in research. More specifically, using ethnicity alone or in combination with race has been broadly accepted within the healthcare, research, and political areas (Ahmad & Bradby, 2007; Bradby, 1995; Bradby, 2003; Dein, 2006; US Census Bureau, 2011; Zagefka, 2009). The largest ethnic group in the United States are those sharing a Hispanic origin defined as “a person of Cuban, Mexican, South or Central American or other Spanish culture or origin regardless of race” (Humes, Jones & Ramirez, 2011, p. 2).

Heart failure is one of the most prevalent diagnosis in the United States with an increased rate in the Hispanic and African American populations. Readmissions for patients with chronic illnesses, primarily HF, continue to be of concern for hospitals. Research has indicated that providing PC consultation may improve patient outcomes and decrease symptom burden for patients with chronic illnesses. To date, little research has been conducted analyzing the relationships between PC and readmissions and the majority have included non-Whites. Therefore, the purpose of this study is to analyze relationships between ethnicity, PC consultation, and readmissions in the HF population at a DSH that has a 70% non-White self-identified patient population.

We hypothesize there will be statistically significant relationships between the use of PC, non-White populations and readmissions.

### **Methods**

**Design.** This study is a retrospective analysis of data collected from an Electronic Health Record (EHR). The data were extracted by the principal investigator with the analysis being conducted with the help of a statistician and co-investigators.

**Setting.** This study occurred at a small, 343-bed DSH community hospital providing emergency, obstetric, critical care, and acute care inpatient services. The hospital is located within 20 miles of a border with Mexico and has a 60% Hispanic patient population and approximately 70% overall non-White population. The PC services at this hospital include a clinical nurse specialist (CNS) and a social worker. Referrals for a PC consult were initiated through a provider order at the time of the admissions in 2016. The majority of consults for the PC team are initiated for goals of care conversations and/or code status conversations.

**Sample.** Adults greater than 18 years of age with a primary or secondary diagnosis of HF admitted to the hospital for a minimum of two nights from January 2016 through June 2016 were included in this study. Each patient identified as having had an initial PC consult consultation with a CNS and/or social worker. Any case identified in the following categories were excluded: non-live discharges, obstetrics, pediatrics, neonates, outpatient admission, outpatient surgery, admission or discharge from a rehabilitation unit within the hospital, hospital length of stay less than two nights, and discharges to another acute care hospital.

Data extracted from the EHR for HF patients admitted from January 2016 through June 2016 include demographics (age, gender, presence of a POLST/advance directive, origin of admission, payer, language, and patient-reported ethnicity and race), the completion of a PC consult and reason for consult, primary admitting diagnosis, and readmission data. Review by the Institutional Review Boards of the community hospital and investigator-affiliated university were obtained to ensure compliance with protection of human subjects and protected health information. Exempt status was provided by the Institutional Review Boards prior to data collection and analysis. All data were stored on a password-protected encrypted drive, only accessible to the primary investigator.

### **Variable Definitions**

Ethnicity is defined as the culture, heritage, and language of a group of persons from the same geographic location. Ethnicity is used throughout healthcare research as a covariate because of its established relationship with access to health, health literacy, patient engagement, and socioeconomic status. (Brown, O’Rand, & Adkins, 2012; Deshpande, Hoyer, & Donthu, 1986; Dew, Scott, & Kirkman, 2016; Negy, Shreve, Jensen, & Uddin, 2003; Rhee, Uleman, Lee, & Roman, 1995; Williams, Priest, & Anderson, 2016). Ethnicity was a readily available recorded variable in the EHR.

Palliative Care is holistic care provided to patients with chronic illnesses throughout the trajectory and hospital stay by an interdisciplinary team, specifically including a CNS and Social Worker. This care can be provided by all healthcare providers, with a consultation service to provide more distinct palliation services.



Readmissions are defined as an admission to the hospital within 30 days of a previous hospitalization. This definition is set forth by CMS for recognition as well as penalties for reimbursement.

### **Analysis**

Analysis of the data was completed using IBM SPSS Statistics 25 software. Descriptive statistics were calculated for age, gender, presence of a POLST/advance directive, origin of admission, primary language, primary admitting diagnosis, and self-reported ethnicity and race. Ethnicity was defined as Hispanic or non-Hispanic/non-Latino. The races identified were White; Black or African American; Asian; Native Hawaiian/other Pacific Islander; and Other. Payer was described due to previous research indicating a possible relationship between payer and ethnicity. Palliative Care consults, including reason for and use of, and readmissions were also described.

Following an examination of frequency distribution, *chi* square statistical analysis was used to examine potential association among the categorical variables. Variables with “unknown” or “declined” in the EHR were coded as missing to accurately obtain percentages and data analysis.

### **Results**

Three hundred seventy-one patients were admitted to the hospital with a primary or secondary diagnosis of HF between January 2016 and June 2016. Of those, 330 were included in this analysis based upon inclusion criteria. The researcher excluded 41 cases for less than a two-night hospital stay or for non-inpatient admissions. The majority of patients admitted were male 56.1% ( $n=185$ ) and 50.9% ( $n= 68$ ) were aged 71-90 ( $M=75.37$ ,  $SD=15.58$ ). Electronic health record-identified ethnicity was described as

Hispanic or non-Hispanic or non-Latino with 53.7% ( $n=176$ ) patients identifying as being Hispanic. The majority of patients were admitted through the Emergency Department (ED) (97.6%,  $n=322$ ). The primary languages spoken were English and Spanish with 54.5% ( $n=190$ ) and 40% ( $n=132$ ) respectively. Although all patients had a primary or secondary diagnosis of HF, HF was the primary admitting diagnosis for 83.7% ( $n=170$ ) of the cases with 16.3% being for respiratory, renal or other in nature. Of the 330 cases included in this analysis, 21.2% ( $n=70$ ) were readmitted within 30 days, 51.4% ( $n=36$ ) of those cases experiencing a readmission were Hispanic, and 7% ( $n=23$ ) of cases had a PC consult during their admission. In 65.2% ( $n=15$ ), advanced care planning and goals of care discussions were the reason for the PC consult. Additional demographic findings are addressed in Tables 1 and 2.

Statistical significance was found in the relationship between age and readmissions ( $p = 0.003$ ). There were no other statistically significant relationships found in the analysis. With regard to the main study aim of analyzing relationships between the variables of ethnicity, receipt of a PC consult, and occurrence of readmission, there was no statistically significant relationship found between ethnicity of the patient and the occurrence of readmission ( $p=0.687$ ) (Table 3). Moreover, no statistically significant relationship was noted between patient ethnicity and receipt of a PC consult ( $p=0.521$ ) (Table 4). Notably, only one case with a history of receiving a PC consult was readmitted, which precludes making any statistical inferences.

Table 1.

<i>Variable data</i>			
<b>Demographic</b>	<b>Readmitted</b>	<b>Not</b>	<b>p value (<math>\chi^2</math>)</b>
	<b>n = 70 (%)</b>	<b>Readmitted</b>	
		<b>n = 260 (%)</b>	
Gender			0.08
Male	31 (44.3)	146 (56.2)	
Female	39 (55.7)	114 (43.8)	
Age			0.003
20-50	9 (12.9)	16 (6.2)	
51-70	10 (14.3)	76 (29.2)	
71-90	45 (64.3)	123 (47.3)	
91-101	6 (8.5)	45 (17.3)	
Race			0.154
White	17 (24.3)	75 (28.8)	
Black or African American	7 (10.0)	14 (5.4)	
Asian	11 (15.7)	23 (8.8)	
Other	35 (50.0)	148 (56.9)	
Language			0.613
English	35 (50.0)	145 (55.8)	
Spanish	30 (42.8)	102 (39.2)	
Other/Mixed	5 (7.1)	13 (5)	
Payer			0.313
Medicare	45 (64.3)	147 (56.5)	
Medi-Cal	13 (18.6)	57 (21.9)	
Private	12 (17.1)	46 (17.8)	
Other	0 (0)	10 (3.8)	

Table 2.

*Clinical Factors*

Demographic	Readmitted	Not Readmitted	p value ( $\chi^2$ )
	n = 70 (%)	n = 260 (%)	
Primary Diagnosis			0.72
CHF	34 (48.6)	136 (52.3)	
Respiratory	5 (7.1)	10 (3.8)	
Arrhythmia	1 (1.4)	4 (1.5)	
CHF/Resp	9 (12.9)	29 (11.2)	
CHF/Other cardiac	9 (12.9)	42 (16.2)	
Other	12 (17.1)	39 (15)	
POLST/Adv Directive*			0.888
Yes	24 (34.8)	93 (36.0)	
No	45 (65.2)	165 (64.0)	
Origin of Admission			0.79
ED	68 (97.1)	254 (97.7)	
Other	2 (2.9)	6 (2.3)	
PC Consult			0.06
Yes	1 (1.4)	22 (8.5)	
No	69 (98.6)	238 (91.5)	

\*3 cases coded as missing for “unknown”

Table 3.

*Ethnicity and Readmissions*

Ethnicity*	Readmitted	Not Readmitted	p value ( $\chi^2$ )
	n = 70 (%)	n = 258 (%)	
Hispanic	36 (51.4)	140 (53.8)	0.687
Non-Hispanic or Non-Latino	34 (48.6)	118 (45.4)	

\*2 cases coded as missing data

Table 4.

*Ethnicity and PC Consult*

Ethnicity*	PC Consult n = 23 (%)	No PC Consult n = 305	p value ( $\chi^2$ )
Hispanic	14 (60.9)	162 (53.1)	0.521
Non-Hispanic or Non-Latino	9 (39.1)	143 (46.9)	

\*2 cases coded as missing data

### Discussion

We found no statistically significant relationships among the primary variables of ethnicity, receipt of a PC consultation, and readmission. Moreover, we found no relationships among the following variables: POLST/advance directive, gender, payer, primary admission diagnosis, race, and origin of admission. There was statistical significance found in the relationship between age and readmission, suggesting that age and readmissions are directly related. Research varies amongst studies analyzing age and readmissions. Several studies have found elevated rates of readmissions for patients over 65 years of age (Ranasinghe et al., 2014; Wetmore, et al., 2018;). This may simply reflect the association of age and number of chronic conditions, which can increase risk of adverse outcomes and result in readmission for any number of reasons (Lund, et al., 2015; Zhu, Armstrong, Tchkonja, Kirkland, 2014). Conversely, using the Agency for Healthcare Research and Quality Nationwide Readmissions Database, Berry et al. (2018), noted that readmissions were elevated in ages 24-44 with all conditions/diagnoses and Hickson et al. (2018) found that a 30-year-old patient receiving dialysis had an 87% chance of being readmitted as opposed to a 25% chance of readmission for an 80-year-old patient receiving dialysis. However, studies examining a relationship between age

and PC consultation are scarce. Current research emphasizes diagnoses, symptom management, and use for goals of care as the main focus for PC consultation and emphasizes the need to make PC to all age groups of patients. This statistically significant relationship between age and readmission warrants further exploration.

Although we conducted our study at a facility located within close proximity of the U.S. border with Mexico, patients seen at this facility may not have had an ethnic origin in Mexico. A further area for research includes looking at acculturation as well as primary language on readmission. Additionally, this region is also home to a large Filipino population and it would be of interest to examine similarities and differences within this specific ethnic group.

These findings suggest that among this particular population, ethnicity, payer, and receipt of a PC consult do not play large independent roles in readmissions of patients diagnosed with HF as seen in previous research. However, with a statistically significant relationship between age and readmission, age may play an independent role in readmission rates. There may be other factors not included in this study that contribute more substantially to whether a patient experiences a readmission. Although no statistically significant relationships were identified among the main variables of interest, it is noteworthy that readmission rates did not differ by ethnicity, an atypical finding in the literature (Hu et al., 2014; Sheingold et al., 2016). Historically, this hospital has served a diverse population, primarily Hispanic, and has designated resources to aid in communication, education, and discharge planning to meet the needs of linguistically diverse patients. These findings suggest that resources aimed at providing specific interventions for communication with these populations may impact the rate of

readmissions. Resources provided by this hospital include translation services readily available on each unit in the form of software programs on iPads and educational materials provided in a multitude of languages and resources including classes for staff to learn the primary alternate language of Spanish.

At this hospital, the PC team consists of a CNS and an SW, which may impact the completion of PC consults. In addition, the primary reasons for the consults obtained were for goals of care discussion and advanced care planning. These discussions include determination of future resuscitation status and plans for transfer to hospice or comfort care, thus, reducing or eliminating the potential for any future readmission. Nevertheless, the low rate of PC consults completed and the 21.2% readmission rate among this population, which exceeds the national average, suggests that efforts to increase access to PC for patients with HF during any admission to aid in symptom management and initiate goals of care conversations have the potential to reduce readmission rates.

### **Limitations**

A number of factors significantly limit this study. Like any retrospective study using data obtained from an EHR, inquiry and analysis is limited to the data available and dependent upon the accuracy with which it was entered. A large number of patients were classified as “other” within the race category and this interfered with a more discrete examination of this variable. While ethnicity was self-identified in the EHR, one of the limitations is the ongoing confusion between race and ethnicity among patients, providers, and healthcare administrators and the tendency for inconsistent usage of the terms. Also, the low rate of PC consultation precludes any analysis regarding its relationship with any other variable. Finally, it is not possible to know whether care

provided to patients during their admission incorporated any of the principles of palliative care thus reducing a perceived need by patient, family, or providers for a formal consultation.

### **Clinical Significance**

Although no statistically significant relationships were identified between ethnicity, PC consultation, and readmissions, this study does suggest that resources aimed at providing care to the Hispanic population may reduce readmission rates. Hospitals serving primarily non-White populations face increased challenges in preventing readmission rates. Increasing resources to provide PC consultation to patients with HF could possibly lead to a decrease in readmissions within that population. Further research and analysis of the relationship between age and readmissions is recommended. This may help identify more discrete significant relationships between the variables.



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## Chapter 5

### Discussion of Findings

Chapter 1 was a synthesis of the background and importance of this dissertation and subsequent manuscripts and study. Background and significance were provided for Palliative Care (PC), ethnicity and readmissions, and their significance when analyzed together. Palliative Care, ethnicity, and readmissions have all been included in key discussions among the policy, political and healthcare arenas. Chapter 2 synthesized the literature and previous research regarding PC and readmissions and the possible relationships between them. Chapter 3 described the theoretical framework used for this dissertation and study as well as the operational definition and background of PC, the main focus of this study. Chapter 4 described the study design and results of the study, analyzing relationships between PC consult, ethnicity, and readmissions in the heart failure (HF) population at a Disproportionate Share Hospital (DSH) providing acute care services to a large ethnically and racially diverse population.

### Synthesis of Specific Aims

**Specific Aim #1.** Define and analyze the concept of palliative care and the extent of the literature surrounding this topic, within the context of uses and history. Chapter 3 provides a synthesis of the literature, background, and operational definition of PC. Palliative Care is providing patient-centered care individualized to the patient who has the chronic illness and their family. Holistic care provided to a patient/family at any stage of a chronic illness utilizing compassion, communication coordination of care, and symptom management was identified as the operational definition. Palliative Care has many benefits including improved quality of life, increased knowledge of illness,

resource acquisition, support, advanced care planning, increased coping, decreased hospitalizations, and symptom management/decreased suffering. Research suggests that identifying patients early in the disease process and/or early in the hospitalization may have a larger impact on positive outcomes than providing a consult later in the disease process.

**Specific Aim #2.** Describe patient demographics including age, gender, location of main address, origin of admission, diagnosis and comorbidities, prevalence of a Physicians Order for Life Sustaining Treatments(POLST)/advance directive on admission, patient identified ethnicity, payer, language, the number of and reason for PC consults, and the overall rate of readmissions among HF patients admitted to an acute care DSH in Southern California from January 2016 through June 2016. The majority of patients admitted were male ( $n=185$ , 56.1%) and 50.9% were aged 71-90 ( $M=75.37$ ,  $SD=15.58$ ). 53.7% ( $n=176$ ) patients identified as being Hispanic. The majority of patients were admitted through the Emergency Department (ED) (97.6%). Of the 330 cases included in this analysis, 21.2% ( $n=70$ ) were readmitted within 30 days, 51.4% ( $n=36$ ) of those cases experiencing a readmission were Hispanic, and 7% ( $n=23$ ) of cases had a PC consult during their admission. In 65.2% ( $n=15$ ), advanced care planning and goals of care discussions were the reason for the PC consult. No statistically significant relationships were found among the primary variables identified. However, age and readmission showed a statistically significant relationship.

**Specific Aim #3.** Examine the relationships between ethnicity and all cause readmissions, while controlling for statistically significant covariates within HF patients admitted to an acute care DSH in Southern California from January 2016 through June



2016. There was no statistically significant relationship found between patient ethnicity and the occurrence of readmission ( $p=0.673$ ). Notably, only one case with a history of receiving a PC consult was readmitted which precludes making any statistical inferences.

**Specific Aim #4.** Examine the relationships between receipt of a PC consult, ethnicity and readmission in the HF population admitted to an acute care DSH hospital in Southern California from January 2016 through June 2016. No statistically significance relationship was noted between patient ethnicity and receipt of a PC consult ( $p=0.472$ ), ethnicity and readmission ( $p=0.687$ ) and receipt of a PC consult and readmissions ( $p=0.06$ ).

### **Implications for Nursing Practice**

This dissertation and study contributes to research analyzing relationships between PC, ethnicity, and readmissions. Hospitals have been penalized for readmission rates and while the majority of extant research identifies combined interventions, little evidence specifically identifies which individual interventions may be most effective in preventing readmissions. In an era of limited resources, it is important to know which interventions may be most effective for select populations and settings. Although no statistical significance was identified between PC consult and readmissions, PC was identified in this study as being primarily used in relation to goals of care discussions and end of life care, possibly leading to a decrease in readmission rates due to identified specific conversations related to goals of care.

Heart Failure has been identified as one of the most common diagnoses, especially in readmission rates. This dissertation increases the research base and knowledge regarding readmissions for patients diagnosed with HF. This study identified

that a hospital providing care to a largely diverse population did not show a significant relationship between ethnicity and readmissions, which is in contradiction with previous research. The lack of relationship between ethnicity and readmissions may indicate the appropriateness of interventions provided to this particular sample in this region of San Diego in preventing readmissions.

### **Implications for Health Policy**

With a 21.2% readmission rate and lack of a significant relationship between ethnicity and readmissions, increased resources directed toward the provision of PC consultation, PC services and other interventions overall have the potential to improve readmission rates. Conversely, monetary penalties for hospitals may have the unintended effect of reducing resources, which results in decreasing the hospital's ability to implement specific interventions to prevent readmissions, especially among DSH. Policymakers should revisit both the application of penalties as well as current PC reimbursement mechanisms to ensure that PC is a viable intervention for reducing readmissions. As the number of patients with HF continues to grow, this becomes increasingly important.

### **Future Research**

Implications for future research include studying relationships between ethnicity and PC consultation as well as the use of PC consultation in the HF population. Previous research has focused on PC consultation focusing on end of life care, palliative focused treatments, transition to hospice and goals of care conversations, which was supported by this study. More research is needed to identify possible improvement in outcomes with early PC consult with a focus on symptom management, general education, and

communication between the healthcare team. The statistically significant relationship between age and readmission gives cause for further research and analysis between the two variables. Additionally, the fact that there was no difference in outcome according to ethnicity in this study warrants further analysis examining the role of multilingual patient education modalities that address potential cultural and linguistic disparities.

### **Summary**

This dissertation has synthesized the literature surrounding PC and readmissions, identified the background and definitions of PC, and analyzed relationships between PC consultation, ethnicity, and readmissions. The aims of this dissertation and the manuscripts provided increase the knowledge related to PC, readmissions, and ethnicity and the relationships between them. Manuscript 1 synthesized the literature surrounding PC and readmissions. Manuscript 2 identified the history, use, and definition of PC. Manuscript 3 explained a research study that identified relationships between PC, ethnicity, and readmissions as well as demographic data for an acute care DSH providing care to a large, diverse population. Increasing the knowledge base and research focusing on PC, ethnicity, and readmissions in the HF population can help provide more guidance for the need of future research.

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## Appendix

5/9/2018 <https://mail-attachment.googleusercontent.com/attachment/u/1/?ui=2&ik=db5489978f&view=att&th=1633c21b12b4911f&attid=0.1&disp=inf...>



Deanna Johnston <[djohnston@sandiego.edu](mailto:djohnston@sandiego.edu)>

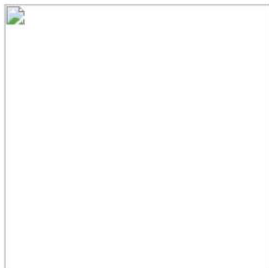
### IRB-2018-199 - Initial: Initial - Exempt

1 message

[irb@sandiego.edu](mailto:irb@sandiego.edu) <[irb@sandiego.edu](mailto:irb@sandiego.edu)>

Thu, Jan 4, 2018 at 2:10 PM

To: [djohnston@sandiego.edu](mailto:djohnston@sandiego.edu), [efrybowers@sandiego.edu](mailto:efrybowers@sandiego.edu)



Jan 4, 2018 2:10 PM PST

Deanna Johnston  
Hahn School of Nursing & Health Science

Re: Exempt - Initial - IRB-2018-199, Examining relationships between Palliative Care, Ethnicity and Readmissions in the Heart Failure Population

Dear Deanna Johnston:

The Institutional Review Board has rendered the decision below for IRB-2018-199, Examining relationships between Palliative Care, Ethnicity and Readmissions in the Heart Failure Population.

Decision: Exempt

Selected Category:

Findings: None

Research Notes:

Internal Notes:

*Note: We send IRB correspondence regarding student research to the faculty advisor, who bears the ultimate responsibility for the conduct of the research. We request that the faculty advisor share this correspondence with the student researcher.*

*The next deadline for submitting project proposals to the Provost's Office for full review is N/A. You may submit a project proposal for expedited or exempt review at any time.*

Sincerely,