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Effects of Engaging Hospitalized Heart Failure Patients in a Self-Care Management Protocol on Self-Care Self-Confidence Levels

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by

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Abstract

Delivering high quality heart failure (HF) management and education to empower patients to manage successfully in the community is imperative. Common trends observed impacting HF patients and concerning inpatient nurses on a medical cardiology unit were identified and discussed. Understanding accessing and adhering to a low salt diet, fluid restriction, and daily weights were all commonly identified challenges by direct care nurses of HF patients. Nurses reported increased frustration with patients not knowing or possessing little awareness of their fluid restriction or how to manage or articulate restrictions during the inpatient stay. Nurses felt intake and output (I&O) and daily weight management were critically important, targeting confidence in these self-care behaviors while inpatient could result in the most impact for this population. This project set out to determine the effect of shifting from all nursing-provided care which may in fact be an "enabler," to a self-care approach for hospitalized HF patients on their self-care confidence levels. This project sought to increase patient engagement in common HF self-care skills specifically, daily weight measurements and intake and output (I&O) while inpatient. The participant's self-care confidence level was measured baseline and prior to hospital discharge. Results reflected a statistically significant increase in self-care confidence levels of HF patients who actively participated in a self-care management (SCM) protocol while inpatient.

Keywords: heart failure self-care, self-care management, self-care confidence

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INTRODUCTION

Heart failure is described as a clinical syndrome resulting from the heart's inability to maintain adequate circulation (Ibrahim, Tawfik, & Abudari, 2016). Heart failure (HF) affects over five million adults in our country, with an estimated 50% mortality within five years of diagnosis (Go et al., 2013). Healthcare providers often set high, potentially unrealistic healthcare expectations for adults with HF. The quality of the plan of care is impractical if the patients do not adopt the plan as their own. Patients who seem to master self-care skills have established links between their HF symptoms and causes (Dickson & Riegel, 2009). Intense patient education efforts may increase disease knowledge, but does not equate to improved self-care or clinical outcomes. Some suggest self-care would be improved by requiring patients to perform expected routine behaviors such as measuring intake and output (I&O) and daily weights in the acute care setting before transitioning to the community (Dickson, Buck, & Riegel, 2009). Critically examining self-care behaviors and tailoring hands-on interventions for HF patients is warranted.

SECTION I

Problem Recognition and Significance

Heart failure is a growing concern globally with a reported incidence of 18% worldwide (Ibrahim, et al., 2016). Lacking effective self-care management (SCM) skills perpetuates potentially unnecessary repeated HF hospital readmissions as evidenced locally by a sample of an estimated 200 patients accounting for over 1,200 readmissions to this medical center (Wake Forest Baptist Medical Center, 2015). Gwande (2014) posits that people facing serious illness have priorities focusing on quality over quantity, avoiding suffering, strengthening relationships with families and friends, and achieving a sense that life is complete (Gwande, 2014). The number of new HF cases is burdensome and will continue to grow as the population ages, however existing cases and longer life expectancy is also taxing current healthcare systems. Quantitative HF data is sobering, yet anecdotal evidence is equally as telling reflecting priorities and lived experiences of the chronically ill, warranting more attention to improve quality of life (QOL) of those affected. To maximize SCM behaviors in HF the following PICOT question was addressed: What are the effects of engaging hospitalized HF patients in a SCM protocol on self-care self-confidence levels? Examining the effects of self-care self-confidence in a HF patient's ability to perform prescribed behaviors is of growing importance. In practice, a troublesome phenomenon has been observed of HF patients being discharged from an acute care environment to the community only to prematurely return several days later, in crisis or unclear how to manage the condition. The impact of this problem is at best three-fold: societal financial burden, financial survival of healthcare organizations providing care, and direct impact on patients and families trying to support them. The

Centers for Disease Control and Prevention (CDC) (2015), reports HF patients, consume an increased amount of healthcare costs over $30.7 billion dollars in the United States (US) annually. The combination of older age and more chronic conditions greatly impacts expense and outcomes. Recent evidence indicates 58% of HF patients have five or more comorbid conditions and take an average of 6.4 prescription medications (Wong, Chaudry, Desai & Krumholz, 2011). More importantly beyond the financial impact is QOL for affected individuals and families. Patients who are more active in their own self-care have been shown to have improved psychological outcomes (Ibrahim et al., 2016). Unfortunately, the solutions to this problem are not obvious, linear or "one size fits all." There have been hundreds of transitional care programs implemented across the country, with a fair amount of related research (Li & Williams, 2015). The primary challenge continues to be determining the best strategy or strategies to ensure success in the community.

Now more than ever, hospitals have the responsibility of educating patients, or an alternate learner on self-management skills as they transition from the four walls of a hospital back to the community. Targeted efforts must address a HF patient's ability to gain, understand, and meaningfully apply and employ the knowledge that is provided. Effective management and implementation is critical in light of the associated costs. Addressing self-care confidence could contribute to decreasing the sobering mortality of a HF diagnosis in this country. Purely financial costs while critical, may not be the most important when one considers the cost to the patient and their overall health. Certainly, the true financial costs to healthcare organizations are a risk, and an intense focus to remain viable is also important or communities will suffer more. Equilibrium must be

achieved in this delicate situation for healthcare institutions to be able to care for those with acute needs, while promoting optimum health and wellness of this vulnerable population in the community.

Justification of Project

Common trends observed impacting HF patients and concerning inpatient nurses on the pilot, medical cardiology unit were identified and discussed (Appendix A). Understanding accessing and adhering to a low salt diet, fluid restriction, and daily weights were all commonly identified challenges by direct care nurses of HF patients during informal, pre-project focus groups. Accessing healthy foods was a concern of the nurses recognizing that many of the HF patients discharged from the hospital had limited resources or likely only had access to shop at "dollar" stores with packaged and highly processed, and salt laden foods; resulting in a greater gap between HF low salt diet education received inpatient and a typical patient's reality. Some programs have proposed nutritional education that offers a list of common foods and prices at less expensive stores, however this was not an option the team felt it could strongly impact from an acute care perspective. Priority from a nursing perceptive was focused on understanding and performing daily weights and managing I&O as these were acknowledged as common contributors to exacerbation and subsequent HF related readmission. Nurses reported increased frustration with patients not knowing or being aware of their fluid restriction or how to manage or articulate restrictions during the inpatient stay. Direct care staff anecdotally reported that patients would frequently call upon the nursing staff to tell them if they could have more fluid, possessing little awareness of how much they had left to consume based on their daily fluid restriction.

Nurses felt I&O and daily weight management were critically important, targeting these self-care behaviors while inpatient resulted in the highest priorities that could result in the most impact for this team.

Problem Statement

Copious amounts of data are collected on admission to most hospitals, however a true assessment or understanding of the patient's self-care self-confidence or ability to care for themselves is often omitted. The patient's ability to care for themselves cannot be independent of the care that is being provided. Following hospital discharge, the pattern is all too often the same with many patients returning prematurely, being labeled noncompliant or simply experiencing poor to suboptimum outcomes. Evidence clearly demonstrates if confidence in one's ability to perform care is low, coupled with complex medical care plans are all ingredients for poor outcomes. Evidence has shown that poor HF related self-care practices contribute to worsening outcomes with more frequent hospital readmissions (Riegel, 2009). Energy must be directed toward interventions that meet and reach the patient at their level and guide them to successful healthcare management across the continuum.

A project targeting this vulnerable population including self-care self-confidence screenings on inpatient admission with practicing SCM behaviors was evaluated for adults with HF. The premise was to promote proactive SCM behavior as it supports best practice in linking symptoms to decision-making (Riegel & Dickson, 2008).

Purpose

The purpose of this particular capstone project was to determine the effects of engaging HF patients in a SCM protocol while inpatient on their self-care self-confidence

levels. The target audience most interested in this work would be inpatient clinicians, nurse educators, and developers of inpatient healthcare education. Specifically, inpatient clinicians would be interested including physicians, nurses, pharmacists, and case managers who directly manage the care of HF patients. Inpatient nurses caring for HF patients, assessing and teaching patients would be interested in the results this project may have on their patient's ability to manage. Project interventions have the potential to impact nursing workflow from admission assessment through discharge teaching. Lastly, those designing healthcare educational materials and interventions for hospitalized HF patients would be interested in the effects of self-care self-confidence and SCM encouraged and examined during this project.

Goals and Objectives

The goal of this clinical capstone project was to determine the effects of engaging hospitalized HF patients in a SCM protocol on self-care self-confidence levels. The objective was to measure the change in self-care self-confidence levels of hospitalized HF patients' baseline and post SCM intervention. This project objective was met by using the Self-Care in Heart Failure Index (SCHFI) confidence subscale to measure changes in self-care self-confidence levels.

SECTION II

Needs Assessment

Literature Review

Self-care Management

Heart failure patients are a particularly vulnerable group, facing complex health management demands, often times compounded by normal age related changes. This rapidly growing, chronically ill segment of the population affected by HF becomes even more challenged in both navigating and accessing the healthcare system (Carollo, 2015). The downstream effect lands many HF patients in the hospital more often, when compared to their healthier peers. Examining the current knowledge surrounding this complex condition was completed via a literature search performed using online databases to locate relevant research. The following combinations of keywords were used: self-care confidence, self-efficacy in HF and chronic disease, self-care management in HF. EBSCOhost, ProQuest and PubMed were all databases used initially, secondary approaches included Google Scholar, and a review of reference lists from pertinent articles.

Successful HF SCM requires foundational knowledge married to actions. Motivating patients to change behavior and perform self-care is quite a complex, multifaceted process. Further work is warranted to facilitate SCM skills, specifically fluid management and measuring daily weights in patients with HF. The HFSA notes that the majority of HF management will occur in the home or community performed by either patients, family, or caregivers (Lindenfeld et al., 2010). Jones et al. (2012) found that patients who adhered to home weight monitoring and self-management of diuretics

experienced fewer emergency department (ED) visits and hospitalizations. Thus, performing successful self-care such as daily weight measurements and management is critical to outcomes. A considerable amount of HF research has focused on medication compliance while less robust evidence is available on weight management or other self-care behaviors (Jones et al., 2012). Various researchers have studied the effects of combination interventions such as weight management with diuretic titration, or programs similar to Jurgens, Lee, Reitano, and Riegel (2013) HF Symptom Monitoring Awareness & Response Training (HF SMART) program on patients' self-care ability, symptom perception, and responses, but fewer focused on promoting a singular self-care management skill, like weight monitoring or fluid management inpatient prior to discharge. Self-care in HF as described by Riegel and Dickson (2008) is both a management and maintenance process where patients are expected to actively participate in the management of their condition usually with assistance from family members or caregivers. As noted, patients who are able to be actively involved in their self-care and shown to have better psychological outcomes (Ibrahim et al., 2016). Specifically, section eight of the HFSA Comprehensive Heart Failure Practice Guidelines Recommendation for Disease Management, Advance Directives, and End-of-Life Care in HF (2010) recognizes that isolated patient teaching is not sufficient and suggests adjunct associated self-care skills be used. Namely recommendations number five, from the HFSA suggest that patients demonstrate and show providers a daily weight log (Lindenfield et al., 2010). A primary difference in traditional, formal patient education is effective HF education must direct patients to what they need to do rather than just what they need to know (Riegel & Carlson, 2002).

Heart failure researchers continue to examine complex relationships and factors between social, physical and psychological relationships that may impact self-care behavior (Sedlar et al., 2017). Ibrahim et al. (2016) developed a HF SCM tool which included a visual aid, self-learning guide and handout. In a sample of 256 patients the authors evaluated effects at three different time points: baseline, after two sessions using the tool, and four weeks after use in with comparison to a standard treatment group. Their findings reflected that at baseline HF patients were found to have inadequate self-care maintenance, low self-care confidence scores, negative impacts noted from low literacy, and the majority of the sample had experienced difficulty breathing and ankle swelling in the previous month (Ibrahim et al., 2016). In their experimental group an increase in self-care self-confidence scores was noted following intervention with their SCM tools (Ibrahim et al., 2016). In a similar approach Sibani, Driscoll, Davidson, and Leeder (2015) echoed these findings in their randomized controlled trial. These authors had three groups: standard of care, HF self-care face-to-face in home training with trained volunteers, and a third HF education offered on site by medical professionals in hospital conference room. The authors noted an increase in self-care confidence in both of their experimental groups as compared to the current standard of care (Sibani et al., 2015).

A systematic review to evaluate self-care behaviors in studies that have used the European Heart Failure Self-Care Behavior Scale revealed similar findings to US studies. The EHFScBS is similar to the SCHFI in that it aims to assess HF self-care behaviors to maintain wellness and functioning in HF. A synthesis of 30 European studies employing the EHFScBS was presented further analyzing factors associated with HF self-care. Quality of life, age, gender, education, New York Heart Association class (NYHA), and

depression were the most common relationships studied. Specifically, through this systematic review these authors in alignment with others identified inconsistent relationships with regard to perceptions of QOL, age, gender, education, and NYHA class, but did note significant association between depression and self-care behavior (Sedlar et al., 2017).

As illustrated HF is not a Western condition, but instead is a growing epidemic with far reaching impacts globally. Hence investigators in an acute care setting in China studied the effects of implementing a HF self-care program. Using a quasi-experimental design a HF self-care program was implemented and self-care assessed using the SCHFI. The investigators compared the experimental HF self-care program group to a control group receiving standard of care. The program was designed to include a companion teaching booklet and video for eligible participants to receive face-to-face while inpatient. Content included symptom recognition, medication education, instruction on salt limitation, low fat diet, fluid restrictions, exercise, and actions to take when HF symptoms were identified (Liou et al., 2015). The experimental group demonstrated an increase in HF knowledge post intervention, as well as an increase in self-care confidence sustained three months post intervention. Interestingly, readmission rates between control and experimental groups remained similar in the months post-discharge (12.2% and 12.5% respectively), but the experimental group demonstrated favorable effects to their NYHA class when compared to their counterparts (Liou et al., 2015). Adherence to complex medication regimens and maintaining a low sodium diets were components of self-care maintenance identified in this sample that were continued struggles for HF patients post discharge (Liou et al., 2015). These findings mirror others, including those

in the US demonstrating HF self-care programs can increase and maintain HF knowledge while having a positive patient impact on physiological functioning, however may not be enough to curb HF acute care readmissions.

A number of HF self-care related studies have addressed cognition or cognitive training as a tool to improve SCM. Davis et al. (2012) conducted a randomized controlled trial of 125 inpatients with HF in an academic medical center setting to determine the effects of a targeted educational intervention on those considered to have mild cognitive impairment. The HF educational interventions were simplified and deliberate for the population while inpatient including interactive HF problem solving scenarios with staff. The authors followed the inpatient interventions by a post discharge phone call at 30 days (Davis et al., 2012). Their findings demonstrated again an increase in knowledge level even at 30 days post discharge, an increase in self-care in the intervention group, but not to the point of statistical significance, yet still no change in hospital readmission rates (Davis et al., 2012). Heart failure readmission rates remained at 21% for the entire sample (Davis et al., 2012). This study and others closely examining the role of cognition and cognitive impairment in HF have begun to illuminate the importance of other factors in this complex relationship including the critical role of confidence.

Chen et al. (2014) assessed relationships between health literacy, HF knowledge level, self-efficacy, and adherence to HF SCM behaviors. Eighty-one patients from three outpatient HF clinics composed a sample for a correlational, cross-sectional study. Findings illustrated that health literacy was not related to SCM behavior, yet self-care efficacy was independently associated with adherence to SCM behaviors (Chen et al., 2014). Confidence emerged as a mediator as lack of knowledge can impact confidence,

while confidence level similarly impacts ability to comply with complex HF SCM behaviors.

Self-Care Confidence

Thoroughly examining the effects of self-care self-confidence in this group of patients and determining the most effective inpatient educational interventions is critical. Efforts to fully understand the connections between self-care self-confidence and SCM in HF have been ongoing for a number of years with the most evidence gathered over the last 20 years. A generous amount of research has demonstrated the negative impact of low self-care self-confidence in HF patients, yet fewer studies exist specifically addressing the role of confidence. A large amount of best practice evidence for HF originates primarily from the American Heart Association (AHA) "Get with the Guidelines" program or through the Heart Failure Society of America (HFSA) (Lindenfeld et al., 2010). Adoption and implementation of such recommendations by many hospitals including this one has been sluggish at best. A plethora of evidence over years has clearly demonstrated knowledge and didactic patient teaching from health professionals is not sufficient to impact self-care behavior. Riegel and Dickson (2008) reinforced that even in the setting of multiple comorbid conditions self-care confidence impacts decision-making, shapes insight hence SCM behavior.

A secondary analysis of 280 HF patients completed by Vellone, Pancani, Greco, Steca, and Tiegel (2016) illustrated that self-care confidence has a strong influence on self-care mediating the relationship between cognition and self-care. In examining self-care self-confidence of this sample, confidence clearly mediated between what was described as simple attention, working memory, and self-care (Vellone et al., 2016).

Interestingly, these authors found executive functioning, complex attention or processing speed had no direct effect on self-care behavior (Vellone et al., 2016). These findings support addressing self-care self-confidence as it is being identified as a solid ingredient perhaps even more valuable than cognitive ability in the HF patient. Although cognition is frequently addressed in HF patients limited studies have successfully demonstrated increases in cognition thus, efforts targeting confidence should be considered for this vulnerable population (Vellone et al., 2016). Subsequently a secondary analysis of a cross-sectional study was completed analyzing the association between cognition, self-care confidence, and self-care practices in adults with HF (Vellone et al., 2015). These authors tested the role of self-care confidence on the relationship between self-care maintenance, cognition and SCM. In a sample of 628 patients, the majority were male with an average age of 73 years old. Results of this secondary analysis demonstrated that self-care confidence completely meditated the relationship between cognition and self-care maintenance, and between cognition and SCM (Vellone et al., 2015). This analysis also demonstrated that self-care confidence was not impacted by disease burden or poor functional status (Vellone et al., 2015). This work asserts that even if a factor decreases self-care, confidence in ability valuing the behavior as important can promote success (Vellone et al., 2015).

Confidence appears to be a primary driver in the HF care trajectory requiring more attention. Studies addressing self-care confidence suggest that confidence has a powerful influence in HF SCM behaviors and support the implementation of strategies that will enhance patients' self-care confidence (Vellone et al., 2015).

Strengths and Limitations of the Literature

Strengths

There is a growing body of evidence around self-care self-confidence in HF, as well as evidence reviewing the negative impacts and various contributing factors and associated relationships. Robust and clear understandings of the impacts of self-care self-confidence on HF patients are strengths of the evidence. Repeated studies have demonstrated increased mortality of older adults specifically from cardiovascular causes, as well as solid evidence that hospitalizations and emergency department (ED) visits are higher in those with low health literacy (Baker et al., 2007). Conversely, when patients are active in performing sufficient HF self-care better outcomes are noted (Jones et al., 2012). These findings are strengths in the literature as they directly point clinicians and researchers to target HF patients with inpatient interventions that build self-care self-confidence as a foundational step toward improved SCM.

Limitations

Evidence is lacking in acute care settings, regarding interventions to promote self-care self-confidence for hospitalized HF patients and how this might impact subsequent management and maintenance in the community. Much of the existing literature is geared toward community and outpatient settings, cognition, or cognitive training and pharmaceutical interventions. There is an additional gap in the literature addressing individualization or adjustments to inpatient teaching strategies, patient education materials, or practitioner encounters based on confidence in ability to carry out prescribed care or tasks. An important caveat highlighted by Riegel, Jaarsma, and Stromberg (2012) is a limitation worthy of mentioning in this complex relationship, sufficient self-care

behaviors may not be indicative of a HF patient possessing good decision-making ability. Recognizing that patients with HF are at risk for cognitive impairment and lower health literacy increases hospitalization risk more, hence it is only reasonable to target efforts and alter traditional care and education delivery in acute care settings to boost self-care confidence.

Study settings were also recognized as a limitation in the literature as the majority of studies were performed in community-based settings not inpatient, acute care hospitals, in spite of the fact that this vulnerable group is inpatient or visiting hospital ED's more frequently (Baker et al., 2007) Homogeneity of samples, lacking diversity in culture, medical insurance carriers, and medical care providers further limit the generalizability of findings to larger populations. Additionally, studies performed in countries outside the US may pose a limitation to generalizability here as healthcare delivery systems and payments for care differ. With regard to research design, many employed practical designs such as cross-sectional which applies well and provides snapshots, however these designs can be a limitation and result in obscurity when trying to determine which variable may have affected another. Lastly, most samples were convenience samples comprised of average functioning older adults baseline, excluding participants who had various impairments including cognitive impairment, or dementia. Understandably more diverse samples with alteration in cognitive ability could be confounding, however exclusion limits greater understanding of realistic health management and generalizability to the diverse patient population being cared for.

Gaps in Practice

When patient education is compartmentalized especially for chronic conditions as is often the case, patient outcomes suffer. Traditional practice and standard of care on this pilot unit was to provide a typical, printed HF teaching packet to the patient even if the patient had received the same packet of information on previous admissions or had frequent HF readmissions the same information was provided each time. There is no distinction or alteration in content or delivery of HF education for initial HF admissions or subsequent readmissions. The most common impetus for inpatient readmission in this project was shortness of breath (SOB) indicating that a more directed inpatient intervention may be helpful to improve this deficit. The common scenario of HF concomitant with end-stage renal disease (ESRD) or renal insufficiency is a common combination in this patient population. A gap in practice exists between recognizing and integrating layered plans of care both inpatient and in the community. An additional practice gap is the language used in the inpatient environment or professional settings versus the community which is especially concerning for HF patients with regard to fluid management. Throughout the healthcare continuum providers continue to refer to fluid measurements in cubic centimeters (cc) and milliliters (ml) of measurement for fluid restriction teaching rather than something more practical in alignment with patient comprehension in the community such as cups and ounces. Simplistically defining what fluids are was also an identified practice gap by patients. It was identified that many HF patients and families believed that fluid restriction applied to only the amount of water consumed not any other types of fluids. Many of these practice gaps have arisen from years of traditional practice of one-way education lacking engagement. Similar practice

gaps were identified in daily weight monitoring as well. Many patients who had a basic grasp of their weight monitoring were not clear that a two to three-pound weight gain within a 24-hour period was critical to report, instead they believed that if they had not gained up to five pounds they were still considered to be effectively managing. An ever-expanding practice gap is additional layers of compartmentalization of educational approaches and strategies that do not integrate or "connect the dots" for the chronically ill patient. It is not uncommon for HF patients not to fully comprehend the physiological relationships of HF. Patients often require reinforcement to understand the relationships of the pumping function of the heart, to fluid movement, management and retention, and the relation to lower extremity edema, weight gain and SOB, these elements are crucial to assist in early symptom recognition.

A practice gap for this particular site was not engaging or inviting the patient to practice, perform, or engage in any of their own SCM behaviors that directly impact HF. Conversely, daily weights are performed by the staff in some cases without the patient's awareness if an electronic bed scale is used and I&O is also nursing managed which as noted may be enabling. A unilateral HF education approach of only delivering didactic printed information to patients has been demonstrated in the literature to have very limited effectiveness even if it increases knowledge. The deficit is clear between possessing knowledge and being able to effectively act on that knowledge once discharged from the hospital. Literature is replete with understanding the negative impacts of low self-care self-confidence on the health and outcomes of HF patients in outpatient and community settings.

Large sums of healthcare dollars are given to management and re-management of HF patients requiring support to manage their health, resulting in readmissions and loss of reimbursement. Despite this awareness much of the HF research involving self-care in HF is being performed in community instead of acute care settings. The premise behind this trend is that the majority of care would occur in the home, however intervening upstream in the process may benefit patients and healthcare systems alike. Major themes weaved throughout self-care literature are the importance of patient-clinician relationship, effective communication, increased mortality specifically from cardiovascular causes, and the need for more evidence-based interventions that reinforce confidence in patient's SCM abilities. Practice gaps are evident in the inpatient setting and the use and impact of interventions that target the patient's self-care ability in hospitalized, vulnerable HF patients. Establishing further knowledge and interventions in the acute care environment is needed. Notably, several studies suggest the importance of building strong patient-clinician relationships, increased communication, and instilling self-confidence to boost patient SCM. These findings support the identified problem to be addressed further investigating, and translating community-based findings to the inpatient environment. Interventions targeting a patient's confidence level within patient teaching in the acute care setting may lead to improved care transitions, and outcomes. The findings from this review of literature contribute positively to the identified problem suggesting evidence-based interventions be developed incorporating confidence in a patient's ability to comprehend and carry out their recommended plan of care. Additional work in acute care settings assessing the impacts of self-care self-confidence while tailoring patient teaching strategies that infuse confidence for the hospitalized HF patient are needed.

Identification of the Population and Site

Setting

The setting for this project was a level I trauma and academic medical center situated in Southeastern US with 885 beds. The medical center served patients with 40,251 inpatient admissions over the last year (Wake Forest Baptist Health, 2016). An inpatient, adult, cardiac-general medicine 28-bed unit was utilized for this project. The historical HF readmission rate for this unit prior to the pilot was 22% (Wake Forest Baptist Health, 2016).

Population

The target population for this investigation was chronically ill adults, defined for this purpose as any adult over 18 years old being admitted to the designated unit with a HF diagnosis who anticipates returning to the community post discharge.

Stakeholders

The primary stakeholders are HF patients and families having the largest personal investment. Health care facilities and providers throughout the continuum are also stakeholders in light of financial and resource burdens posed by this growing segment of the population. As the national healthcare landscape continues to change, efforts must be geared toward effective chronic disease management as viability of healthcare delivery depends on it. Society at a national and local level are both stakeholders due to the strain, challenges, and impact HF poses to the strength and efficiency of national healthcare delivery.

Organizational Assessment

Strengths

Assessing organizational strengths, weaknesses opportunities and threats (SWOT) (Figure 1) analysis was crucial to performing this project. Strengths recognized are dedicated HF cardiologists who actively engage and offer leadership focusing and HF management, within a certified HF center of excellence. Additionally, the presence of a high-functioning HF clinic with mid-level providers and nursing support. The nursing team assembled to complete this project was also a strength. The team remained on task with bi-weekly meetings as well as additional meetings as warranted with the nursing research director and cardiovascular nursing director for consultation on any global project questions. Lastly, both a strength and opportunity is a large, established base of HF patients in this region requiring care.

Weaknesses

The potential for political power struggles with regard to gaining agreement to adopt and practice in a standardized fashion utilizing proposed best practice guidelines were a weakness. Further gaining consensus with the proposal and suggested evidence-based, best practice guidelines. Competing priorities also presented a challenge among and between disciplines. Notably, a principal competing priority within the nursing division is achieving a balance between patient satisfaction and motivating patients to perform self-care tasks for themselves while they are inpatient. Nurse staffing was also a weakness to maintain support for a change in practice.

Opportunities

There is a large range of growth opportunities within HF management while patients are inpatient particularly around adopting evidence-based practice (EBP) guidelines and actively applying them during the hospital stay. An opportunity existed to focus on facilitating a proactive patient-driven management style, rather than historical state of nursing staff performing all care. There is also a clear gap between acute care management and the outpatient HF management clinic despite being housed within the same institution. Additional work is needed to close this identified gap to enhance continuity as HF patients transition between the two areas.

Threats

Some clear multi-disciplinary threats contributing to the weaknesses are present in both the physician and nursing realm. Nursing administration is intensely focused on Hospital Consumer Assessment of Healthcare Providers and Systems **(**HCAHPS) patient satisfaction scores and particularly concerned that asking patients to do more for themselves in the hospital could have negatively impacted these results. Interestingly, some physicians were not fully vested in the EBP guidelines and feel that the trend will not change and practice should stay the course.

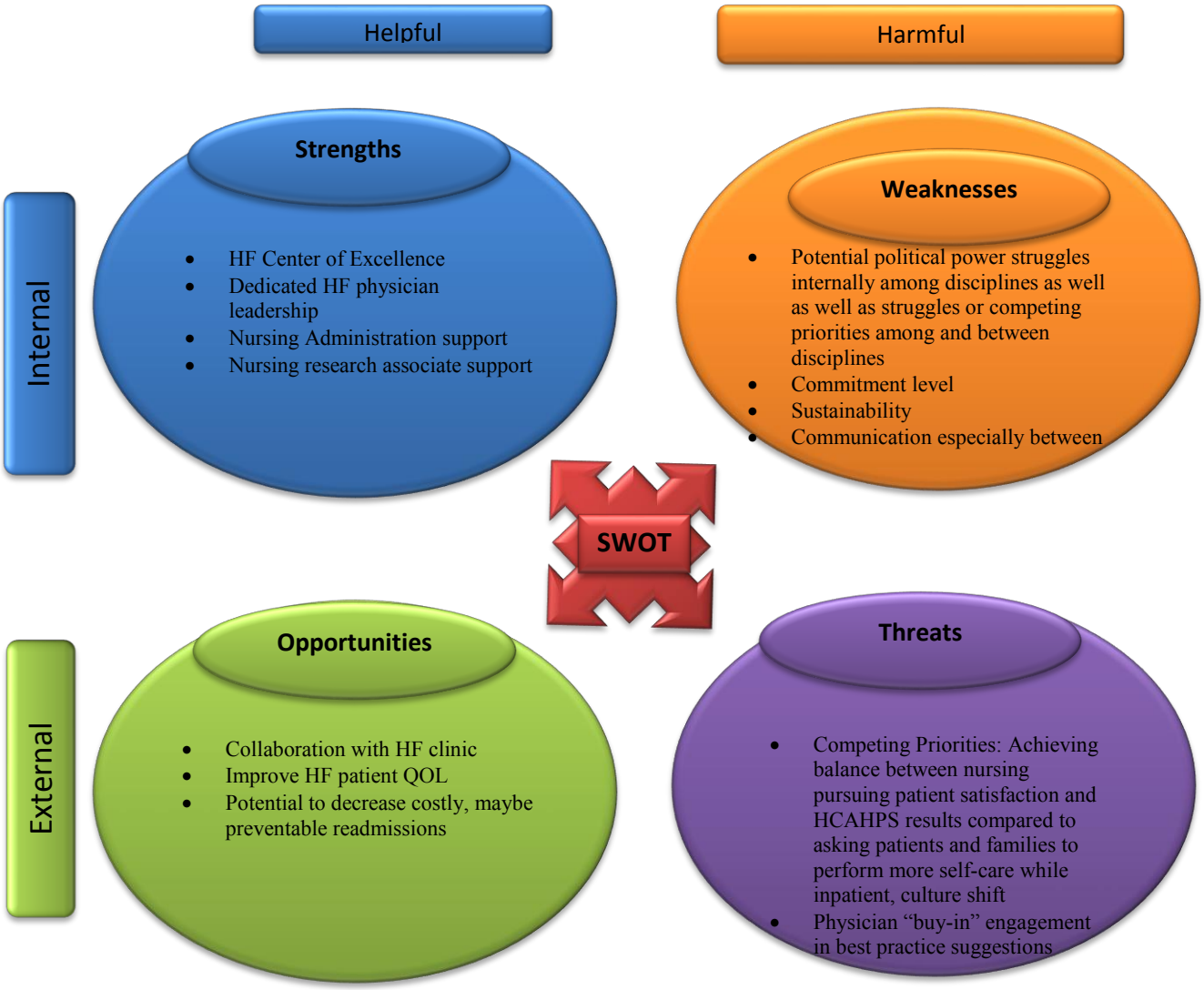

Figure 1. Strengths, Weaknesses, Opportunities & Threats (SWOT) Analysis Diagram.

Assessment of Resources

Grant money previously secured by the inpatient HF coordinator was offered to support the purchase of scales for the pilot project to allow patients to weigh themselves. Current nursing staff on the pilot unit altered workflow to accommodate this clinical project, additional personnel, or nursing staff were not needed to implement this project. Printing, paper, and other supply costs were absorbed into the office supply budget of the pilot unit and the Nursing Education budget of the sponsoring facility.

Project Purpose, Question, and Desired Outcomes

The purpose of this project was to analyze self-care self-confidence levels of hospitalized HF patients following participation in an inpatient SCM protocol. The expectation was for direct care nurses to intervene after baseline screening with supportive patient education strategies that foster confidence in ability to perform I&O and daily weight measurements. The principal goal was to promote self-care self-confidence such that HF patients can more readily manage their prescribed plan of care as they progress toward discharge. The intended outcome was for hospitalized HF patients to gain confidence through participating in their self-care as demonstrated by an increase in their SCHFI confidence scale prior to discharge.

Team Selection

A core multidisciplinary team of stakeholders employed by the sponsoring institution collaborated to perform the project. Direct care nurses of the pilot unit were selected as critical teammates as they interface with the patients the most, have established a rapport and have the greatest potential for impact. The charge nurses for the pilot unit served as contacts and support for the direct care nurses as well as for

identifying potential patients. The pilot unit nurse manager was a direct link to coordination and facilitation of the efforts of this project from a unit perspective. The nursing director for cardiovascular nursing services was employed from a global perspective to garner support and push the effort forward. The cardiovascular clinical nurse educator was also selected as a necessary team member to partner in pilot education design and delivery. The nursing research director was also an instrumental member of the team to advise in the pilot design. The unit chaplain was enlisted as a part of the team in the event there were any emotional or psychological issues that arose during the pilot.

Definition and Scope of the Problem

Heart failure admissions and readmission are costly and of growing concern globally. As noted locally, a cohort of 200 HF patients have accumulated up to 1,200 HF admissions to this medical center over the last year. This project specifically targeted one inpatient medical cardiology unit that often houses these HF patients. Addressing HF SCM in this acute care setting could decrease these sobering statistics, while promoting a better QOL in the community for this group of vulnerable adults.

Many related self-care concepts are used interchangeably in the self-care literature, for clarity SCM is used in this project as reflecting dynamic engagement with facilitation by the interprofessional team. Self-care management is defined for these purposes as active participation in HF self-care behaviors as recommended by their healthcare team with a specific focus on daily weights and I&O.

SECTION III

Theoretical Framework

Dorothea Orem's grand Self Care Deficit theory coupled with Riegel & Dickson's (2008) Situation Specific Theory of Heart Failure Self-Care were both utilized as theoretical underpinnings for this project (Figure 2). Dorothea Orem's Self Care Deficit Theory was first developed to delineate when nursing care is needed and is based on a central assumption that people want to care for themselves (Conway, 1997). Orem's Self-Care Deficit Theory suggests that patients experience times of interruption when they are unable to, or incapable of continuously providing self-care resulting in self-care deficits or limitations where nursing is necessary to complete the care, or nursing agency (Orem, 2003). Major concepts of this theory include self-care agency, self-care demands, self-care deficits, and nursing agency (Orem, 2003). Heart failure patients who seek medical attention at an acute care facility requiring nursing care generally have an identified deficit that requires care or nursing agency to bridge this gap. Common deficits observed in HF patients are a deficit in fluid management which can be augmented with closely monitored fluid management in the form of I&O tracking coupled with daily weight measurement with necessary adjustments.

Riegel and Dickson (2008) expounded on these ideals to develop a clinically relevant situation specific theory. The Situation Specific Theory of Heart Failure Self-Care which specifically concentrates HF and has an interprofessional lens as opposed to just nursing care. More in depth explanation of these two theoretical frameworks is necessary to trace the clinical problem toward intervention. Focal theoretical concepts utilized for this project were self-care deficit, self-care self-confidence, and SCM. Self-

care management was operationally defined as activities or tasks that HF patients are expected to carry out to maintain their physical, mental, and emotional health and meet recommended plans of care prescribed and facilitated by the interprofessional healthcare team. The concept of SCM is described by Riegel et al. (2012) as the patient's ability to assess physical or emotional signs and symptoms and determine what actions are needed. Self-care management suggests a partnership with support from healthcare professionals to actively make choices and evaluate one's own effectiveness. Orem's framework was selected as it applies to HF patients often when they are unable to adequately perform SCM or maintain health, at which time this self-care demand prompts them to present for care often to an acute care setting requiring nursing agency to augment this gap to assist or prevent a growing self-care deficit, as may be the case with acute hospitalization. The situation specific theory described is a direct fit to the HF patient who must make conscience decisions and take proactive steps to manage their health. Self-care management is outlined with five distinct stages beginning with recognition of a change or symptom, evaluation of the new finding, active decision to take action, taking the action, and finally evaluating effectiveness of the action. The assumption is when HF patients recognize a change or symptom they will be better suited to manage it (Riegel & Dickson, 2008). The converse may also be true if patients fail to recognize changes or symptoms a deficit has the potential to form or expand.

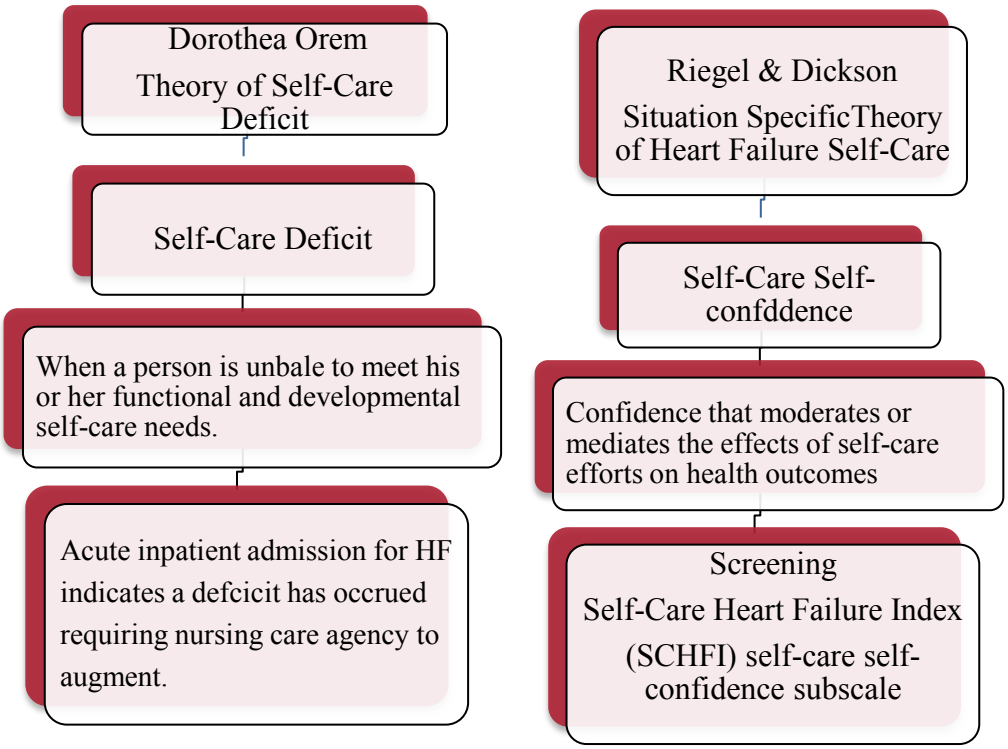

Figure 2. Conceptual Theoretical Empirical (CTE) Diagram. This figure illustrates the focal theoretical concepts of this project.

Summary

The ever-present tenets of Orem's Self-Care Deficit Theory were foundational to the development of this clinical project specifically self-care deficit and nursing agency (Conway, 1997). This project was further supported by the clinical applicability and relevance of Riegel and Dickson's (2008) Situation Specific Theory of HF addressing the concept of self-care self-confidence of HF patients in an inpatient, clinical environment. The use of both theories was complementary in constructing the theoretical framework for this capstone project.

SECTION IV

Planning

Project Proposal

The primary purpose of this nursing led project was to assess the effects of engaging hospitalized HF patients in a SCM protocol on their self-care self-confidence levels. In the section that follows the components used to plan the project will be described.

Timeline

Assessing the overall goals and intent of the project, a reasonable and achievable timeline of six to twelve months was projected and met (Table 1 and Figure 3)

Table 1

Timeline

TASK	Start Date	Duration in Days	Status
Problem Recognition	1/1/2016	180	Completed
Needs Assessment	1/1/2016	120	Completed
Goals, Objectives and Mission Statement	1/1/2016	180	Completed
Theoretical Underpinnings	1/1/2016	180	Completed
Project / Work Planning	5/1/2016	120	Completed
Projected Project Budget	5/1/2016	60	Completed
Evaluation Planning	5/1/2016	90	Completed
Project Implementation	5/1/2016	180	Completed
IRB Approvals	5/1/2016	90	Completed
Data Interpretation	2/14/2017	30	Completed
Dissemination / Utilization and Reporting of Results	3/2/2017	90	Completed

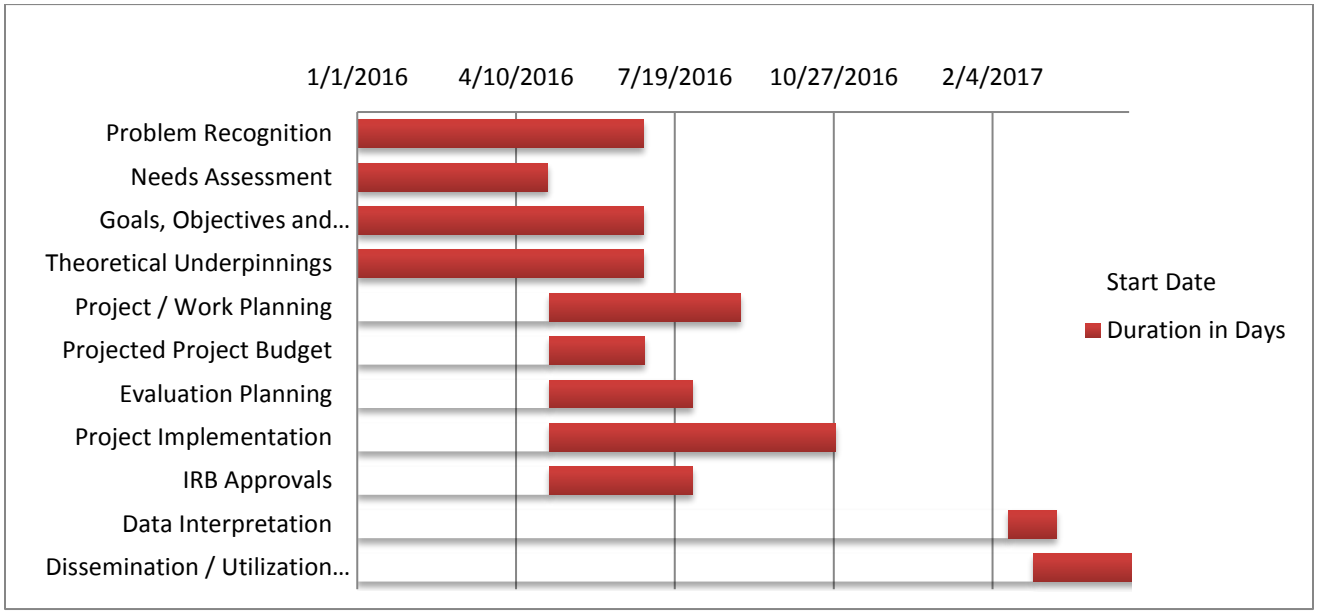

Figure 3. GANNT Chart

Budget

Funding for the project and materials was minimal with the greatest cost was purchasing sets of bathroom style scales to be used on the pilot unit. The HF coordinator was able to provide funds to obtain these scales. (Table 2)

Table 2

Project Budget

TASK	MATERIALS		BUDGET	ACTUAL	UNDER/OVER
	UNITS	$/UNIT			
Project Supplies Paper (21.99/ 1500 sheet box)		21.99	24.00	24.00	
Printing (*estimated)		200.00	200.00	128.60	(71.40)
Markers (15.74/ 18 pk/ 2 pks)	0.87	15.74	34.00	34.00	-
Lamination (1.50 each up to 25 sheets)	1.50	37.50	37.50	37.50	-
Door magnets (pilot unit pt room doors)		4.54	23.00	22.70	(0.30)
			318.50	246.80	
Grant Funds {1,000.00} Scales (patient rooms x 6 sets)		30.00	180.00	180.00	-
			498.50	426.80	-71.17
TOTAL				426.80	

SECTION V

Evaluation Plan

The objective of this project was to engage HF patients in their own self-care and assess changes in self-care confidence level from baseline to discharge in an acute care setting. Nursing staff of the pilot unit had the opportunity to offer feedback to shape the process pre-pilot, as well as make recommendations for future practice once the official pilot had concluded.

Facilitators

Strong nursing support and buy-in of the staff and administration to facilitate engagement of patients in their inpatient HF care created a positive implementation. The staff who specialize in the daily care of these patients were open to innovative strategies for this target population. Finally, resource support was available to ensure provision of bedside scales to support this inpatient strategy.

Barriers

Lack of face-to-face time to interface with patients and families to teach and encourage SCM behavior was a commonly identified barrier. Recognition of competing priorities and nurse staffing affecting direct care nurses were identified barriers. Nurses consistently preferred a focus on fluid management I&O and felt that this one piece would be most beneficial to focus on moving forward. Nurses also felt that tangible resources for patients that had once been available in the past would be helpful for the organization to re-assess specifically measured cups for the HF patients.

Cost/Benefit Analysis

Clear delineation of the exact relationship and all of the contributing factors to effective HF SCM is still unknown. Evidence and efforts to understand this complex relationship of HF SCM and associated factors is growing. In the meantime, data demonstrate the mean HF readmission cost is $13,000.00, with an estimated readmission rate of 25.1% (Rizzo, 2013). In light of these statistics this project budget was menial in comparison to the cost of one HF patient being readmitted. If one HF patient was able to avoid a HF related hospital readmission the facility could contain over $12,000.00. Lastly, HF related QOL is presumably better if the patient is able to manage independently in the community.

At project evaluation, these nurses overwhelmingly felt that they were providing as many resources to HF patients as they had available. Most nurses involved in this project felt strongly that if patients were able to manage while inpatient using resources and training provided successful community management could be achieved while avoiding premature HF readmission.

SECTION VI

Implementation

Protection of Human Subjects

Institutional review board (IRB) approval was gained via the hosting hospital site and sponsoring University. Patient and family participation in all aspects of this project was voluntary, not participating did not result in repercussion or change in care provided for lack of participation. At any time during the project or hospitalization a patient or identified primary learner for the patient who no longer wished to participate or receive educational intervention was free to withdraw without repercussion. An IRB approved fact sheet was provided to participants to explain that only information needed to study outcomes will be collected, minimizing to the fullest extent possible the collection of any information that could directly identify subjects, and all study information was maintained in a secure manner. Confidentiality was further protected in a similar fashion by collecting only information needed to assess study outcomes, minimizing the collection of any information that could directly identify subjects, and maintaining all study information in a secure manner.

The intervention had the potential to decrease HF readmission rates offering mutual benefit. The project was relatively low risk to patients and families. Potential associated risks that were considered were the patient's psychological state including emotions or emotional stress surrounding self-care abilities or perception of shame and embarrassment over inability. The chaplain for the unit was available as the trained resource to assist in protecting and addressing any emotional or psychological risks of

participants, but was not called upon during the pilot period. The project coordinator was responsible for the overall monitoring of the data and safety of study participants.

An educational PowerPoint was used for the direct care nurses of the pilot unit. A hard copy of education was delivered at shift change huddles 6:30 am and pm. The educational material was also sent electronically to all nurses on the pilot unit for reference. The same education PowerPoint slides as well as the associated tools to be used for the pilot was posted on the bulletin board in the pilot unit conference room.

Threats and Barriers

Threats that deserve mentioning are the use of tools that rely on self-report measures and the potential for cognitive and/or sensory impairments in this population that may not be detected. The team projected a sample size of 60 patients based on size of unit and average amount of HF admissions, however after six months of piloting recruitment was closed with a final sample of 54 patients. Design criteria could be a potential barrier however, recruitment over six-months resulted in an adequate sample. Inclusion criteria were a challenge to recruitment, but specifically designed to address and have the most impact on HF patients who planned to return to the community supporting the project goal. The criteria included being mentally and cognitively intact with the ability to physically be involved in self-care; while exclusion criteria included physical inability or mental or cognitive impairments. This project did not capture HF patients who may have resided in, or were returning to an alternative living arrangement such as a skilled nursing facility or assisted living facility as those individuals would receive some level of professional or skilled health management of their HF. Recruitment was less than expected based on inclusion criteria and patients admitted, criteria were

designed to target HF patients who would return to community dwelling which narrowed eligibility for some inpatients who either resided in skilled nursing facilities on admission or were being discharged to a facility or alternate care setting. Patient behavior, mentality, internal motivation, lifestyle choices all were identified as both threats and barriers. These aforementioned factors are potential threats to the HF patient's overall health and QOL. These potentially modifiable, yet challenging factors also pose a threat to the future viability healthcare systems.

Time and availability of nursing staff to adjust work flow to work one-on-one with HF patients to allow them time to safely and adequately practice and fully comprehend SCM practices while inpatient is a threat to sustainability in busy acute care environments. Of note, not collecting further demographic or personal identification information was a barrier to determining if the patients who participated in the SCM protocol were readmitted during the pilot or immediately following. If patient level detail were a variable to be analyzed in the future for readmission trends a modification in project design to include higher level of demographic information would be necessary in the IRB protocol to overcome this barrier. This level of granularity may in fact be useful as historical data at this site reveals a relatively small segment of HF patients are accumulating a large number of inpatient days.

Steps in Implementation

Pilot Education

An educational plan for all involved staff on the unit and both 12-hour shifts was delivered. All direct care registered nurses (RN) on the pilot unit were educated prior to project implementation. Financial support for printing and use of technological

equipment was gained from the department of Nursing Education Department at the host hospital. Education of the involved nursing staff was performed by the project coordinator and nursing clinical educator. All RN's on the unit and all shifts received face-to-face training on the purpose and objectives of the project

Interventions

The following SCM interventions were implemented as a part of the piloted SCM protocol (1) Patient Education: Each patient will receive face-to-face education from their nurse on how to perform and measure daily weights using the bathroom style scale provided in hospital room, as well as education on how to track and measure I&O based on prescribed restrictions using a dry erase chart provided in room (Appendices B-C). (2) SCM Activities: include daily weights with a weight management chart to facilitate daily monitoring performed and reported by the patient (Appendix C). (3) Fluid Management: all SCM patients will receive a dry erase marker to record measurements of I&O for the duration of the inpatient stay (Appendix B). Finally, all SCM patients were asked the same six SCHFI sub scale self-confidence baseline and prior to hospital discharge for comparison.

Project Design and Implementation

Design

This project was designed to foster self-care self-confidence in SCM ability of HF patients while hospitalized. The purpose of this project was to assess self-care self-confidence of hospitalized HF patients agreeable to participating in the SCM protocol while inpatient. A project fact sheet was developed for distribution to all interested participants. The fact sheet described the expectations of the pilot project and

components of the SCM protocol including how the nursing team would partner with the patient and family to offer comprehensive support to improve SCM. The fact sheet explained the primary project objective to build confidence with common heart failure self-care tasks specifically of checking weight daily, and tracking I&O. An explanation of the SCHFI confidence subscale was also included to inform patients they would be asked six questions about confidence in self-care skill at the beginning and end of the hospital stay. Finally, the fact sheet outlined the tools that would be provided at the bedside to facilitate care including a scale, dry erase style I&O chart and weight management chart (Appendices B-C).

Implementation

This was a nursing led project intended to assess and build self-care self-confidence of HF patients implemented in August, 2016 on an adult, inpatient general medical-cardiology unit. Resources for project development and implementation were made available via the hosting hospital site.

Instrument

The existing SCHFI Self-care confidence Section "C" screening assessment was employed with proper permission. The SCHFI is a commonly used, recognized, validated tool in self-care literature. The SCHFI was the instrument selected for this project due to its validity and ease of use with patients. Implementing the SCHFI subscale Section "C" screening tool on all eligible patients, with HF on the specified unit resulted in a score from 6-24. The SCHFI, which is a validated tool for measuring self-care includes 22 questions, with three subscales: self-care maintenance, self-care management, and self-care confidence. Each item is based on a four-point Likert scale,

with one equating to "never or rarely" up to a rating of four which is indicative of "always" (Riegel et al., 2004). This confidence screening tool was utilized on all consenting, newly admitted patients who met inclusion criteria. The screening was performed by the coordinator for patients admitted with a HF diagnosis. The screening assessment resulted in a baseline self-care self-confidence score, coupled with a second score of the same six questions asked again prior to discharge. Patients who met inclusion criteria but suffered from cognitive or sensory impairments were considered eligible to participate if they had someone present who was an acceptable primary learner on their behalf, however this did not arise in this sample. Student t-test was used to measure changes in self-confidence levels of program participants pre-and post-self-care intervention.

Tools

The following tools were implemented as a part of the SCM protocol: a bathroom style scale provided in the participant's hospital room, an I&O dry erase chart at bedside (Appendix B), as well as a daily weight management chart (Appendix C) posted in the room.

Process

Community dwelling adult patients admitted to the designated medical cardiology unit with a primary HF diagnosis were screened for inclusion into the SCM protocol by the coordinator via a convenience sample at an academic medical center situated in southeastern US. The project coordinator reviewed new patient admissions daily for recruiting potential participants, and was alerted by the charge nurse or HF coordinator of new participants in between those times. The project coordinator, following inpatient

admission to the specified unit, met with the patient to perform self-care self-confidence screenings as described using the six question SCHFI confidence subscale. It was posited that HF patients who participated in a targeted SCM protocol while inpatient would appreciate an increase in their self-care self-confidence scores prior to discharge.

Project Closure

Heart failure affects millions globally reaching epidemic proportions. Due to burden imposed on patients and healthcare systems alike, innovative strategies are warranted to promote effective SCM keeping patients well in the community. Following six months of inpatient acute care recruitment the current project closed with a sample of 54 HF patients. A meeting was held with the stakeholders to review pilot project findings. Nurses of the pilot unit had the opportunity to participate in final focus groups to offer feedback on SCM practices on the unit moving forward. Results affirmed for the direct care nurses that simple, cost-effective alterations in practice can positively impact the self-care confidence of HF patients. Further, performing this pilot project reinforced the importance of analyzing routine inpatient nursing practices for common chronic conditions.

SECTION VII

Interpretation of Data

This section will present findings of statistical analysis and anecdotal results addressing the effects of an inpatient SCM protocol on HF patient's self-care self-confidence. A convenience sample of 54 adult inpatients, with a diagnosis of HF, admitted to the designated inpatient, medical unit were recruited. All patients admitted with HF anticipated to discharge back to the community had the opportunity to participate. The average number of new admissions to the selected area is six to eight adult patients daily, all with varying ages over 18 years old.

Data Collection

Data was collected at two time points on the following variable: self-care self-confidence via SCHFI Subscale "C" scores. Data collection points for SCHFI Subscale "C" scores were following admission for baseline collection on admission to the selected inpatient unit, and prior to hospital discharge. Self-care confidence screening scores were collected and recorded by the project coordinator. The project data was recorded and organized in a Microsoft Excel spreadsheet. Statistical Package for Social Science (SPSS) was used to perform statistical data analysis.

Data Analysis

The differences in participant self-care confidence scores were analyzed. A paired t-test was used to examine group differences between participant's baseline and pre-discharge SCHFI self-care self-confidence scores. The change between the participant's baseline self-care self-confidence screening and pre-discharge screening was calculated. Descriptive statistics were also evaluated. The mean age of participants was

68.5 years old, with a range of 29 to 95 years old. Seventy percent (35) of the sample was male. Primary chief compliant for admission was SOB, with the ED being the most common portal of entry for inpatient admission. Self-care self-confidence mean score on baseline screening was 12.22, with higher score reflective of higher confidence, while pre-discharge self-care self-confidence score mean was 13.93. There was a statistically significant increase in score by 1.71 points ($p<.001$). Baseline mean confidence score for females in the sample was 12.32 compared to 12.17 for males. Forty-nine patients, roughly 90% of the sample experienced an increase in self-care self-confidence, only five participants had self-care self-confidence levels that were unchanged from baseline, while none of the participants in the sample experienced a decrease in self-care self-confidence. (Table 3)

Table 3

SCM Participant SCHFI Confidence Results

Participant	Gender (M=1/F=2)	Age	Baseline Score	Post Score	Score Change +/-
1	1	91	13	14	1
2	1	61	14	16	2
3	2	75	14	12	2
4	1	71	14	15	1
5	2	64	14	17	3
6	1	87	17	17	0
7	1	58	12	14	2
8	1	86	10	12	2
9	2	29	10	12	2
10	1	52	11	12	1
11	1	39	11	12	1
12	1	60	8	12	4
13	1	71	14	17	3
14	2	92	16	16	0
15	2	85	15	16	1
16	2	71	14	16	2
17	1	60	14	16	2
18	1	69	14	17	3
19	1	78	15	15	0
20	1	67	13	17	4
21	1	57	8	12	4
22	1	59	12	15	3
23	2	68	13	14	1
24	1	69	11	17	6
25	2	35	11	12	1
26	2	92	12	13	1
27	2	79	10	12	2
28	2	64	12	13	1
29	2	60	13	14	1
30	1	87	11	13	2
31	1	71	14	16	2
32	1	66	8	12	4
33	1	82	14	16	2
34	2	61	13	17	4
35	1	60	14	16	2
36	2	61	11	12	1
37	2	54	10	12	2
38	1	62	13	13	0
39	1	83	10	14	4
40	1	67	16	17	1

41	2	35	11	12	1
42	2	72	12	13	1
43	1	84	12	12	0
44	1	81	11	12	1
45	1	95	11	12	1
46	1	78	12	13	1
47	2	35	11	12	1
48	2	84	12	14	2
49	1	53	13	14	1
50	1	92	12	12	0
51	1	60	12	13	1
52	1	65	11	12	1
53	1	67	11	12	1
54	1	83	9	12	3

SECTION VIII

Utilization and Report of Results

Knowledge gained from this project highlights the need for further interprofessional efforts to increase quality face-to-face interaction time with hospitalized HF patients to assess needs and build confidence. Specifically, efforts to integrate multiple complex plans of care that are manageable and individualized to the patient's ability and comorbid conditions. Typically, as demonstrated in this sample many patients are older adults facing multiple conditions requiring prescriptive behaviors namely diabetes and renal disease concomitant with HF. The most common clinical challenge identified which was congruent with nursing concern and feedback was the patient's inability to delicately balance I&O for renal perfusion, yet stringent enough with fluid management to keep HF symptoms at bay. In the planning stages of the project nurses prioritized targeting I&O and daily weight management, however in the post project focus groups direct care nurses felt increased attention to build confidence in managing I&O would be the most impactful moving forward (Appendix A). The majority of the sample was male which is reflective of current findings and epidemiology of the HF literature. A number of patients in this sample faced resource and social challenges including being caregivers themselves of older, ill spouses. Patients who participated in this project often shared their decision-making process on trying previous interventions with limited success such as altering diuretics to avoid seeking healthcare.

The infrastructure to sustain this program moving forward is in place, but will require stakeholder monitoring to prevent nursing practice drift back to linear, professional teaching. There must be a commitment to partner with patients engaging

them in what they are able to perform and facilitating decision-making with a patient centered focus.

Summary

Recognizing that as complex as HF is, impactful interventions will be equally as complex. Advocating for a shift in HF clinical practice to improve patients SCM behavior is a best practice that is dependent on the practitioner as much as it is the patient. The effectiveness will rest on the encounter with the patient in partnership with their ability to pursue necessary behaviors (Davidson, Inglis, & Newton, 2013). Continued partnership efforts are warranted with this growing vulnerable, often frail segment of the population to avoid creating a greater health disparity. As comprehensive HF management programs are refined healthcare leaders must continue to acknowledge the challenges in symptom identification, knowledge access and healthcare-seeking are hurdles for this group (McNaughton et al., 2013).

The concept of self-care has continued to emerge more strongly over the last few decades however, face-to-face interaction time with chronically ill patients is shrinking (Riegel & Dickson, 2008). Studies suggest that self-care confidence acts as a mediator in chronic disease and is influential in outcomes of the self-care process (Riegel & Dickson, 2008). Recognizing the importance of self-care confidence in SCM, this project sought to strategically intervene early in the acute care phase with HF SCM strategies. The piloted inpatient HF SCM strategy encouraged patients to practice behaviors while bolstering confidence in a safe environment. Heart failure is one of several burdensome chronic diseases not unlike diabetes that requires a set of prescriptive management behaviors and associated decision-making ability to regulate physiologic challenges imposed by the

condition. Unfortunately, imparting knowledge alone to HF patients is insufficient. Instead, HF knowledge must be congruent with accurate decision-making tied to confidence and action in a setting of social support. Commonly patients are thought to use a naturalistic decision-making process where the stakes may be high, and impulsive where real life conditions shape which or how choices are made (Riegel et al., 2012). Recognizing most HF SCM decisions are not going to be arrived at through a cognitive decision-making process, allowing and encouraging hospitalized HF patients to practice skills and decision-making in context has mutual benefit. The findings of this project support and are in alignment with the growing body of evidence emphasizing the importance of self-care self-confidence as an emerging critical component of successful HF management.

All too often these patients present with diabetes mellitus (DM) and end-stage renal disease (ESRD) or some form of renal insufficiency posing challenges for patients to manage the correct amount or adequate amount fluid for sufficient renal perfusion versus a balance not to overload the cardiovascular system. In typical compartmentalized healthcare environments patients receive fragmented or "piece meal" patient education and support that is disease specific. It is common for a HF patient to be managed by more than one clinical specialist such as an endocrinologist, nephrologist, and cardiologist minimally, in addition to their primary care provider. The nephrologist encounter results in information on diabetes and kidney failure which may not integrate easily into what may have been received via a cardiologist or primary care practitioner. As this project illustrated the majority of the sample was older over 65, facing normal age related changes and as data demonstrates over half may have up to five or more

comorbidities with equally as many prescription medications (Wong et al., 2011). These statistics demonstrate that this population may have at least five or more different layers of information or plans of care based on comorbid conditions.

Shortness of breath was the most common chief complaint that prompted HF patients in this sample to seek care in the hospital ED in many cases resulting in acute care admission. As established in Orem's theory there is a self-care deficit that requires nursing agency to augment when the patient requires hospital care. In this project deficits contributing to the chief compliant of SOB were fluid management and weight gain best augmented via fluid management and close monitoring of daily weights. As demonstrated HF patients can own and have accountability for SCM behaviors while inpatient. However, as highlighted through this work targeting patient knowledge alone is not sufficient for SCM behavior change in HF. Riegel and Dickson (2008) assert that first recognition of the symptom is imperative in this case SOB, followed by knowledge, skills, experience which can be given while inpatient through a SCM protocol, yet lastly and perhaps the most important piece is confidence as the mediator between patient's self-care, maintenance, and ultimate outcomes.

Self-care is critically important in HF management, similarly confidence is emerging as a potent ingredient for SCM success. This project demonstrated that altering HF patient education can increase self-care self-confidence, but requires nursing commitment, time, and a change from traditional homogenous workflows. Innovation in practice is to look at care delivery differently not to continue to search among previous strategies. Trends identified were multiple conflicting or confusing plans of care for comorbid conditions, resources, knowledge deficit and decision-making factors. Riegel et

al. (2012) highlighted the importance of further study into patient's naturalistic decision-making which is also supported by anecdotal findings in this project. A number of patients freely described their thought and decision-making process most all recognizing a symptom or change choosing to try strategies which had been tried before to "buy time" or delay seeking treatment to see if symptoms would improve or fully resolve. These findings further supported both the need to have patients practice this care while inpatient to reinforce rationale for decision-making and further attention to the decision-making process of chronically ill patients as decisions are shown to be drawn from an inventory of previous experiences. A strong foundation of knowledge and experience constructed while inpatient may lend to more effective SCM in the community decreasing frequency of deficits and need for acute inpatient care. Additionally, this clinical improvement project reflects common challenges in promoting self-care and educating chronically ill patients with a short length of stay in today's acute care environments. Quantitative findings from this project highlight that engaging hospitalized HF patients in their SCM behaviors may increase their self-care self-confidence levels. Opportunity exists to explore further nursing interventions that target confidence to promote SCM while inpatient. As noted performing one's own care is supported as a best practice in the HF guidelines (Lindenfeld et al., 2010). Further, in naturalistic decision-making patients are likely to perform behaviors that they have been able to simulate and feel they have expertise in, hence the impetus for HF patients to perform as much self-care in the hospital as possible. The greatest impact this project can have is increasing awareness to drive evidence-based nursing practice around the self-care self-confidence levels specifically in refining comprehensive HF management. The goal is to facilitate an

evolution in clinical practice facilitating HF patient-family centered partnerships to build confidence in SCM ability offering a higher likelihood of success once back in the community.

This project has important implications for nursing practice to support a greater understanding of the effects of self-care self-confidence in HF patients and how this may relate to patient's premature use or readmission to the hospital. This project illustrates a critical need for nurses to individually assess and actively engage patients, structuring bedside care based on a patient's comorbidities, confidence, and ability. Healthcare leaders can no longer afford to apply a "blanket coverage" care planning strategy to all patients when needs clearly differ stemming from multiple comorbidities, circumstances, and capacity. Further investigation is recommended in the promotion of self-care self-confidence in HF and how strengthening confidence for SCM impacts HF outcomes. In addition, as highlighted by Riegel et al. (2012) expanding knowledge on patient decision-making is critical to facilitate confidence and decision-making capacity as it remains a fundamental link to creating workable solutions.

Conclusion

Our current healthcare climate puts increasingly greater demands on the growing number of chronically ill older adults to manage effectively without consideration of true level of self-care self-confidence and associated ability. Acute care environments can slow the current trend of learning from mistakes to facilitating confidence and skill proficiency as patients transition from the acute care setting back to the community. Recognizing that imparting disease knowledge alone does not increase or change self-care behavior, efforts to converge disease knowledge and enhance SCM skills for patients

to be successful in the community and improve clinical outcomes are needed. As the chronically ill often have more struggles than their healthier counterparts navigating the healthcare system and independently managing their health, our level of concern is understandably rising. Efforts to shift the hospital experience and culture of care delivery for HF patients to more active as opposed passive participation in care may preclude a premature return to the hospital. Nurse leaders must advocate for the reintroduction or increase of face time with patients perhaps focusing on fewer layers of documentation technology and workflow disruptions. A number of supportive roles have arisen in recent years to assist in the management of complex patients, yet the role, relationship, and expertise of the bedside nurse cannot be minimized in the care of this population.

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Appendix A

Project Nursing Focus Group Questions

1.) What strategies do you feel would benefit your HF patients the most in performing common self-care tasks once discharged?

2.) Do you feel that encouraging your HF patients to manage their weight and intake and output while they are in the hospital will help them be more successful in their HF management once at home?

3.) I feel we provide our HF patients with all of the resources they need to be successful once discharged, supporting them so they will not be readmitted for HF.

4.) I feel most of our HF patients could avoid HF admissions and readmission if they would use their resources and manage themselves effectively in the community.

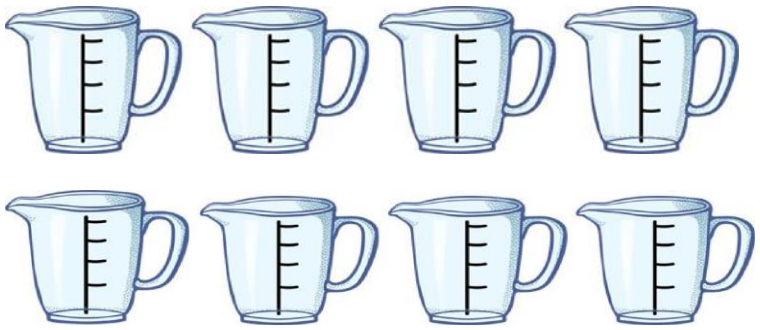
5.) Please tell us any other suggestions or creative ideas that could be implemented on your unit to help hospitalized HF patients be more successful with their disease management once discharged home?

Appendix B

Fluid Management Chart

Intake

- **Instructions:** Each cup on this chart represents an 8-ounce cup of fluid
- Color in the cups with the marker as you drink your fluid throughout the day.
- If you are on a 64-ounce fluid restriction, you should shade in all 8 cups by the end of the day.
- If you are on a 48-ounce Fluid restriction, you should shade in 6 cups by the end of the day.



Output	Please place a mark in a box below for each time you urinate

Appendix C

Weight Management Chart

DAILY WEIGHT CHART

DATE	WEIGHT