KEEP TICKING: CONGESTIVE HEART FAILURE SELF MANAGEMENT PROGRAM

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Bachelor of Nursing, University of Lethbridge, 2016

A project submitted
in partial fulfilment of the requirements for the degree of

MASTER

of

NURSING

School of Health Sciences

University of Lethbridge

LETHBRIDGE, ALBERTA, CANADA

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Date of Project Presentation: July 12, 2022

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Abstract

The social determinants of health are factors that impact an individual's ability to self-manage congestive heart failure. Social determinants of health impact adherence to treatment and self-monitoring. Assessing how the social determinants of health impact patients on an individual level improves patient-centered care planning and health education. Registered nurses play a key role in facilitating access to health care resources and promoting healthy behaviors by building effective relationships and fostering open communication. There is a gap in practice within the Calgary Integrated Home Care Program in what patients need to be supported with, and what they end up being supported with. The Keep Ticking: Congestive Heart Failure Self-Management program offers an education seminar to registered nurses working with heart failure patients that highlights how the social determinants of health affect heart failure management, the role nurses have in addressing heart failure management, and provides strategies in which nurses can use to improve the delivery of health education. This program also uses an assessment tool that nurses use with heart failure patients to identify specific self-management barriers related to the social determinants of health and acts as a guideline in how nurses can help support patients in mitigating those barriers. This program has shown to be effective in improving health education by assessing baseline understanding of patient's knowledge in heart failure management. Further assessment tool adaption and timing is required to improve its applicability in the home care program. Future program implementation will focus on collaboration and building relationships for effective patient-provider relationships. Nurses in the home care setting are limited on how they can address barriers related to the social determinants of health. Action is required beyond the level of care that home care nurses can provide, and further intervention is required on a social and political level.

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List of Abbreviations

CHF	Congestive Heart Failure
SDoH	Social Determinants of Health
HFT	Heart Failure Team
RN	Registered Nurse
IHC	Integrated Home Care
UofL	University of Lethbridge
AHS	Alberta Health Services
TTM	Transtheoretical Model
MN	Master of Nursing

CHAPTER 1: INTRODUCTION

Congestive Heart Failure (CHF) is a significant illness that threatens public health, with a five-year survival prognosis of fifty percent (Coats, 2019). Three and a half percent of Canadians live with CHF, with approximately 90 000 Canadians diagnosed with it yearly (Government of Canada, 2018; Canadian Heart Failure Society, n.d.). CHF is among the most common diagnoses associated with hospital admissions among adults sixty-five years and older (Graven & Grant, 2014).

CHF is a condition in which the heart cannot effectively pump oxygen-rich blood throughout the body (U.S. National Library of Medicine, n.d.). Risk factors for developing CHF include arrhythmias, myocardial ischemia, respiratory infections, poorly managed hypertension, non-compliance with medications, and poor diet (Ambrosy et al., 2022). Individuals at risk for CHF include older adults, women, and individuals with diabetes, lung disease, coronary artery disease, renal disease, and sleep-disordered breathing (Coats, 2019).

Because there is no cure for CHF, lifestyle changes and pharmacologic treatment are crucial to self-management. Patients must monitor symptoms, adhere to complex medication regimens, eat a healthy diet, exercise regularly, and adapt behaviors (Takhousi, 2015). The social determinants of health (SDoH) impact CHF self-management, and registered nurses (RN) are in optimal positions to act as primary care coordinators in addressing barriers (Riley & Masters, 2016).

Patients who experience the downstream effects of the SDoH are less likely to access care and have poorer health outcomes (White-Williams et al., 2020). Socioeconomic status has a significant correlations with CHF (Mahabir et al., 2020). CHF patients may experience challenges related to costs of medications, making difficult decisions about their health,

attending medical appointments, and are at odds with basic food and housing needs (White-Williams et al., 2020). SDoH were identified from a list outlined by the Government of Canada, (2022), including income, physical environment, social supports, healthy behaviors, health literacy, food security and nutrition, culture, and transportation. Berman et al., (2018) state that health care practice needs to identify SDoH that are relevant to the population of interest, and O'Gurek & Henke, (2018) state that screening for SDoH without equipping practitioners with the ability to address needs is ineffective and unethical. Therefore, I chose SDoH that are relevant to CHF patients as well as SDoH that could be addressed within the resources of the IHC program.

From my experience working with the IHC program and collaborating with nurses who specialize in CHF management, I have noted that the current CHF management program offered to individuals in the home care setting in Calgary, Alberta does not effectively meet the diverse learning needs of patients and there are limitations in how nurses can support patients through managing SDoH. This program improved nurses' ability to assess for barriers to CHF management and provide health education.

The 'Keep Ticking: Congestive Heart Failure Self-Management Program' adopts several components of CHF programs outlined by Riley & Masters, (2016). My CHF management program includes adequate patient education focused on treatment adherence and self-care, symptom monitoring by the patient, and increased access to health care services. It also adopted a multidisciplinary approach to address barriers that practical education cannot resolve. This program provided nurses with an educational session highlighting the various SDoH that can impact CHF self-management, the benefits of including a multidisciplinary team in CHF management, and strategies nurses can use to provide adequate information sharing with patients. The nurses then applied this knowledge to practice as they cared for CHF patients.

1.1 PROGRAM OVERVIEW

This program focused on CHF patients sixty-five and older, and RNs within the heart Failure Team (HFT) of the Calgary IHC program in Alberta. The patient participants of this program received informative health education and had person-centered barriers to CHF management identified. Through education, the RNs responsible for the care of CHF patients have a better awareness of the relationship between the SDoH and CHF management, have more knowledge of strategies they can use to provide more effective patient education skills, and an increased understanding of the multidisciplinary team's role in CHF management. Through the use of the assessment tool, RNs also have an improved ability to assess their patients for barriers to CHF management.

1.2 PROGRAM RATIONALE

This program advances nursing practice by deepening the understanding RNs have of how the SDoH impact CHF patients, improves the measurement of how the SDoH impact patient abilities to self-manage CHF, and provides direction to nurses on the actions required to mitigate the effects of the SDoH (White-Williams et al, 2020). This program improves health teaching and standardizes nursing assessment of how the SDoH impact patient self-management abilities.

1.3 LITERATURE REVIEW STRATEGY

To guide my literature review, I aimed to identify various components of this CHF management program. This included evidence about barriers to CHF management related to the SDoH, education strategies nurses can utilize to improve patient self-management abilities, and how nurses can support patients in removing barriers to self-management. My literature search also aimed to identify instruments and tools to assess patient-specific factors related to the SDoH. I completed a simple Google search to gather a bank of search terms to start my literature

search. I then searched the following nursing and public health databases, including CINAHL, Proquest Nursing & Allied Health Source, and Medline. I chose these databases as I wanted to focus on nursing and public health as subjects. I utilized the find articles by database subject function on the UofL (University of Lethbridge) library page to select the databases. While using the online search engines, I set search criteria dated the past ten years and included scholarly, peer-reviewed articles. I was also open to documents older than ten years old, such as documents related to the Transtheoretical Model (TTM), Gagne's Nine Events of Learning, how to improve online the online education experience, assessment tools used in practice, and strategies to improve patient education. Search terms used were 'social determinants of health,' 'heart failure,' 'self-management,' 'income,' social support,' 'transportation,' 'culture,' and 'chronic disease management.' Search terms also included 'social determinant of health assessment tools,' 'social determinant of health assessment,' 'nurses', 'nursing', 'behavioral change,' 'patient,' and 'teaching strategies.'

My search strategy also included grey literature to find information about statistics, public health data, and existing programs available within Alberta Health Services (AHS). To find information, I did a simple Google search and utilized search terms including' social determinants of health in Canada', 'income status Canada', and 'income support programs Alberta' and found information from the Public Health Agency of Canada, the Government of Canada, and the Government of Alberta websites. I also utilized the Insite page on the AHS website and searched 'heart failure programs'.

1.4 REVIEW OF EVIDENCE

SDoH are a set of conditions in which an individual lives. They significantly affect health inequities, self-care, and quality of life (Tankumpuon et al., 2019). Hayman & Worel, (2017) report that the SDoH influence the development and maintenance of healthy behaviors,

potentially putting individuals at risk of developing CHF and having poor self-management skills.

Income has significant effects on CHF management. Compared to other wealthy countries, Canada has one of the highest poverty rates (Raphael, 2020). A survey completed by the Angus Reid Institute (2018) concluded that 21% of Canadians cannot afford dental care, 9% occasionally have to borrow money for essentials such as food and transportation, 16% of Canadians live in poverty, and 11% are on the edge of poverty. Indigenous peoples, those with lower education levels, individuals with disabilities, females, immigrants, and single parents are at higher risk for poverty. Income and social status significantly affect cardiovascular health and CHF disease management. Those with a low-income status are less likely to access health care services, have poorer quality of care, have increased hospitalization and readmission rates, have poorer health outcomes, and increased mortality rates (Schultz et al., 2018).

To assess income, nurses need to consider issues related to food insecurity and transportation barriers. Food insecurity refers to the uncertainty and limited access to nutritionally adequate and safe foods (Jih et al., 2018). There is an increased burden of health expenditures associated with CHF and expensive nutritional recommendations for a heart-healthy diet. This insecurity may cause individuals to reduce food intake, miss meals, or alter dietary intake by shifting to less expensive foods. These foods tend to be higher in fat, salt, and sugar. Food insecurity can also adversely affect CHF management by reducing or skipping medications. Living with CHF also requires clinician visits, medication access, and changes to the treatment plan (Syed et al., 2013). Lack of transportation can lead to rescheduled or missed appointments, delays in care, and missed or delayed medication use.

To improve access to food, nurses can direct patients to various services available in the community, such as food banks and meal delivery services. Nurses also must understand the relationship between transportation barriers and CHF management (Syed et al., 2013). Telehealth services are an effective way of overcoming transportation barriers with patients who have adequate technical literacy. Video conferencing or telephone consultations between patients and nurses improves access to health care services when transportation is a barrier. Many pharmacies also offer deliveries to patient's homes to ensure access to medication. Nurses can also direct patients to the City of Calgary website to apply for Calgary Transit Access. Access Calgary is a transportation program in Calgary utilized by individuals who are either physically or cognitively incapable of using public transit (the City of Calgary, n.d.). Application forms are readily available online.

The physical environment, specifically the home environment is a significant contributor to positive and negative health-related outcomes, safety, satisfaction levels, and well-being (Gitlin, 2003). Many individuals prefer to age in place and grow old in their community residence. Older adults with functional disabilities often have difficulty navigating their environment and actively reconstruct their living space to cope with difficulties. Home possessions are also a source of symbolic meaning and contribute to well-being and quality of life. Wahl et al., (2009) state that remaining independent in activities of daily living requires an optimization of the home environment. This is especially true for individuals with a physical illness. Common deficits individuals face as CHF progresses include mobility, strength, balance, motor processing, endurance, and physical activity (Vitale et al., 2018). Many individuals with CHF report unintentional weight loss, exhaustion, low energy expenditure, slow gait speed, and weak grip strength. They are at greater risk for cognitive and functional decline, increased

hospitalization and readmission, and increased risk of falls. Nurses need to consider the ability of an individual to function at home and decrease barriers in their physical environment to create a living environment suitable for CHF self-management (Liu et al., 2018).

Social support systems positively impact self-care maintenance and management (Graven & Grant, 2014). Support systems benefit individuals by assisting with treatment adherence, monitoring symptoms, and promoting healthy behaviors for those living with CHF. Individuals with a higher level of family support have greater adherence to self-management activities and improved control over their conditions. Individuals with poor social support systems are at risk for poor health outcomes, decreased ability to adapt to health conditions, lower levels of optimism, and reduced quality of life (Maguire et al., 2019). Social support is critical to long-term CHF management, emphasizing self-reliance, personal achievement, family cohesion, and attentive responses to symptoms (Grady & Gough, 2014).

Increasing patient access to resources is impossible unless nurses know social barriers exist (O'Brien, 2019). Nurses should question individuals with CHF regarding the presence and availability of social support sources (spouse, significant others, family, and friends) that may be able to assist with the daily activities related to self-care maintenance and management. For patients without an adequate support system, nurses may need to schedule more frequent appointments to assess the individual's ability to maintain self-care. They may also need to set up services for closer monitoring and assistance with self-care-related activities (Graven & Grant, 2014). Nurses should also involve family and caregivers in education and care planning to ensure available supports are in the home (Riley & Masters, 2016).

Engaging in healthy behaviors is an important aspect of CHF management. CHF exacerbations are typically due to failed self-care, poor medication adherence, poor diet, and

delayed seeking of health care services (Moser et al., 2012). Self-care maintains health through positive health behaviors and is integral to the health and well-being of individuals with CHF (Graven & Grant, 2014). Many factors may affect self-care, including cognitive impairment, depression, anxiety, poor health literacy, social isolation, poor social support, low socioeconomic status, and sleep disturbances (Moser et al., 2012). Self-care involves a high level of decision-making and several activities when managing CHF. Patients need to be knowledgeable about the condition, adhere to diet recommendations, and actively engage in symptom surveillance. Nurses need to assess the individual's ability to engage in healthy behaviors and monitor symptoms. Nurses can offer support and intervention where gaps are noted.

Low health literacy levels act as a barrier to effective CHF self-management (Cajita, 2016). Studies have shown that low health literacy is associated with poorer healthcare knowledge, decreased medication adherence, diminished use of preventative services, poorer physical and mental health, and increased hospitalizations. People with low health literacy may have trouble processing information on disease management, such as reading appointment slips and medication labels, verbal understanding of the information provided by healthcare clinicians, and understanding educational materials.

Low health literacy can be a barrier to effective disease self-management, especially for chronic diseases such as CHF that require complicated self-care regimens (Cajita, 2016). Considering the prevalence of low health literacy among the CHF population, nurses and healthcare professionals need to recognize the consequences of low health literacy and adopt strategies to minimize its detrimental effect on patient health outcomes. Nurses play a critical role in patient education and must make the most out of teaching moments and adopt various strategies (Hersh et al., 2015). Teaching strategies include using plain, non-medical language,

common words familiar to the patient, prioritizing and limiting health information to three key points, and reinforcing those key points. Other strategies include utilizing the teach-back method by having patients repeat health information in their own words, utilizing the Chunk and Check method by reviewing material, and providing opportunities for the patient to ask questions. Nurses should also determine the patient's baseline understanding of CHF, apply universal precautions using the same communication strategies for everyone, and provide health information in various formats (Brooks et al., 2018).

Resources available for CHF patients with low literacy include the Living Well with Heart Failure booklet, a CHF patient education tool frequently used in practice (Heart and Stroke, 2018). Developed by the Heart and Stroke Foundation, this is a free online resource for hard copy orders (https://www.heartandstroke.ca/-/media/pdf-files/canada/health-information-catalogue/en-living-with-heart-failure.pdf). The booklet utilizes a combination of written and visual information. This resource provides information on CHF, CHF management, activities for healthy living, information on medications, and accessing mental health support. This resource also provides information to caregivers and directs the individual in developing a personal action plan. This booklet also contains a self-monitoring sheet, a daily weight information and monitoring form, and a symptom assessment sheet. The Heart and Stroke Foundation encourages this resource to be reviewed by patients and families of those affected by CHF (Heart and Stroke, 2018). There are also various other forms of health information communication that patients and families can access. YouTube is an excellent resource for educational material and can add audiovisual communication to patient education. Many websites have reliable information on CHF self-management, including the My Health Alberta website (https://myhealth.alberta.ca/health/pages/conditions.aspx?hwid=hw44415) and the Heart and

Stroke Foundation (https://www.heartandstroke.ca/heart-disease/conditions/heart-failure). The Alberta Health Services website also allows access to a free patient resource package which includes educational information, including information on nutrition and self-monitoring (https://albertahealthservices.ca/info/Page7735.aspx). There are also a variety of applications available for download on mobile devices for ease of access.

Culture is passed down from generation to generation and affects individuals' perceived control over health, decisions, and treatment preferences (Allasoud et al., 2020). People's cultural beliefs about health and disease affect the expression of symptoms, inform lay knowledge of CHF diagnosis, causes, treatment, self-management, and influence their healthcare decisions and behaviors.

Inconsistencies between culture and health recommendations restrict the understanding and adoption of healthy behaviors (Allasoud et al., 2020). Culturally competent care is at the forefront of client-centered care. Nurses need to develop interventions that embrace the language, social context, role of family, and patient values and beliefs. Health care organizations must support the development and implementation of interventions to support safe and high-quality care for diverse patient groups and families in a culturally safe fashion. Nurses must ask about issues in a caring, sensitive, and culturally safe manner to encourage patients to be more forthcoming about challenges and concerns they may be experiencing (Andermann, 2016).

1.5 EXISTING PROGRAMS

Programs already in practice that support CHF patients in Calgary, Alberta, include the Heart Failure Optimization program and the IHC program. These programs aim to increase CHF management and facilitate access to health care services.

Heart Failure Optimization was developed by the Cardiovascular Health and Stroke Strategic Network in 2010 (Alberta Health Services, 2012). This program closely monitors patients during two critical stages. The first is admission to acute care, and the second is at discharge. This program gives patients the information needed to manage their CHF by providing patient education and resources for self-management. This program aims to develop care pathways that improve health outcomes, enhance the patient experience, and standardize care pathways across the province. Heart Failure Optimization reduces hospital admission stays, reduces readmission, and improves access to cardiac care.

The second program offered by AHS is the Integrated Home Care Program in Calgary (Alberta Health Services, n.d.). This program helps individuals remain safe and independent in their homes for as long as possible. This program involves a multidisciplinary team that supports individuals living in the community. Clinicians meet with clients to assess their needs, involve the client and their families in care planning, and oversee care coordination and services. There is a separate team within the program called the HFT that specializes in CHF education and management to home care clients.

1.6 EXISTING SDoH ASSESSMENT TOOLS

O'Gurek & Henke, (2018) state there is a lack of evidence-based SDoH screening tools, and there is no single preferred screening tool in practice. O'Brien, (2019) completed a study where the primary goal was to determine the screening tools used to assess SDoH in health care settings. The study identified eight screening tools for food insecurity, such as the 'Brief Hunger Screening Tool,' which asks individuals if they or anyone in their family have gone hungry in the past month because there was insufficient food. The research concluded that five out of the eight screening tools for food insecurity were valid. Twelve assessment tools were identified that

assess health literacy, including the 'Short Test of Functional Literacy,' 'Newest Vital Sign,' and 'Rapid Estimate of Adult Literacy in Medicine. Of the twelve assessment tools, nine were deemed reliable. Seven assessment tools were also identified to assess social support. The most common tool for measuring the level of support included the 'Medical Outcomes Study-Social Support Survey,' which has shown consistency across participants. Comprehensive screening tools were also identified, screening for factors including poverty, food insecurity, social support, trauma exposure, housing, education, employment, and transportation. Valid tools included the 'Child Poverty Tool & Resource Guide," IHELP,' and 'WE CARE' (O'Brien, 2019). The study also concluded that when assessing for SDoH, nurses should consider the style of administration, the purpose of evaluation, and the availability of resources when determining which assessment tool to use.

For the development of my assessment tool, I utilized the IHELP questionnaire, the Medical Outcomes Study, the Canadian Nutrition Screening Tool, the Dutch Heart Failure Knowledge Scale, and the Alberta Comprehensive Assessment. The details and rationale for how and why these tools were used will be discussed in the next chapter.

The IHELP questionnaire was initially developed as a pediatric assessment tool to address social stressors and support networks, changes in the environment, life control, and literacy (Kenyon, 2007). The assessment tool assesses income, food security, housing, ability to pay bills, education level, immigration status, access to benefits and services, and personal safety.

The Medical Outcomes Study is a brief, self-administered social support survey developed for patients with chronic conditions (Sherbourne & Stewart, 1991). This survey measures physical functioning, role limitations, pain, emotional problems, current health, social

activity, energy and fatigue, loneliness, family functioning, family happiness, and marital functioning.

The Canadian Nutrition Screening Tool is an assessment tool that identifies patients who are at risk for poor nutrition (Canadian Nutrition Society, n.d.). This assessment tool asks patients if they have lost any weight in the past six months without trying, or if they have been eating any less than usual for more than a week. If patients answer 'yes' to both questions, this indicates nutritional risk.

The Dutch Heart Failure Knowledge Scale is a 15-item questionnaire that assesses baseline understanding of CHF, knowledge of CHF treatment, and CHF symptom and symptom recognition (Van der Wal et al., 2005). Questions assess patients understanding of how often they should monitor symptoms, why is it important to monitor symptoms, actions they can take to prevent symptom exacerbation, and if they are aware of when they need to seek medical treatment.

I have frequently used an assessment tool in practice called the Alberta Comprehensive Assessment. This assessment is completed on acute clients of the IHC program. This tool assesses client needs related to material resources, physical surroundings, health behaviors, physiological function, psychosocial factors, and cognition. This tool helps prompt nurses to make referrals and develop patient-centered care plans based on needs identified through the assessment.

1.7 GAPS IN EXISTING ASSESSMENT TOOLS

Although several instruments have been developed to evaluate the impact the SDoH have on a patient level, there currently are no standards for how the screening of the SDoH should be conducted (White-Williams et al., 2020). Additional evidence is needed to understand better how

well different tools will perform for specific populations. At this time, each practice setting should select a tool that can be easily incorporated into practice.

CHAPTER 2: PROGRAM DEVELOPMENT

The Keep Ticking program consisted of an educational session provided to nurses of the HFT and their use of an assessment tool to identify barriers to CHF management with their patients. This program combined research and theory that directed content and program deliverables.

2.1 DEVELOPMENT OF THE ASSESSMENT TOOL

To guide the development of the assessment tool, I utilized the Alberta Comprehensive assessment, which is well-known amongst nurses working with the IHC program. I chose this assessment tool as a guide to document barriers identified and referrals required. I also used this assessment tool to assess the physical environment and the mobility aids that patients use or may require. I utilized the assessment tool for this purpose because in my experience using the assessment tool, I have noted that it does adequately assess patient's mobility needs. It is also useful in triggering me to make referrals if barriers are noted.

To assess health literacy and healthy behaviors, I used the Dutch Heart Failure Knowledge Scale and adapted it to my program population. I chose to utilize this scale in the development of my assessment tool because it is shown to be a valid and reliable scale in clinical practice to measure CHF patients' health knowledge (Van der Wal et al., 2005). Questions were changed for my assessment tool to determine what the patient's current self-management practices are, to determine their baseline understanding, and to help identify what stage of change the patient is in. For example, the Dutch Heart Failure Knowledge Scale asks "how often should patients with severe heart failure weigh themselves?" I adapted this question to ask "how often do you weigh yourself?" I thought that rephrasing questions to assess patient-specific care

practices were more beneficial than asking more general questions. This gives the nurse a good idea of what the patient knows and what they are doing.

To assess food and nutrition, I used the Canadian Nutrition Screening Tool. I chose this tool because it has been rigorously tested and has been proven to be a valid nutrition screening tool (Canadian Nutrition Society, n.d.). Questions were adapted to be more relevant to the CHF population. For example, this tool asks patients if they had any weight loss in the past six months to determine if the individual is at risk for malnutrition. I adapted this tool to ask patients if they have had any weight changes in the past 6 months, as CHF causes fluid retention, resulting in weight gain (Sergi et al., 2004). This question acts as an indicator for malnutrition and symptom exacerbation.

To assess income, I utilized the IHELP questionnaire, with adaptations. Because this tool was originally developed for the pediatric population, I made some changes to better relate to my patient population. I used this assessment tool because as stated above, it has been proven to be valid and reliable. I thought that the questions are more beneficial in assessing if patients' income meets their needs, rather than outright asking patients about their income levels. This is a better way to ask questions about sensitive needs to encourage patients to be more upfront about any challenges they may be facing (Andermann, 2016).

To assess social support, I utilized the Medical Outcomes Study. I chose this assessment tool because I thought that it was well-rounded in assessing social support, and it also addressed a lot of social support barriers that I have seen in practice. The questions were also easy to administer to chronically ill patients, easy to understand, and restricted to one idea (Sherbourne & Stewart, 1991). Nurses using the assessment tool were taught to ask social support questions as applicable to patients. For example, one question asks if there was anyone available to help

patients if they were stuck in bed. If patients mobilized independently, nurses could omit this question during the assessment.

I did not use any specific assessment tool to identify barriers related to culture and language. Instead, I aligned questions with what is found in the literature. To assess immigration status, I utilized the IHELP screening tool (Kenyon et al., 2007). This tool asks if patients have any questions regarding immigration status. I adapted the tool to simply ask patients about their country of origin and immigration status. If patients had Canadian citizenship, further discussion about immigration status can be avoided.

I also added a section in my assessment tool to document additional considerations. In this section, nurses could note any alternate therapies the client is participating in, if they have any additional co-morbidities, and other information that may be important to the patient and their care.

2.2 THEORY AND MODEL APPLICATION

Transtheoretical Model (TTM) is a behavioral change theory (Hashemzadeh et al., 2019) that has guided program development and deliverables. To inform the development of the nursing education session, I utilized Gagne's Nine Events of Instruction (Miner et al., 2015). This model directed the content and activities to relay educational material and promote knowledge retention.

2.3 TRANSTHEORETICAL MODEL

Generally speaking, self-management refers to an individual's day-to-day management of chronic conditions throughout the disease process (Grady & Gough, 2014). Self-management in CHF involves behavioral adaptation, and from the patient perspective, it can be quite complex (Toukhsati, 2015). Patients may need to learn new behaviors, including how to monitor and

manage symptoms and comply with complex medical regimens. Patients may also need to abstain, adapt, restrict and maintain other behaviors (Toukhsati, 2015).

TTM is a commonly used behavior change theory (Hashemzadeh et al., 2019). This theory suggests that behavioral change is not a coincidence but a process. Individuals transition through five stages of readiness, including pre-contemplation, contemplation, preparation, action, and maintenance. Three factors impact the transfer between stages: the processes of change, decisional balance, and self-efficacy. Because of its practical nature, TTM is useful alongside preventative interventions for chronic conditions such as CHF.

Processes of change enable us to understand how shifts in behavior occur (The University of Rhode Island, n.d.). They are activities and experiences individuals engage in when attempting to modify behaviors. Each process is broad and incorporates a variety of methods, techniques, and interventions. Decisional balance is the balance between health decisions' pros and cons (risks and benefits) that are impacted by readiness levels (The University of Rhode Island, n.d.). Self-efficacy is the confidence to execute a particular behavior and perceived control over behavior (Bruijns et al., 2022).

Stages must first be identified for behaviors that need modification before proper interventions can be determined. Nurses need to engage in patient-centered care to define the behaviors that need to be addressed and implement a plan of care. Education was provided to nurses about TTM and its role in CHF management. Nurses were taught how to recognize the stage of change their patient was in, and how to adapt their care accordingly. This program focused on the pre-contemplation and contemplation stages of behavioral change. However; if this program were implemented in future practice, there will be an increased focus on all stages of behavioral change.

In the pre-contemplation stage, patients may be unaware that they have a problem and they do not intend to make a change in the foreseeable future (Suppan, 2001). For example, a CHF patient may not be ready to make a change regarding exercise and sodium restriction. At this time, nurses can only provide information on the consequences of the continued behavior and the benefits of changing that behavior. To support CHF patients in this stage, nurses assessed patients for potential barriers to self-management and provided patient education. The nurse reviewed the assessment tool with the patient and discussed interventions and referrals that could improve their self-management abilities.

In the contemplation stage, the individual recognizes the need for change and understands the risks and benefits of behaviors. The individual intends to make a change within the next six months. In this stage, CHF patients are likely aware of the need to exercise and make dietary changes. Nurses discussed the importance of behavioral change with patients and facilitated access to resources and support to make the change. Nurses followed up with patients, reinforced education, and developed a patient-centered care plan.

2.4 GAGNE'S NINE EVENTS OF LEARNING

The Gagne Model is based on knowledge of how human beings process information (Miner et al., 2015). The nine instruction events that enhance learning are gaining attention, informing learners of objectives, stimulating recall of prior learning, presenting stimulus, providing learner guidance, evoking performance, providing feedback, assessing performance, and enhancing retention. These nine events facilitate student engagement, enhance learning, and improve overall comprehension of course objectives.

Miner et al., (2015) set to evaluate how the use of Gagne's Nine Events of Instruction impacted the final grades and student evaluation instruction of an undergraduate medical-

surgical course. To gain students' attention, instructors opened the course with a YouTube video relevant to the lesson's topic. Instructors then presented objectives followed by real-life work application. They also incorporated images and questions to review material and bridge connections to prior learning. Students played word games and received lecture recordings, handouts, and sample questions to review learning expectations. Students engaged in case studies, simulations, and group activities for peer and instructor feedback. Students took mini-quizzes after lecture sessions to assess lesson knowledge and tests to assess overall learning. Researchers concluded that applying this model in education creates a positive change in student evaluations and learning experiences.

I utilized Gagne's Model in the nurse education seminar. To gain the nurse's attention, learners completed the VARK learning assessment tool (https://vark-learn.com/the-vark-questionnaire/) to determine their preferred learning style. I clearly outlined objectives before delivering content and used a power point (Appendix A: Power Point) for learner guidance. To stimulate recall of learning, I planned multiple knowledge checkpoints during content delivery where nurses engaged in discussion and had opportunities to share experiences. Nurses were also provided with two mock case studies (Appendix B: Case Studies) to complete, to assess their overall performance using the assessment tool. To evaluate intended learning, nurses completed a post-education test. Nurses were given a clinical resource tool (Appendix C: Clinical Resource Tool) to enhance knowledge retention and were asked to complete a post-education session questionnaire to provide feedback on the learning experience.

CHAPTER 3: PROGRAM PURPOSE

The purpose of this program was to bridge the gaps in the current heart failure program offered to CHF patients enrolled in the IHC program. This program aimed to improve the nursing assessment of barriers to CHF management and improve the delivery of health education.

3.1 GOALS

Nurses were expected to have improved knowledge of how the SDoH impact CHF management, the improved ability to assess for potential barriers to self-management, the ability to provide effective patient education, and improved provision of support to CHF patients in addressing barriers to self-management.

3.2 LOGIC MODEL

The logic model (Appendix D: Logic Model) is a visual representation of my program that described the program overview, including process objectives, outcome objectives, strategies, and activities. Nurse participants are nurses already working for the Calgary IHC on the HFT and consisted of five to ten nurses. The patient participants are clients enrolled in the IHC and are referred by their home care case manager.

3.3 ETHICAL CONSIDERATIONS

A Project Ethics Community Consensus Initiative is an Alberta initiative that addresses the ethical components of health-related investigative projects (Hagen et al., 2007). The screening tool is a pragmatic decision-support tool to assist program developers and teams as they identify and address complex ethical questions. The tool assists in identifying the need for review by an ethics board, helps identify if the project is research or quality improvement based,

and asks questions related to data collection, power relationships, and conflict (Alberta Innovates, 2020). The following ethical considerations were identified for this program.

There was a burden on participants to participate in this program. Nurse participants of this program needed to be available for an education session, reducing their available time to provide patient care. To better help the nurses attend the education session, they were given three weeks' notice of the date and time of the session. Reducing the transportation and time barrier, the education session was provided online where people could attend at a convenient location. I also allowed the nurses to complete educational activities and evaluations after the education session as they fit in with their schedule. There was also an additional burden on nurse participants to use the assessment tool in practice which may require additional time and interrupts workflow (Berman et al., 2018). Nurses were given ample time to use the assessment tool, were only expected to use it once, and could choose a convenient time to utilize it.

The patient recipients of the program also experienced a burden as they had to be available for a home visit, and additional time for the assessment. Home visits were made at a time that was agreed upon by the patient and the nurse. The nurses informed patients of the purpose of the assessment tool and gained verbal consent before the commencement. Patients were not obligated to complete the evaluation survey if they did not want to or did not have the time.

There was a power relationship when nurses provide care for a patient. Patients may feel pressured to participate in the program because their home care case manager referred them. Patients may feel pressured to agree to all recommended referrals and comply with treatment recommendations because nurses direct them. Patients were told by nurses that participation in

the program was entirely voluntary, and they could remove themselves from the program anytime.

This program utilized an assessment tool that asked sensitive questions regarding lifestyle and culture. Nurses verbally notified patients that completing the assessment tool is entirely voluntary, and patients only needed to answer questions they were comfortable with. Patients provided verbal consent before starting the assessment. Nurses were provided education about how culture may affect CHF management and nurses' role in providing culturally safe care.

I am inexperienced as a program lead and have had high expectations for the nurses involved in this program to utilize components of my proposed program. I have respected the nurse's workload but also sent out friendly reminders to utilize the assessment tool. To ensure that program resources and content were appropriate, I consulted with colleagues and content area experts to ensure feasibility in practice. My inexperience working with CHF patients and limited experience providing education in practice may also impact patients. For this program, I did not develop any patient education material and left it to nursing participants considered experts in CHF to identify the most credible educational materials to utilize.

Data that is specific to the evaluation of this program was collected. Patients may have felt hesitant to provide negative feedback for fear that it would negatively impact the quality of care they received. Patients were ensured that all information collected was confidentially maintained and that their feedback would have no impact on the level and quality of care that they received. Survey questions were specific to the assessment tool and did not evaluate the nurse providing the assessment tool. Participants were notified that the purpose of data is for quality improvement, and they were not obligated to provide any feedback they were uncomfortable with.

This program utilized surveys and questionnaires to evaluate program outcomes. Oral history was used to complete the assessment tool, and patients were at risk of having this information shared with individuals not a part of their care. Nurses assured patients that all information gathered from the assessment tool was only to be shared with relevant health disciplines identified to benefit the individual's CHF management abilities. Nurses were instructed to place assessment tools in the office confidentiality bin after use to ensure they are discarded safely.

Patients of this program come from diverse populations. Patients were at risk for bias and stigmatization based on assessment findings. Nurses received education on the importance of culturally sensitive care in practice and the impact it has on patient interactions, health decisions, and trusting relationships. Nurses were all instructed to notify patients before starting the assessment tool that the questions were standardized, and all patients were asked the same questions to reduce potential stigma.

No evaluation documents or program resources were directly gathered from patient participants, and there were no patient identifiers or specific health information. Any information gathered from the assessment tool was not used for program evaluation. Information was utilized in practice to improve patient-centered care plan development and health education.

3.4 STAKEHOLDER ENGAGEMENT

Stakeholder engagement and feedback is important in identifying and prioritizing areas for research, to determine if the final product is readable and accessible, and proves or disproves literature (Cottrell et al., 2014; Brandon & Fukunaga, 2013). I initially spoke to the manager of the HFT on May 18, 2022, to provide a brief description of my program and to facilitate communication with the HFT nurses. On that same day, I attended a zoom meeting with the HFT

to introduce myself and my program, and let them know that I will be scheduling an education session for the middle of June. Two weeks later when I had a date for the education session finalized, I invited the care managers of the IHC program and the HFT nurses to attend. Along with the invitation, I emailed the clinical resource tool, the assessment tool, and the evaluation documents required for my program. Nurses were then engaged during an online education session that took place on June 12, 2022. Following the education session, nurses were contacted every Monday to remind them to use the assessment tool and to complete evaluation documents by July 8th, 2022.

Nurses engaged with patients directly within one month of the education session to utilize the assessment tool. Nurses called clients on the phone to schedule a mutually agreed time and date to do the assessment. After completion of the assessment tool, patients were asked to provide feedback.

3.5 ACTIVITIES

To achieve the objectives and program outcomes, I planned two activities. To improve nurses' understanding of the SDoH and CHF management, I provided nurses with an education session. I also developed an assessment tool (Appendix E: SDoH Assessment Tool) that the nurses used in practice to improve health education and identify barriers to CHF management. I provided an education session to a group of five RNs and three managers of the IHC program. The education session took two hours and was completed over Microsoft Teams to ensure that nurses across Calgary could attend. Following a lesson plan (Appendix F: Lesson Plan) to direct to the education session, I outlined how the SDoH may impact CHF management and the appropriate interventions or referrals to other health disciplines needed to reduce those barriers. I also educated nurses on behavioral change theory's role in patient decision-making, health

behaviors, and nurses' role in supporting patients through behavioral change. I reviewed how to use the assessment tool and the rationale behind its development, when and how to complete program feedback, and how to submit documents for evaluation. Nurses were provided with mock case studies and encouraged to complete them before use in practice. I also provided all nurses with a clinical resource tool to review.

To address patient-specific risk factors for CHF management, Nurses utilized an assessment tool. Assessments were completed in the patient's home, and nurses used their clinical judgment to ask questions as they applied to the individual. Nurses utilized the outcomes of the assessment to determine what other health disciplines would benefit the individual. Nurses provided health education and were encouraged to incorporate various education resources, including oral, written, and audiovisual material. The needs identified from the assessment tool were reviewed with the patient, and the nurse shared information about resources and interventions to address those needs.

3.6 EVALUATION DESIGN

There are limitations to my program evaluation due to the small sample size. Small sample size quality improvement projects may overestimate effects, have low reproduction rates, and are at risk for publication bias (Button et al., 2013). Small study results have limited statistical significance and are not applicable on a larger scale.

To evaluate the intended program outcomes and the format, I gathered feedback from nursing and patient participants. The nurses completed knowledge tests, case studies, and questionnaires. Patients completed a post-assessment survey. The feedback measured the success of the program outcomes, including improved nursing assessment of the SDoH, improved ability

of nurses to provide patient education, and adequate abilities of patients to manage CHF. Evaluation results also identified areas of improvement for future program implementation.

Nursing participants were engaged in program evaluation before and after the education seminar. Participants had time to submit evaluation documents before the education session from June 12th to July 8th, 2022. To evaluate the intended learning of the nursing education session, nurses completed a pre-test and post-test (Appendix G: Pre-Test/Post-Test)). These tests asked open-ended questions about how various SDoH affect CHF management. Nurses completed a pre-education test to evaluate baseline understanding of the SDoH and CHF management. They then completed a similar test after content delivery to assess learning from the education seminar. Nurses also chose one of two mock case studies to practice using the assessment tool before using it on patients. Nurses completed a questionnaire following the education session (Appendix H: Education Evaluation) to evaluate the overall educational experience. The questionnaire evaluated if the educational content was understood and if the flow of information made sense. The questionnaire asked nurses if they thought the assessment tool would identify barriers to CHF management and how it would identify required referrals and interventions. Questions also evaluated how the assessment tool would assist in tailoring health education and how they would adapt the tool to be more effective in practice.

Following the education session, nurses were contacted via email every Monday to remind them to utilize the assessment tool and provide program feedback. Once nurses utilized the assessment tool in practice, they completed an open-ended questionnaire (Appendix I: Nurse Evaluation of Assessment Tool) to evaluate its applicability. Questions included if the assessment tool effectively identified potential barriers to CHF management, if it helped identify appropriate referrals and interventions, how it helped tailor health education, and what they

would change about the tool. Nurses were also encouraged to provide any other additional feedback related to the program.

Patients are key stakeholders in this program, and their input is valuable for future implementation. Nurses engaged patients within one month of the education session to use the assessment tool and provide feedback. Considering the diverse population in this program, I decided to use short, easy-to-answer questions in a survey (Appendix J: Patient Evaluation of Assessment Tool). Lengthy questions tend to have lower response rates than shorter-length surveys due to the time it takes and the cognitive requirement to complete. Surveys that require five minutes or less produce a higher level of buy-in compared to surveys longer in duration (Walston et al., 2006). I wanted to evaluate if the assessment tool questions were easy to understand, if the assessment length was appropriate, and if they felt comfortable with the questions. I also asked questions to determine if they understood the purpose of the assessment tool, if it was offered at an appropriate time, and if it was helpful to their overall care and CHF management.

Stakeholder involvement is valuable to effective program evaluation (Brandon & Fukunaga, 2013). Data evaluation is essential in measuring the success of my program and will also guide future implementation. Based on participant feedback, I came to several conclusions and strategized ways to improve my program in the future, which I will discuss in part four of this paper.

3.7 EVALUATION RESULTS

This section discusses the evaluation results gathered from patient and nursing participants. Insights and lessons learned from the evaluation will be discussed in my reflection, along with suggestions for future program implementation.

My goal was to present educational content to 75% of the nurses working on the HFT. Unfortunately, only five out of the eight (62.5%) invitees were able to attend the education session. Lack of participation was likely due to designated days off, vacation, and workload. My goal was for eighty percent of nurses who attended the education session to have increased knowledge of how the SDoH affect CHF management. There was no significant difference in the answers from the pre-test and the post-test. From the tests and discussion during the education seminar, I concluded that this participant group already had a solid knowledge of how the SDoH impact CHF management before receiving education. This suggests that nurses' knowledge levels are not the problem in inadequately addressing SDoH in CHF patients. I also had the goal of seventy-five percent of nurses showing competence in using the assessment tool before use in practice. Ideally, the nurses would have divided into groups of two where one nurse would pretend to be the patient character of the case study, and the other nurse would utilize the assessment tool with them. The nurses would then switch roles and complete another case study. However, due to the limitations of the virtual education session and low attendance rates, there were no opportunities to practice using the assessment tool during the education session. Instead, nurses were asked to review a mock case study after the education session, and complete the assessment tool based on the information within the case study. No mock case studies were received from nursing participants. For future nursing education sessions, I will design the education session differently to allow more opportunities for interaction and to practice using the assessment tool.

Three nurses provided feedback on the education session. They agreed that the content was well understood and that the flow of the information made sense. The nurses commented

that the visual aspect of the education session could have improved and suggested using videos and ensuring that my power point is visible.

The nurses reviewed the assessment tool and reported that the questions reflected barriers they often experienced in their practice and were relevant to CHF management. Nurses also agreed that the tool is effective in determining baseline understanding of heart failure and helps identify the education level of patients. Therefore, they could see the tool as successful in helping provide tailored education specific to individual patients.

My target was to have 80% of nurses utilize the assessment tool with at least one patient within one month of the education session. Only two out of the five (40%) nurses utilized the tool in practice. One participant noted that the assessment questions helped identify barriers to CHF management; however, they also stated that many of the questions are typically already identified and addressed before being involved with the HFT. Nurses found some repetitions and the potential for duplication of services. This suggests that there are significant gaps in how patients need to be supported in addressing the SDoH and how they can actually be supported. Nurses also stated that the HFT often acts as consultants and is strictly involved in care for heart failure management. Due to their roles within the IHC program and patient workload, it would be unrealistic for them to follow up with every barrier identified through the assessment tool and provide a high level of case management. The nurses suggested that with future implementation, parts of this assessment tool should be completed before or upon referral by an RN case manager as they have more contact with patients in the community and coordinate services to meet their complex needs (Sutherland & Hayter, 2009).

Both nurses appreciated the directing questions of the assessment tool. One participant commented that they often find it hard to initiate discussions when talking about sensitive issues,

so prompting questions made it easier to bring up. However, nurse participants felt uncomfortable asking some questions during their initial interactions with patients. Belfage et al., (2018) state that clinicians may feel uncomfortable counseling patients on sensitive issues due to personal health behaviors, discomfort in new situations, and the fear that people may take offense. Nurse participants said they would prefer to complete the assessment tool after building a solid and respectful relationship with their patients.

The one patient who completed the evaluation also shared similar feedback. They neither agreed nor disagreed that the questions were easily understood; they also felt the same when asked if the questions helped identify their needs. The patient reported that the length of the assessment tool was just right but felt that the questions did not respect their privacy. The nurse who completed the assessment of this patient reported that they could tell that the patient felt uncomfortable and hesitant to answer questions. Srivastave & Lauster, (2014) state that when answering questions about sensitive issues, patients may be reluctant to tell the truth for fear of feeling embarrassed and judged. The patient also asked the nurse why questions were relevant to their care and refused to answer specific questions. Refusal to answer questions is explained in the literature by evidence as patients may be hesitant to open up and want nurses to think highly of them (Vogel, 2019). Building rapport with patients is integral to nursing care and is at the forefront of developing trusting and effective nurse-patient relationships. It is also important to ensure that the patient has a foundational understanding of why the assessment tool matters for it to be effective.

The assessment tool was initially designed to be completed upon initial interaction between nurse and patient to identify barriers to CHF management promptly. Future program implementation will consider the sensitive nature of the assessment questions and utilize

strategies to support and guide patients through managing the SDoH. I will also consider the timing at which the assessment is completed, and the role case managers have in supporting patients through barriers to CHF management.

Results of this program were discussed during an online zoom session with student colleagues and the course instructor. I sent out an email to nursing participants to thank them for program participation and also provided information on program findings and a summary of my conclusions.

Because of the short duration of my program implementation, I was limited in the amount and type of evaluation I could complete. I could evaluate some of the short-term outcomes, but I could not evaluate the medium and long-term outcomes. Ideally, as the program continued, I would have liked to re-evaluate the use of the assessment tool after three months to evaluate if referrals are being made to barriers identified. I would also evaluate how nurses felt about the continued use of the assessment tool in practice during the six-month period and determine the number of patient participants who had been admitted to acute care in the past year.

One of the most important questions from nursing participants is how nurses can support patients through the stages of change in the community setting. In current practice, it is unrealistic to allocate resources and staff to follow patients through the stages of change. Patients who are actively engaging in behavior change have priority over resources. Therefore, those in the pre-contemplation and contemplation stage may not have ready access to support as they transition through change. They may end up in the hospital with symptom exacerbation before the HFT reassesses them in the community. With future program implementation, I hope to have time to implement additional activities and gather more feedback to better support patients through behavioral change.

CHAPTER 4: REFLECTION

The overall program development process was overwhelming, exhausting, informative, and rewarding. After developing and implementing my program, I have an increased understanding of why and how we do things in healthcare. This experience has given me great insight into the foundation for nursing practice and a deeper appreciation for how evidence translates into healthcare. I have also had the opportunity to do self-reflection and have learned some valuable lessons on a personal and professional level.

4.1 PROGRAM DEVELOPMENT

I utilized the six steps of program planning outlined by Public Health Ontario (Public Health Ontario, 2015) for guidance in developing my program. To start, I identified a nursing practice problem and my population of interest. I then completed a comprehensive literature search to learn more about CHF, how the SDoH may impact CHF management, and the role of nurses and other disciplines in CHF management. I also researched current CHF management programs in place and suggestions for practice. At this time, I was also developing my program goals and objectives. Incorporating evidence and theory, I created a logic model to organize my outcome objectives, planned activities, SMART indicators, and required resources. Once this planning was complete, I developed a stakeholder engagement plan, timeline, and completed program and evaluation resources. My program was then implemented and evaluated over four weeks. Throughout this process, I actively received feedback from peers, instructors, and colleagues. It was a dynamic process that underwent several development stages and continuous adaptation.

4.2 PROGRAM EVALUATION

This program aimed to improve the knowledge nurses have on the SDoH, improve the ability of nurses to assess potential barriers to self-management, and improve their ability to provide effective patient education. Because the knowledge level of the nurses was already comprehensive, my program did not necessarily increase knowledge related to the SDoH and CHF management. However, it certainly stimulated conversation and enhanced awareness. Through feedback, it is evident that the assessment tool has effectively identified barriers to CHF management. However, feedback has also suggested that assessment tools used in practice are already practical in identifying and addressing barriers. I cannot conclude that my assessment tool is more effective in identifying barriers to CHF management than other assessment tools. However, the questions on the assessment tool related to health knowledge are unique to CHF management and are beneficial in determining knowledge gaps and tailoring health education. The ultimate goal of this program is also to help individuals living with CHF to have adequate self-management abilities. Understanding that behavioral change can be a lengthy process, measuring a patient's abilities to self-manage CHF was not feasible within the time frame of my program implementation. Additional time and evaluation are required to evaluate self-management abilities.

4.3 LESSONS LEARNED

4.3.1 BARRIERS TO ADDRESSING SDoH

Addressing the SDoH is beyond the level of nursing care that this program provides, I need to shift my thinking from addressing barriers to CHF management, to assessing for barriers and reducing the negative impact that it has on patient self-management abilities. This program has helped me understand that there are many barriers to addressing the SDoH in nursing

practice, and patients are limited in how they can adapt behaviors to achieve the best health outcomes. Bloch et al., (2011) state that primary care practitioners experience barriers to addressing SDoH as a risk to patient health, and research into addressing SDoH is largely focused on policy-level and public health-based interventions. Before my program commencement, I always thought that it was a lack of education and poor nursing practice that led to poor self-management abilities and poor patient understanding within the IHC program in Calgary. However, there are so many limitations on how nurses can address the SDoH in primary care practice. For example, even for individuals with food insecurity that rely on food banks, there is still a lack of supply, and lack of access to healthy foods such as fruits and vegetables (Tsang et al., 2011). It would be unrealistic to expect patients that rely on food banks to be able to follow the recommended diet for CHF management.

Improving individual health and addressing the SDoH requires partnership and collaboration amongst other sectors such as justice, education, and employment to create healthier environments (Andermann, 2016). Training nurses to assess the SDoH is one of the key principles in promoting health equity for patients and families. On the patient level, nurses can assess for social barriers, provide guidance and support, and facilitate access to community support. Nurses can also take additional consultation time with patients who experience complex health and social needs. Nurses can also participate in community engagement and can advocate for social changes to change policy and influence social agendas.

4.3.2 BARRIERS TO KNOWLEDGE TRANSLATION

One of the main lessons I learned is how knowledge translation is affected by modes of communication. While completing the research component of my program development, technology allowed me to access countless articles and other evidence-based research online. I

was able to find information from all over the world, I could find multiple articles related to my search topic, and I was able to find information that was up to date. This made it possible for me to present a solid case for why my program benefits healthcare and also helped provide evidence for my deliverables and the program content.

However, technology negatively affected how I translated my knowledge to the intended users. Dung, (2020) states that virtual education causes a lack of interaction with learners and educators, a lack of concentration, causes difficulty communicating, and difficulties acquiring lesson resources. Completing the education session online did not allow me to read body language, complete learning activities as planned, and did not allow me to get a true sense of learning. I cannot confidently say that all education session participants had an understanding of the evidence behind the program or the overall functioning of the program. Although an online platform for communication is easy and convenient, it negatively affected my ability to share knowledge.

To complete the education in person, I will go to the various home care sites in Calgary to provide education to the HFT nurses in that area. This will improve interactive teaching and facilitate learner engagement, elevating understanding of what they are doing, and why they are doing it (Cronhjort, 2018). A classroom approach will facilitate group discussions and participation in activities. It will also make it easier to assess learning and engage learners in evaluation.

If the education seminar were to continue online, there are some strategies I would use to improve engagement and learning. All participants will be required to turn their camera's on to increase connectivity and help me read body language and facial expressions. Davis & Davis, (2010) state that increasing interaction between patients and participants is an effective strategy

for increasing engagement, and case studies are effective in stimulating critical thinking and problem-solving. Through some online platforms, meeting participants can be separated into breakout rooms for discussion. To complete the activities of the education session, I will create breakout rooms for nurses to gather in small groups to complete a mock case study. Each group will then present their findings from their discussion to the rest of the participants. To improve the visual experience of learners, Limnou & Smith, (2010) suggest that integrating videos into lesson plans is beneficial to participant engagement. Many videos on YouTube will be integrated into the education session. A recording will also be made available online to allow nurses to study material independently (Limnou & Smith, 2010). This will be a great strategy to offer the education session to participants who cannot attend the initial session.

4.3.3 FOCUS ON QUALITY IMPROVEMENT

Another lesson I learned is that no program will be perfect and focusing on quality improvement is crucial. Program goals should be centered on how to improve practice to benefit the needs of the target population the most. Quality improvement enhances health delivery, standardizes care, elevates patient safety, and is at the forefront of chronic disease management and preventative care (Vancey et al., 2007). While developing my program, I did not review what the current HFT provides to IHC patients. I wanted to strictly keep it to my ideas and formulate a program independently without influence. I have learned that program development requires a collaborative approach and input from multiple perspectives. I required a significant amount of feedback from colleagues, fellow students, and instructors. I valued the feedback I received because it helped me improve and narrow down a focus for my program and assisted in adapting my program deliverables. The input was extremely beneficial to my program development, and I could not have done it alone. Focusing on quality improvement, gathering

more feedback on the current heart failure management program would be beneficial. Before program implementation, I will gather feedback on what nurses think the strengths of the current program are, and what the weaknesses are. This will determine areas that need improvement and promote collaborative decision-making of areas for intervention (Bianchi et al., 2018). I have looked at the current heart failure program offered in IHC and already have a suggestion on when patients are referred. The current program requires patients to have at least one admission to acute care for CHF exacerbation in the past year. I believe that patients who have not had to be hospitalized for CHF exacerbation should be eligible for program referral as well. Patients should have access to primary prevention support and teaching to prevent symptom exacerbation and hospitalization.

4.3.4 BARRIERS TO STAKEHOLDER ENGAGEMENT

I was extremely disappointed with the low levels of nurse participation in my program. I have done a lot of reflection on my role as the program developer and how I should have encouraged higher levels of participant engagement. Nurse engagement in quality improvement increases health care quality and patient outcomes (Alexander et al., 2022). Nurse participation is beneficial due to their knowledge in system-level health care operations and front-line care provision. However, nurse engagement is low in clinical settings. A barrier to nurse engagement in quality improvement projects is a lack of leadership. Nursing leadership is a critical component of supporting evidence-based practice to create a culture of inquiry and lay a foundation for the use of evidence (Majers & Warshawsky, 2020). Graduate-level educated nurses such as myself are in optimal positions to support staff in the delivery of transformed health care systems and evidence-based practice. In future program implementation, I will take on a mentor role to guide and support nurses. I will make more of an effort to engage with nurses

and build relationships by providing support, engaging in regular communication, being flexible, and maintaining motivation (Dogherty et al., 2010). Instead of contacting nurses as a group, I will contact nurses individually to answer questions, engage in problem-solving, and be flexible in discussing timelines to complete program activities and evaluations (Majers & Warshawsky, 2020; Dogherty et al., 2020).

4.3.5 IMPROVING THE ASSESSMENT TOOL

I have learned how vital trusting relationships between patient and provider are in discussing and managing the SDoH, as trust is vital to developing effective patient relationships (Dinc & Gastman, 2013). Many factors shape the patient's trust, including previous experience with health care providers, availability and accessibility of nurses, feeling emotionally and physically safe, being informed, and respectful communication. To develop trusting relationships with patients, nurses must display honesty, trustworthiness, sensitivity, understanding, respect, reassurance, and encouragement. Developing trust is a dynamic process, from being comfortable to building rapport. Trusting relationships improve treatment adherence, improve collaborative decision-making, increases a sense of peace and security, provides cultural safety, and enhances the satisfaction of patients and nurses. Without a strong foundational relationship, patient needs may be inadequately addressed and are subject to health disparities.

Based on the feedback, the questions of the assessment tool that assess health literacy and determine baseline understanding, I do think it would be beneficial to have this section as an assessment tool all on its own. Nurses will assess baseline understanding before providing health education to determine what areas require immediate focus.

I will also have components of the assessment tool identified and addressed before or upon referral to the program by an RN case manager. This will also enhance communication and

comfort when discussing sensitive issues related to SDoH. Case managers establish effective relationships and strive for cultural competency (National Case Management Network of Canada, 2009). RN case managers respect, appreciate, and are sensitive to the values, beliefs, lifeways, and practices that are shaped by an individual's culture and heritage. Case managers utilize comprehensive assessments to coordinate services by monitoring and organizing appropriate care provisions (Sutherland & Hayter, 2009). For example, the RAI is a frequently used assessment tool for home care clients that identifies many of the barriers captured within the assessment tool developed for my program. Understanding that addressing barriers to SDoH may require a high level of case management and time, it is not feasible for RNs of the HFT. Upon referral to the program, referring case managers will ensure that barriers have been addressed either through the assessment tool developed for this program, or through other assessments utilized in home care. The RN within the HFT will collaborate with the case manager to ensure needs are assessed,but will have more of a focus on CHF health education and symptom monitoring.

4.4 FUTURE PROGRAM IMPLEMENTATION

4.4.1 IMPROVING PATIENT UNDERSTANDING

To improve the patient experience and understanding of how and why the SDoH may impact their ability to manage their CHF, future program implementation will have a larger focus on educating clients on the SDoH and how it affects them as an individual. Providing information to patients is central to nursing care (Christalle et al., 2019). Meeting the information needs of patients increases treatment adherence, improves emotional and psychological health, elevates quality of life, and heightens patient satisfaction. With future program implementation, nurses will provide a brief explanation to patients on the SDoH and how they can impact CHF

management abilities. Nurses will clearly explain that the assessment tool is designed to identify any potential barriers that they may experience. Once the assessment tool is complete, the nurses will thoroughly discuss with patients the barriers that were identified and discuss how that will impact their care. Nurses and patients will collaborate to create a plan of care to mitigate the barriers to CHF management so patients can achieve the best health outcomes possible.

4.4.2 BEHAVIORAL CHANGE

As stated earlier, there were program limitations in supporting patients through the stages of change. Future program implementation will have a heavier focus on supporting patients through behavioral change. In the preparation stage, CHF patients intend to make a change in the near future and have a plan of action (Suppan, 2001). For example, a CHF patient in the preparation stage may request assistance to formulate a plan of action for diet and exercise. The nurse, at this stage, will assist the patient in selecting a date to initiate change and suggest ideas to ease that transition. In the action stage, the individual has made specific lifestyle modifications within the last six months. Individuals rely on the support of the health care team and family members. At this stage, the nurse will provide ongoing follow-up with the patient when required and during times of disease exacerbation. Transitioning into the maintenance stage, the CHF patient continues with self-management. Patients will remain on the nurse's caseload to follow up with ongoing needs and concerns.

4.5 PROFESSIONAL AND PERSONAL GROWTH

The purpose of this program is to better support patients in managing CHF and improve their health outcomes. Although the research was for this program, the knowledge gained has tremendously impacted my beliefs as a nurse, my nursing practice, patient interactions, and outlook on life. To document my professional and personal growth throughout the development

of this program, I will be referring to the code of ethics outlined by the Canadian Nursing Association, the nursing practice standards outlined by the College of Registered Nurses of Alberta, and the Master of Nursing (MN) competencies outlined by the Canadian Association of Schools of Nursing.

I can confidently say that I have increased my knowledge of health care beyond the extent of the patients I provide care to. Domain 1.4 of the nursing practice competency for master's students states that nurses know complex health care systems, policy environments, and changing contexts of nursing and health care (Canadian Association of Schools of Nursing, 2015).

Throughout the MN program, there has been a focus on education that directs nursing practice and health care. I have increased knowledge about the different kinds of research and its interdependent relationship with nursing practice. I have increased my knowledge about nursing education, ethical components of nursing practice, and the theoretical underpinnings that direct care. Having a better understanding of the foundation of health care practice, I have increased my knowledge and skills beyond primary care and have an increased ability to contribute to health care and improve practice.

Having participated in program development, I have achieved advanced practice. Extending beyond the diverse skills and scope of practice of RNs, I have elevated my ability to support decisions with evidence-based information, as outlined by nursing practice standard 2.1 (College of Registered Nurses of Alberta, 2013). I completed a comprehensive literature review showing my ability to access, appraise, critically examine, synthesize and use theory and evidence from various sources. Through this, I have achieved domain 2.2 of the MN competencies and domain 2.3 by using a systematic approach to gather evidence, plan,

implement, and evaluate solutions to nursing practice problems (Canadian Association of Schools of Nursing, 2015). Utilizing the research and evidence, I also designed and implemented innovative solutions for practice problems outlined by domain 3.3. Research and practice inform one another to support evidence-based nursing. When looking for health information, it is important to choose reliable and accurate resources to provide the highest quality of care.

Throughout the development of this program, I have improved my ability to engage in conversations and interact with a multidisciplinary team and other professionals. Domain 4.1, outlined by the Canadian Association of Schools of Nursing, (2015) states that masters-educated nurses must have the communication skills to participate in and lead teams to improve practice and support policy changes. Through my program development and implementation, I have communicated evidence that supports the need for quality improvement practices. I have actively engaged in knowledge translation by presenting information to health professionals and have developed resources to implement evidence into practice. I have also effectively communicated with various professionals at the UofL to collaborate during my program development.

One of my program goals was to improve patient education, which is certainly reflected in my practice. An ethical standard outlined by the Canadian Nursing Association, (2017) states that nurses "provide patients with information needed to make autonomous and informed decisions related to their health and well-being." Understanding the barriers to health literacy and strategies to improve health education, I am making an effort to consistently apply my knowledge to improve the health literacy of my clients. I am more frequently assessing my client's baseline knowledge, asking more questions about how they prefer to receive information, and taking more time to ensure that my clients understand the health information I am giving them.

I have more confidence in influencing my colleagues' practice positively. I support the MN competency 4.2 as I hold values that influence effective interprofessional, collaborative practice (Canadian Association of Schools of Nursing, 2015). Nursing competency 6.3 states that a master's-educated nurse must have "the ability to coach, mentor, and teach nurses, nursing students, and other members of the healthcare team" (Canadian Association of Schools of Nursing, 2015). I have a voice in my healthcare setting and take every opportunity to share my knowledge and inspire others to facilitate change. I am more confident in engaging with higher-level practitioners and management to represent and advocate for the group's needs. As I continue in my career, I hope to take on positions with a higher leadership level and influence on nursing practice.

I have learned in the MN program that I have a transformative worldview. The transformative approach focuses on confronting social oppression on whatever level it occurs (Creswell, 2013). My program's transformative worldview is evident as it focuses on inequality due to socioeconomic factors and promotes change. The nursing code of ethics suggests that nurses working with individuals receiving care explore various health care options available to them, and recognize that they may have limited choices related to social, economic, geographic, and other factors (Canadian Nursing Association, 2017). As a home care nurse, I care for individuals with diverse backgrounds. Each patient is unique in the resources and supports they have available. These factors play a key role in care planning to address their needs.

Current interventions ignore social and physical factors that impact health, and I strongly feel that health care needs to look at SDoH in an upstream approach (Braveman et al., 2011). An upstream approach identifies fundamental factors that set-in motion causal pathways. Upstream determinants have direct influences, such as exposure to toxins, and indirect influences, such as

unhealthy behaviors. It is more important than ever to change negative SDoH to reduce health disparities (Paskett et al., 2016) and health outcomes. More focus is needed on addressing social factors and how we can most effectively intervene to facilitate health promotion and primary prevention (Bravemen et al., 2011). Addressing foundational factors for poor health will reduce health inequities and improve population health.

4.5 CONCLUSION

CHF is a progressive and fatal disease with modifiable risk factors (Dineen-Griffin et al., 2019. With CHF so prevalent globally, self-management practices are more critical than ever. Nurses are essential in supporting individuals to engage in CHF self-management. Effective patient education will help the individual understand CHF as an illness, its impact on the body, how behavioral change can improve symptom management and prevent exacerbation, and how the SDoH uniquely impact individual abilities to self-manage CHF.

The program I implemented consisted of a nursing education session presented to nurses working with CHF patients, and the use of an assessment tool for CHF patients to identify barriers to self-management abilities. I highlighted the role of behavioral change theory in CHF, how the SDoH can impact disease management, and how nurses can improve the delivery of health information. The assessment tool identified various SDoH that impact CHF management.

I have learned how limited nurses in the home care setting are in addressing the SDoH, Interventions are needed in the social and political context to reduce health inequities and improve the factors that impact the way we live and grow. A greater focus on improving individual circumstances and lessening the impact the SDoH have on patient CHF self- help n will support patients through mitigating barriers to CHF management to help them live to well and manage as best as possible.

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APPENDIX A: POWER POINT

Keep Ticking CHF Management Program

KENDRA BODIE BN RN
UNIVERSITY OF LETHBRIDGE
MASTER OF NURSING PROGRAM

Purpose

- A little bit about myself.....
- What is the Keep Ticking CHF Management Program?
- Activity: Pre-Test
- Activity: V.A.R.K Learning Style Questionnaire

The VARK Questionnaire | VARK (vark-learn.com)

Objectives

- Increased understanding of how the social determinants of health affect CHF management
- Increased knowledge of strategies to provide effective health education
- Improved ability to identify barriers to CHF management
- Increased awareness of the role of a multidisciplinary in CHF management

Social Determinants of Health

What are They? How do they impact CHF Management? and What can you do?

- Income
- Physical Environments
- Social Supports
- Food Security/Nutrition
- Transportation
- Culture
- Healthy Behaviours
- Health Literacy

Income

- -Significantly impacts cardiovascular health/CHF management
- -Individuals with low-income are less likely to access health care services, have increased hospital admission/readmission rates, poor health outcomes, increased mortality rates, poorer quality of Care (Shultz et al., 2018)

Intervention: Referral to social worker

Programs in Alberta (Government of Alberta, n.d.)

-Assured Income for the Severely Handicapped
-Adult Health Benefit
-Support for Basic Living Expenses

Physical Environments

- -Common deficits individuals face: mobility, strength, balance, motor processing, physical activity (Vitale et al., 2018)
- -Many CHF patients report weight loss, exhaustion, low energy expenditure, slow gait, weak grip strength (Vitale et al., 2018)
- **Intervention:** Referral to occupational therapist/physiotherapist

-Maximize function at home: assistive devices, home modification (Liu et al., 2018)

-Increase functional capacity: exercise training (Vitale et al., 2018)

Social Supports

- Have a positive impact on self-care maintenance and management (Graven & Grant, 2014)
- Assist with treatment adherence, monitoring symptoms, promoting healthy behaviours (Graven & Grant, 2014)
- Individuals with poor social support systems are at risk for poor health outcomes, decreased ability to adapt to health conditions, lower levels of optimism, reduced quality of life (Graven & Grant, 2014)
- **Interventions**
  - -more frequent monitoring, assistance with care activities (Graven & Grant, 2014)
  - -Social work referral (Alberta Health Services n.d.)
  - -Involve support systems in care (Riley & Masters, 2016)

Food Security/Nutrition

- Uncertain and limited access to nutritionally adequate and safe foods (Lih et al., 2018)
- Increased burden of health expenditures related to nutritional recommendations of heart healthy diet (Lih et al., 2018)
- May lead to reduced intake, missed meals, altered dietary intake (less expensive foods-higher in fat, salt, and sugar), skipping/reducing medication (Lih et al., 2018)
- **Interventions**
  - -Referral to dietitian and/or social workers
  - -Grocery/meal delivery
  - -Food bank

Transportation

- Living with CHF requires clinician visits, medication access, change to treatment plans (Syed et al., 2013)
- Lack of transportation can lead to: rescheduled/missed appointments, delays in care, missed/delayed medication use (Syed et al., 2013)
- Results in impaired ability to self-manage and poor health outcomes (Syed et al., 2013)

Interventions

-Teleheath services (Syed et al., 2013)

-Medication Delivery (Syed et al., 2013)

-Transportation Services-Calgary Transit Access, cab/taxi, driving services

Culture

- Passed down from generation to generation (Allasoud et al., 2020)
- Affects perceived control over health, decisions, and treatment preferences (Allasoud et al., 2020)
- Informs lay knowledge of CHF diagnosis, causes, treatment, and self-management (Allasoud et al., 2020)

Interventions

-Culturally sensitive care (Allasoud et al., 2020)

-Embrace language, social context, and role of family (Allasoud et al., 2020)

-Support safe and high-quality care for diverse patients and families (Allasoud et al., 2020)

Knowledge Check

- You get a new referral for a new immigrant/refugee to Canada from Ukraine with CHF. He do not speak English, but is supported by a large family. He is supported by them financially and provide food/shelter. However, his family works during the day and are unable to provide transportation.
- Are there any potential barriers to CHF management that this individual may experience? If so, what are they?
- What are the individuals strengths to self-management?
- Are there any special considerations (culturally) that may need to be considered?

Healthy Behaviours

- Maintaining positive self-care behaviours is integral to CHF management (Graven & Grant, 2014)
- Factors that may affect: cognitive impairment, depression, anxiety, poor health literacy, social isolation, low socioeconomic status, sleep disturbances (Moser et al., 2012)
- CHF self-care requires a high level of decision making/activities
  - -Becoming knowledgeable about conditions (Moser et al., 2012)
  - -Adhering to diet/medication recommendations (Moser et al., 2012)
  - -Symptoms surveillance/action taking (Moser et al., 2012)
  - -Preventative actions: getting exercise, smoking cessation, limiting alcohol intake (Moser et al., 2012)

Healthy Behaviours

Transtheoretical Model: A behavioural change model (Kuppan, 2001)

- **Pre-Contemplation:** provide education/assess for barriers to self-management
- **Contemplation:** patient follow up, reinforce education, person-centered care plans
- **Preparation:** assist client with setting a date to change, suggest ideas to ease transition
- **Action:** continue to support/follow up at times of health decline
- **Maintenance:** continue to support/follow up, facilitate communication with health care providers
- Processes of Change, decisional balance, Self-Efficacy (University of Rhode Island, n.d)

Interventions

-Understand clients readiness level/cater education

-Vendored Services

Health Literacy

- Low health literacy is associated with poorer health-care knowledge, decreased medication adherence, decreased access to preventative services, poorer physical/mental health, increased hospitalizations (Cajita, 2016)
- Individuals with low health literacy may have trouble processing health information such as reading appointment slips and medication labels, understanding information provided by clinicians, and understanding educational materials (Cajita, 2016)

Strategies

-Determine Baseline Understanding (Brooks et al., 2018)

-Teach-Back: clients repeat information in own words (Hersh et al., 2015)

-Multiple Sources: provide health information in a variety of formats (Brooks et al., 2018)

-Chunk and Check: review material/encourage questions (Hersh et al., 2015)

-Use plain, non-medical language, common words to recipients (Hersh et al., 2015)

-Prioritize health information into 3 key points (Hersh et al., 2015)

Knowledge Check

- You learn that this individual has received minimal health education for CHF. However, he stated "I don't put salt on anything, I use Soy Sauce". He does not monitor his weight or blood pressure. He does however enjoy reading and is interested in learning more about CHF management.

- What are some potential barriers to CHF management?
- What are some strengths?

Assessment Tool

Assessment Initiation: start of the conversation by stating "let me ask you some questions I ask every family" (Coleman et al, 2016)

Section A) Information Source

Section B) Healthy Behaviours

- Do you smoke? Y/N
- How often do you weigh yourself?
- How often do you engage in physical activity?
- Do you take your medications as prescribed? Y/N
- Are you able to attend medical appointments when scheduled? Y/N
- Do you follow a low sodium diet? Y/N
- Do you monitor your fluid intake? Y/N
- Comments:

Section C) Physical Environment

- Have you had any falls in the past 6 months? Y/N
- Do you use mobility aids? Y/N Comments:_____
- Observation (assess gait: unsteady on feet, balance): Comments:_____
- Referral to Occupational Therapist? Y/N Comments: _____
- Referral to Physiotherapist? Y/N Comments:_____

Assessment Tool

Section D) Food Security/Nutrition

- Have you had any weight changes in the past 6 months? Y/N
- Have you eaten any less than usual for more than a week? Y/N
- What is your typical diet (go through breakfast, lunch, dinner) Y/N
- Who does the grocery shopping?
- Who prepares meals?
- Referral to Social Worker? Y/N Comments:_____
- Referral to Dietitian? Y/N Comments: _____
- Resources Provided:_____

Section E) Income

- Do you have any concerns about making ends meet? Y/N
- Do you rent or own your home?
- Do you have any concerns about getting evicted or paying your mortgage? Y/N
- What is your current source of income?
- Do you receive any income support benefits? Y/N
- Do you ever have to skip or reduce medications? Y/N
- Referral to Social Worker? Y/N Comments: _____
- Resources Provided:_____

Assessment Tool

Section F) Social Support

- Is there someone available to help with daily chores? Y/N
- Is there someone available to get you out of bed? Y/N
- Is there someone available for you to have a good time with? Y/N
- Is there someone available for you to confide in and talk about your problems? Y/N
- Is there someone available to drive you to medical appointments if needed? Y/N

- Referral to Social Worker Y/N Comments: _____
- Vendored Services? Y/N Comments: _____
- Referral to Adult Day Program? Y/N Comments: _____
- Resources Provided: _____

Assessment Tool

Section G) Health Literacy

- If you needed it, is there someone available to give you information to help you understand a situation? Y/N
- What level of education did you obtain?
- How do you prefer to receive/learn information? (written, verbal, hands on)
- Comments:
- **Assessing Baseline Understanding:**
- How do you understand your heart failure diagnosis?
- When was the last time you had swollen legs?
- What needs to happen for you to seek medical attention?

Assessment Tool

Section H) Culture, Language, and Immigration Status

- What is your primary language?
  - Interpreter Required? Y/N
- What is your country of origin?
- What is your immigration status?
- Are there any culture factors that I should know to help me provide care?
- Referral to Social Worker? Y/N Comments
- **Section I) Additional Considerations (alternate therapies, co-morbidities, what is important to client?)**
- Comments:

Activities

- Let's Practice!!!
  -mock case studies
- Post Test
- Discussion/education session feedback

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APPENDIX B: CASE STUDIES

Case Study 1: Betty Lou

Read through the following case study and complete the assessment tool. What are the potential barriers to CHF management? What will you do/what referrals will you make to alleviate those barriers?

Betty Lou is a 78 year old woman newly diagnosed with CHF. She was referred to you by her family doctor.

Income: Betty is a retired teacher, receives her own full pension and half of her husband's pension.

Physical Environment/Mobility: Betty uses a walker for mobility, but lives in a 2 story home where the laundry is in the basement. Betty reports increased difficulty going up and down the stairs, but wants to remain in her own home.

Social Support: Betty's husband passed away last year and her children live in other provinces. Betty doesn't get out of the house much and is alone quite often.

Food Security/Nutrition: Betty orders groceries online and has them to delivered to her home. She enjoys cooking and tends to her garden in the summer. She has purchased a heart health recipe book.

Transportation: Betty does not drive, but will take a cab to appointments and has her groceries delivered.

Health Literacy: She is able to use a computer and has already looked into CHF and knows to regularly exercise and monitor symptoms. She has already bought a weigh scale and blood pressure monitor.

Special Considerations: Betty prefers to use traditional therapies over taking medications. For example, Betty has decided to drink dandelion root tea instead of taking furosemide.

Case Study 2: Peter Pickle

Read through the following case study and complete the assessment tool. What are the potential barriers to CHF management? What will you do/what referrals will you make to alleviate those barriers?

Peter Pickle is a 75 year old male who is new to Calgary. He was previously living in Saskatchewan and was diagnosed with CHF last year. He was referred to you by a home care case manager. He lives with his wife Delores who has MS.

Income: Both Peter and his spouse live off of CPP and live in low income housing. They were previously receiving income support benefits while living in Saskatchewan.

Physical Environment/Mobility: Peter has had multiple falls over the years. He refuses to use mobility aids.

Social Support: Peter and his spouse hold traditional values and beliefs. Peter's wife was his primary caregiver and completed most of the household chores including cooking and cleaning. Their children visit them on a monthly basis.

Food Security/Nutrition: Delores is not able to cook, so Peter is now the one responsible for making meals. Peter has never cooked in his life so often will make microwaved meals. Peter has lost 15 pounds over the past 6 months.

Transportation: Peter does not drive and they are unable to afford to pay for taxis. Their children work and are unable to drive him to appointments.

Health Literacy/Healthy Behaviors: Peter has a mild cognitive impairment and has poor reading and writing skills. He has very little knowledge about CHF management and does not report any self-monitoring. Peter requires his medication to be blister packed as he often does not take his medications and prescribed.

Special Considerations: Peter and Delores hold traditional values and household roles. Delores was a homemaker and took care of all the cooking and cleaning. Both are struggling with role changes as her MS progresses.

APPENDIX C: CLINCIAL RESOURCE TOOL

Keep Ticking

Congestive Heart Failure Management

Clinical Resource

Purpose: To provide Continuing Care providers with evidence-based information when managing clients with congestive heart failure.

Table of Contents

List of Tables and Figures

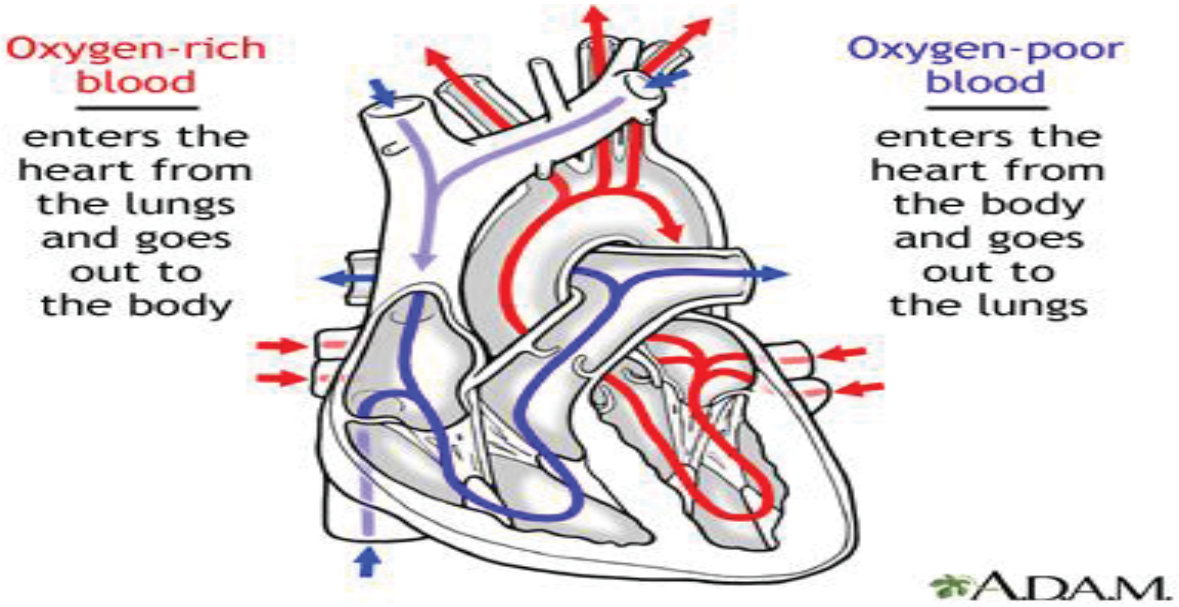
Congestive Heart Failure Management

Regular Heart Functioning

The right side of the heart receives oxygen-depleted blood from the veins and circulates it throughout the lungs, where carbon dioxide is secreted, and blood is oxygenated. Oxygen-rich blood is received by the left side of the heart and is distributed by arteries throughout the body (My Health Alberta, n.d.). Figure 1.0 provides a visual demonstration of regular heart functioning as found on (Medlineplus, n.d.).

Figure 1.0

Heart Functioning

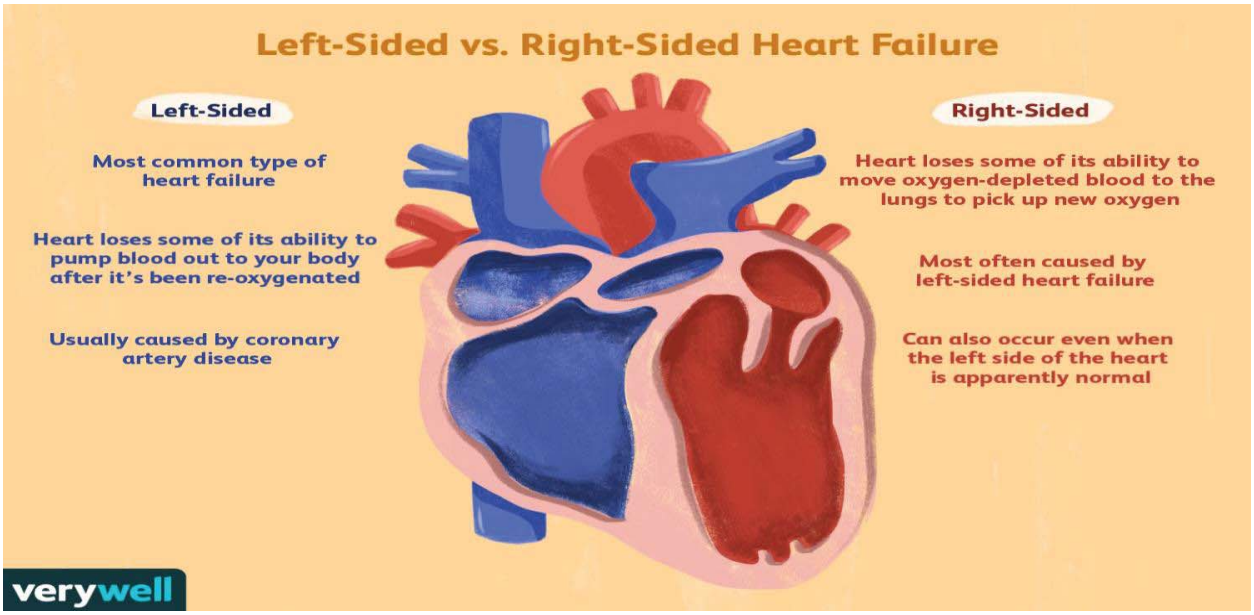


Congestive Heart Failure (CHF)

Congestive Heart Failure is when the heart cannot effectively pump oxygen-rich blood throughout the body (National Library of Medicine, n.d.). Heart failure presents differently based on the side that is affected as described in figure 1.1 (Live Well, n.d.).

Figure 1.1

Congestive Heart Failure



Working with Patients who have CHF

Because there is no cure for CHF, lifestyle changes and pharmacologic treatment are crucial to self-management. Patients must monitor symptoms, adhere to complex medication regimens, eat a healthy diet, exercise regularly, and adapt behaviors (Takhousi, 2015).

Registered nurses (RN) are in optimal positions to act as primary care coordinators (Riley & Masters, 2016). This includes adequate patient education with a focus on treatment adherence and self-care, symptom monitoring by the patient, increased access to health care services and home visits, and facilitated access during symptom exacerbation.

Behavioral Change

Generally speaking, self-management refers to individuals' day-to-day management of chronic conditions throughout the disease process (Grady & Gough, 2014). Self-management in CHF involves behavioral adaptation, and from the patient perspective, it can be quite complex (Toukhsati, 2015). Patients may need to learn new behaviors, including learning how to monitor and manage symptoms and comply with complex medical regimens. Patients may also need to abstain, adapt, restrict and maintain other behaviors (Toukhsati, 2015).

Transtheoretical Model (TTM) is a commonly used behavior change theory (Hashemzadeh et al., 2019). This theory suggests that behavioral change is not a coincidence but a process. Table 1.0 outlines the various stages of change, the associated patient readiness level, and the appropriate nursing intervention for CHF patients.

Table 1.0

Stage of Change and Readiness Level

Stage of Change	Readiness Level	Nursing Intervention
Pre-Contemplation	The patient does not plan on changing behaviors (Laporte, 2017).	Nurses can only provide information on the consequences of the continued behavior and the benefits of changing that behavior (Suppan, 2001).
Contemplation	Patient plans on changing behaviors within the next six months (Laporte, 2017).	Nurses can discuss the importance of behavioral change with patients and facilitate access to resources and supports to make the change (Suppan, 2001).
Preparation	The patient occasionally engages in healthy behaviors and plans on regularly engaging in healthy behaviors (Laporte, 2017).	The nurse assists the patient in selecting a date to initiate change and suggests ideas to ease that transition. For example, the individual may want information on low sodium foods or restaurants in their area that is heart-healthy. They also may require education on label reading (Suppan, 2001).
Action	The patient has maintained healthy behavior for six months (Laporte, 2017).	The nurse provides ongoing follow-up at times of decline and when needed (Suppan, 2001)

Maintenance	The patient has maintained healthy behavior for over six months (Laporte, 2017).	The nurse provides ongoing support and positive feedback (Suppan, 2001)

Social Determinants of Health

The SDoH have a significant impact on CHF management. The SDoH are a set of conditions in which an individual lives. They significantly affect health inequities, self-care, and quality of life (Tankumpuon et al., 2019). SDoH influences the development and maintenance of health behaviors, potentially putting individuals at risk for developing CHF and poor self-management (Hayman & Worel, 2017). See Table 1.1 to explain the various SDoH that can impact CHF management and the nursing interventions required.

Table 1.1

Barrier and Intervention Table

Potential Barrier	Impact on CHF Management	Intervention(s) Required
Income	Socioeconomic status significantly affects CHF management. Those living in poverty have reduced access to health care services, have increased hospitalization and readmission rates, poor health outcomes, increased mortality rates, and poorer quality of care (Schultz et al., 2018).	**Referral to Social Worker(SW)** SWs assist clients in accessing income support programs (Alberta Health Services, n.d.)
Physical Environment	Common deficits individuals face: mobility, strength, balance, motor processing, and physical activity (Vitale et al., 2018)	**Referral to Occupational Therapist** Occupational therapists can assess how individuals function in their living environment and how they are

	Many CHF patients report weight loss, exhaustion, low energy expenditure, slow gait, and weak grip strength(Vitale et al., 2018)	affected by their abilities and make recommendations such as assistive devices and environmental modifications to reduce the physical demand on the individual. **Referral to Physiotherapist** Physiotherapists work with CHF patients to improve mobility for daily life and utilize various techniques, equipment, and education to help people stay well and improve their physical health.
Social Support	Social supports have a positive impact on self-care maintenance and management (Graven & Grant, 2014) Supporters assist with treatment adherence, monitoring symptoms, and promoting healthy behaviors (Graven & Grant, 2014) Individuals with poor social support systems are at risk for poor health outcomes, decreased ability to adapt to health conditions, lower levels of optimism, and reduced quality of life (Graven & Grant, 2014)	**Increased Monitoring** Health care professionals may need to schedule more frequent appointments to assess the individual's ability to maintain self-care (Graven & Grant, 2014) **Referral to Social Worker** Support individuals coping with their disease and provide counseling to patients (Alberta Health Services, n.d.). **Vendored Services** Health care professionals may need to set up services for closer monitoring and assistance with self-care-related activities (Graven & Grant, 2014) **Involve Support Systems in Care** Involve family and caregivers in education and care planning to ensure

		that available supports are available in the home (Riley & Masters, 2016)
Food Security/Nutrition	Increased burden of health expenditures related to nutritional recommendations of a heart-healthy diet (Jih et al., 2018) This may lead to reduced intake, missed meals, altered dietary intake (less expensive foods higher in fat, salt, and sugar), and skipping/reducing medication.	**Referral to Dietitian** Dieticians provide nutrition plans, ensure that nutritional needs are met, provide education programs and materials, and help individuals develop a healthy relationship with food and eating (Alberta Health Services, n.d.). **Referral to Social Worker** SWs facilitate access to community resources (Alberta Health Services, n.d.). **Community supports** Many community supports such as food banks, meal delivery programs (Meals on Wheels), and grocery delivery services are available.
Transportation	Living with CHF requires clinician visits, medication access, and change to treatment plans (Syed et al., 2013) Lack of transportation can lead to rescheduled or missed appointments, delays in care, and missed/delayed medication use (Syed et al., 2013) Lack of transportation results in impaired ability to self-manage and poor health outcomes (Syed et al., 2013)	**Calgary Transit Access** A program in Calgary provides individuals who are either physically or cognitively incapable of using public transit access to transportation services regardless of income (City of Calgary, n.d.) **Community Supports** Many transportation services are available, such as taxis, uber, and private driver programs (Driving Miss Daisy).

		Medication Delivery Many pharmacies offer medication delivery. **Telehealth Services** Telehealth services are an effective way of overcoming transportation barriers.
Culture	Culture is passed down from generation to generation (Allasoud et al., 2020) Culture affects perceived control over health, decisions, and treatment preferences (Allasoud et al., 2020) Culture informs lay knowledge of CHF diagnosis, causes, treatment, and self-management (Allasoud et al., 2020)	**Culturally Safe Care** Nurses must develop interventions that embrace the language, social context, role of family, and patient values and beliefs. Nurses must implement interventions to support safe and high-quality care for diverse patient groups and families in a culturally safe fashion.
Health Literacy	Low health literacy is associated with poorer healthcare knowledge, decreased medication adherence, decreased access to preventative services, poorer physical/mental health, and increased hospitalizations (Cajita, 2016) Individuals with low health literacy may have trouble processing health information such as reading appointment slips and medication labels, understanding information provided by clinicians, and understanding educational materials (Cajita, 2016)	**Teaching Strategies** Determine Baseline Understanding (Brooks et al., 2018) Utilize the teach-back method by having patients repeat information back in their own words (Hersh et al., 2015) Provide information in a variety of methods and utilize various educational materials. (Brooks et al., 2018) Utilize the check and check methods by reviewing material and encouraging questions(Hersh et al., 2015).

		Use plain, non-medical language and familiar words to recipients (Hersh et al., 2015). Prioritize health information into three key points and reinforce those points (Hersh et al., 2015).
Healthy Behaviors	Maintaining positive self-care behaviors is integral to CHF management (Graven & Grant, 2014) Factors that may affect healthy behaviors include cognitive impairment, depression, anxiety, poor health literacy, social isolation, low socioeconomic status, and sleep disturbances (Moser et al., 2012) CHF self-care requires a high level of decision making/activities such as becoming knowledgeable about conditions, adhering to the diet and medication recommendations, symptom surveillance and action-taking, and preventative actions (getting exercise, smoking cessation, limiting alcohol intake)	**Understanding Readiness Level** Nurses must understand the readiness levels of patients to modify behaviors. **Vendored Services** Home health aides are in unique positions to observe, assist, and advise patients daily (Sterling et al., 2018). These healthcare workers provide long-term care for community-dwelling older adults living with CHF and help them navigate the health care system. They assist individuals with critical aspects of care such as meal preparation, physical activity, and medication reminders. They can also provide monitoring assistance by taking daily weights, monitoring fluid intake, and taking vital signs.

CHF Management Assessment

Utilize the assessment tool (see Appendix A) to identify potential barriers to CHF management and develop a client-centered care plan. Table 1.2 outlines how to use the tool effectively and associated assessment questions. Based on the answers provided by clients, nurses discuss required referrals and initiates those referrals as agreed upon by client. Nurses also utilize data to develop education plans to address gaps in knowledge and promote behavioral change where needed. In table 1.1, see further promoting questions and communication to determine potential barriers to CHF management.

Table 1.2

Assessment Tool Guide

Introduction	To initiate this assessment, Colvin et al., 2016 suggest starting the conversation by stating, "let me ask you some questions I ask every family."
Section A) Information Source	Document information sources
Section B) Healthy Behaviors	**Prompting Question(s)** Do you smoke? How often do you weigh yourself? How often do you engage in physical activity? Do you take your medications as prescribed? Are you able to attend medical appointments when scheduled? Do you follow a low sodium diet? Do you monitor your fluid intake?
Section C) Physical Environment	**Prompting Question(s)** Have you had any falls in the past 6 months? Do you use mobility aids? **Mobility assessment** Observation (assess gait: unsteady on feet, balance)

Section D) Nutrition	**Prompting Question(s)** Have you had any weight changes in the past 6 months? Have you eaten any less than usual for more than a week? What is your typical diet (go through breakfast, lunch, dinner) Who does the grocery shopping? Who prepares meals?
Section E) Income	**Prompting Question(s)** Do you have any concerns about making ends meet? Do you rent or own your home? Do you have any concerns about getting evicted or paying your mortgage? What is your current source of income? Do you receive any income support benefits? Do you ever have to skip or reduce medications?
Section F) Social Support	**Prompting Question(s)** Is there someone available to help with daily chores? Is there someone available to get you out of bed? Is there someone available for you to have a good time with? Is there someone available for you to confide in and talk about your problems? Is there someone available to drive you to medical appointments if needed?

Section G) Health Literacy	**Prompting Question(s)** If you needed it, is there someone available to give you information to help you understand a situation? What level of education did you obtain? How do you prefer to receive/learn information? (written, verbal, hands on) **Assessing Baseline Understanding:** How do you understand your heart failure diagnosis? When was the last time you had swollen legs? What needs to happen for you to seek medical attention?
Section H) Culture, Language, and Immigration	**Prompting Question(s)** What is your primary language? What is your country of origin? What is your immigration status? Are there any culture factors that I should know to help me provide care?
Section I) Additional Considerations	Document additional information such as alternate therapies, co-morbidities, and what is important to the client.

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APPENDIX D: LOGIC MODEL

<table>
<tr><td colspan="4">Program Name: Keep Ticking: Heart Failure Management Program
Mission Statement: The purpose of this program is to help individuals enrolled in the Integrated Home Care Program in Calgary who live with congestive heart failure gain the knowledge, skills, and improve access to resources that allows them to live well and manage their disease.</td></tr>
<tr><td>Situation/ Priorities</td><td>Goals</td><td>Nurses will have improved assessment of SDoH and improved ability to provide effective patient education.</td><td>Adequate self-management abilities of CHF patients</td></tr>
<tr><td>Inputs</td><td>Resources</td><td>Program developer, heart failure nurses, clinical resource tool, zoom meeting, pre-test/post-test, case study/mock example, PowerPoint presentation</td><td>Heart failure specialist nurses, assessment tool, individuals 65 and older with CHF, patient home environment</td></tr>
<tr><td>Outputs</td><td>Participants & Activities</td><td colspan="2">1. Nurses attend 4-hour educational session
2. Nurses screen participants for barriers to CHF management
3. Nurses provide tailored patient education and develop patient-centered care plans
4. Participants and nurses engage in ongoing follow up</td></tr>
<tr><td rowspan="3">Outcomes</td><td colspan="3">Short Term
-75% of invited nurses attend education session
-80% of nurse participants have increased knowledge of SDoH impacting CHF management
-75% of nurses can competently utilize assessment tool</td></tr>
<tr><td colspan="3">Medium Term
1 Month: 60% of nurses will complete the assessment tool on at least one patient.
3 months: 60% of patient barriers identified will have appropriate referrals made.</td></tr>
<tr><td colspan="3">Long Term
6 months: 70% of nurses would recommend the continued use of assessment tool or something similar in practice
One year: 75% of patients have not been admitted to acute care in the past year</td></tr>
<tr><td colspan="2">Assumptions:
Participants of the program are engaged
Health care services will be provided efficiently</td><td colspan="2">External Forces:
The individual is agreeable to referrals /adheres to treatment
Other comorbidities complicating the disease process</td></tr>
</table>

APPENDIX E: SDoH ASSESSMENT TOOL

CHF Management Assessment Tool Guide

Purpose

The CHF Management Assessment Tool identifies potential barriers to CHF management focusing and various social determinants of health.

Definitions

1. **Assessment:** A comprehensive assessment of collecting pertinent information related to CHF management.
2. **Risks:** Identifies socioeconomic, behavioral, environmental, and cultural factors impacting CHF management.
3. **Interventions:** Directs patient-centered care planning and health education.
4. **Outcomes:** Care planning and education to address person-specific barriers to CHF management

Points of Emphasis

1. This assessment tool is to be completed by the RN, OT, PT.
2. The assessment tool is completed upon initial assessment and reviewed as needed
3. The data gained through the assessment tool is used for care plan developed and health education.

Guidelines

1. Begin assessment tool with opening statement provided in introduction.
2. Obtain verbal consent from recipient
3. Ask questions as applicable to individual (e.g. Section F: Social Support, questions may not be applicable if individual lives with others or is mobile).
4. Based on client answers, identify potential barriers to CHF management and discuss what referrals are required and why. Complete referrals as agreed upon by client.
5. In the comment section, provide additional information (e.g. if a client agrees to a referral, state what the purpose of the referral was. If client declines referral, comment that they decline and provide reasoning).
6. Utilize client answers to develop a health education plan to address gaps in knowledge and promote behavior modification.
7. Provide any relevant resources to clients

Introduction

“With your permission, I would like to ask you some questions I ask everyone regarding potential barriers that may affect the management of your heart failure. This assessment tool was developed by a Master of Nursing student at the University of Lethbridge. This assessment takes approximately 20-30 minutes, and asks some sensitive questions related to your income, personal support system, and culture. The purpose of these questions is to better identify how your unique social, economic, and lifestyle factors that may impact your heart failure management interventions. It helps me better identify what I can do as a nurse to help you achieve your best health outcomes. Your questions will remain anonymous and you can decline to answer any questions you are not comfortable with.”

Section A) Information Source

Client ___ Spouse___ Child ___ Other___ Comments: _____

Section B) Healthy Behaviors

1) Do you smoke? Y/N
2) How often do you weigh yourself?
3) How often do you engage in physical activity?
4) Do you take your medications as prescribed? Y/N
5) Are you able to attend medical appointments when scheduled? Y/N
6) Do you follow a low sodium diet? Y/N
7) Do you monitor your fluid intake? Y/N

Comments: _____

Section C) Physical Environment

1) Have you had any falls in the past 6 months? Y/N
2) Do you use mobility aids? Y/N Comments: _____

Observation (assess gait: unsteady on feet, balance): Comments: _____

Referral to Occupational Therapist? Y/N Comments: _____

Referral to Physiotherapist? Y/N Comments: _____

Section D) Food Security/Nutrition

1) Have you had any weight changes in the past 6 months? Y/N
2) Have you eaten any less than usual for more than a week? Y/N
3) What is your typical diet (go through breakfast, lunch, dinner) Y/N
4) Who does the grocery shopping?
5) Who prepares meals?

Referral to Social Worker? Y/N Comments:_____

Referral to Dieitian? Y/N Comments: _____

Resources Provided: _____

Section E) Income

1) Do you have any concerns about making ends meet? Y/N
2) Do you rent or own your home?
3) Do you have any concerns about getting evicted or paying your mortgage? Y/N
4) What is your current source of income?
5) Do you receive any income support benefits? Y/N
6) Do you ever have to skip or reduce medications? Y/N

Referral to Social Worker? Y/N Comments: _____

Resources Provided: _____

Section F) Social Support

2) Is there someone available to help with daily chores? Y/N
3) Is there someone available to get you out of bed? Y/N
4) Is there someone available for you to have a good time with? Y/N

5) Is there someone available for you to confide in and talk about your problems? Y/N

6) Is there someone available to drive you to medical appointments if needed? Y/N

Referral to Social Worker Y/N Comments: _____

Vendored Services? Y/N Comments: _____

Referral to Adult Day Program? Y/N Comments: _____

Resources Provided: _____

Section G) Health Literacy

1) If you needed it, is there someone available to give you information to help you understand a situation? Y/N

2) What level of education did you obtain?

3) How do you prefer to receive/learn information? (written, verbal, hands on)

Comments:_____

Assessing Baseline Understanding:

1) How do you understand your heart failure diagnosis?

2) When was the last time you had swollen legs?

3) What needs to happen for you to seek medical attention?

Section H) Culture, Language, and Citizenship

1) What is your primary language?
   Interpreter Required? Y/N

2) What is your country of origin?

3) What is your immigration status?

4) Are there any culture factors that I should know to help me provide care?

Referral to Social Worker? Y/N Comments:_____

Section I) Additional Considerations (alternate therapies, co-morbidities, what is important to client?)

Comments:

APPENDIX F: LESSON PLAN

Instructor: Kendra Bodie RN

Date: June 12, 2022

Duration: 2 hours

Location: Microsoft Teams

Materials: Power point presentation, pre-test/post-test, mock case studies, assessment tool, education session evaluation, clinical resource tool

Lesson objective(s):

- Increased ability to assess for barriers to heart failure management
- Improved ability to provide effective patient health education
- Increased knowledge of the social determinants of health
- Increased knowledge of behavioral change theory

ENGAGEMENT

- Program description/reason for developing program (nursing experience).
- VARK learning style questionnaire.
- 2 knowledge checks
- Opportunities for patient discussion

ACTIVITIES

- Mock case studies

CONTENT

- Social determinants of health-what are they and how do they affect CHF management
- Role of the multidisciplinary team in CHF management
- Transtheoretical Model-behavioral change theory
- Health teaching strategies
- Program content-how to use the assessment tool/when to use the assessment tool
- How to complete evaluation documents/how to submit documents

EXPECTED LEARNING

- The role of behavioral change theory in heart failure management
- The impact the social determinants of health have on CHF management
- Strategies to improve delivery of health information

EVALUATION

- Pre-test/post-test
- Education session evaluation

APPENDIX G: EDUCATION SEMINAR PRE-TEST/POST-TEST

Education Session Pre-Test

Please answer the following questions. What interventions or referrals would you make to address these issues?

1) **Income**

How can lack of income impact use of health care services?

2) **Physical Environments**

How does the progression of heart failure impact physical endurance?

3) **Social Supports**

How can social support improve adherence to heart failure treatment?

4) **Food Security/Nutrition**

How can food insecurity alter dietary intake?

5) **Culture**

How does culture impact client health decision-making?

6) **Healthy Behaviors**

What are factors that may impact self-care and healthy behaviors?

7) **Health Literacy**

What are some strategies to improve health education retention?

Education Session Post-Test

Please answer the following questions. What can you do as a clinician to address these issues?

1) **Income**

How can lack of income affect healthy behaviors such as medication adherence?

2) **Physical Environments**

How does the progression of heart failure impact strength and mobility?

3) **Social Supports**

How can a lack of social support affect adherence to heart failure treatment?

4) **Food Security/Nutrition**

What are some negative impacts the lack of access to healthy foods has on following a heart-healthy diet?

5) **Culture**

How does culture impact client health decision-making?

6) **Healthy Behaviors**

How does a lack of symptom monitoring impact heart failure management?

7) **Health Literacy**

How can poor reading or writing skills impact the retention of health education?

APPENDIX H: NURSING EDUCATION EVALUATION

1) How was your overall experience with this nursing education session?

2) Was the information well understood?

3) Did the flow of information make sense?

4) After practicing using the assessment tool, how do you think it will identify barriers to heart failure management in practice?

5) How will the assessment tool help identify required referrals and interventions in practice?

6) How will this tool help you tailor health education to the individual?

7) Would you change anything about the assessment tool?

APPENDIX I: NURSE EVALUATION OF ASSESSMENT TOOL

Clinician Evaluation of Assessment tool

1) How did you find the use of this assessment tool? (e.g. Questions were easy to ask, questions were relevant)

2) After using the assessment tool, how do you think it effectively identified barriers to heart failure management in practice?

3) How did the assessment tool help identify required referrals and interventions in practice?

4) How did tool help you tailor health education to the individual?

5) What would you change anything about the assessment tool?

Please provide any additional feedback.

APPENDIX J: PATIENT EVALUATION OF ASSESSMENT TOOL

Patient Evaluation-Assessment Tool

1. Did you find the questions asked during the assessment easy to understand? Please circle your answer.

   NO—NEUTRAL—YES

2. Did the assessment tool help identify your needs? Please circle your answer.

   NO—NEUTRAL—YES

3. How did you find the length of the assessment tool? Please check next to your answer?

   Too Long ____
   Just right ____
   Too short ____

4. Did the questions in the assessment tool respect your privacy? Please circle your answer.

   NO—NEUTRAL—YES