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Chronic Care Model Staff Education and Adherence with End-Stage Renal Disease Patients

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Walden University

College of Health Sciences

This is to certify that the doctoral study by

Emilia Addo

has been found to be complete and satisfactory in all respects,

and that any and all revisions required by

the review committee have been made.

Review Committee

Dr. Cassandra Taylor, Committee Chairperson, Health Services Faculty

Dr. Mary Martin, Committee Member, Health Services Faculty

Dr. Sue Bell, University Reviewer, Health Services Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2015

Abstract

Chronic Care Model Staff Education and Adherence with End-Stage Renal Disease Patients

by

Emilia Addo

MSN, FNP, Molloy College, 2002

BSN, Pace University, 1994

This Project Submitted in Partial Fulfillment

of the Requirement for the Degree of

Doctor of Nursing Practice

Walden University

December 2015

Abstract

The management and treatment of chronic diseases, such as end-stage renal disease, is often unproductive because of patients' poor adherence to treatment. The chronic care model toolkit is an Agency for Healthcare Research and Quality supported framework, associated with improved outcomes in patients living with chronic disease. The purpose of this project was to develop and plan an educational program using the chronic care model toolkit for the interdisciplinary clinical staff of a renal hemodialysis center. The goal of this project was to adapt team building between patients and their clinicians through the use of the chronic care model in order to improve patients' adherence to treatment. The educational program materials were developed, including a plan for future implementation over 6 weeks in 2-hour twice-weekly sessions. Program planning accounted for the mixed roles and responsibilities of the interdisciplinary clinical team members, who will share their knowledge among the team and act as patient advisors. The pretest and posttest materials were developed from the toolkit Team Health Audit Questionnaire, which can be used to evaluate staff learning after the program is delivered. Existing clinical metrics are tracked through a Quality Assessment Performance Improvement measure, which will be used to evaluate potential long term influences of the program on patient adherence and outcomes. The project may contribute to social change in practice by enhancing teamwork that has the potential to improve clinical outcomes. Future research should include longitudinal studies on team building using the chronic care model toolkit to determine if its adaption enhances team effort and contributes to a collaborative workforce that improves clinical outcomes.

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Dedication

I dedicate this Capstone project to my family.

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Thanks to the Almighty and everlasting Lord, for his guidance throughout this journey in pursuit for excellence and achievement for this degree.

I would like to acknowledge the help of my Capstone project committee, family members, and friends who have assisted me in reaching this point in my academic career.

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Section 1: Nature of the Project

Introduction

The management and treatment of chronic diseases, such as end-stage renal disease (ESRD), is often unproductive because of adherence issues that lead to the recurrence of active illness. There are several factors that contribute to adherence issues. Some adherence issues associated with ESRD include psychosocial issues, patients seeking autonomy, and uncoordinated, fragmented care management within the health systems. The evidence-based Doctor of Nursing Practice (DNP) project focused on planning, developing, and evaluating a chronic care model (CCM) staff education program that will address barriers that impact adherence to treatment regimens and self-management support to improve adherence in the specified population.

The CCM education addresses factors that contribute to adherence issues. The CCM staff education may be useful to change the cultural dynamics at any health care institution and improve the clinical outcomes of patients. I plan to create this educational program for the facility where I practice with the aim of improving adherence issues among the ESRD patients. Redesigning of the healthcare environment with enhanced CCM knowledge is supported by evidence-based studies to achieve best patient outcomes.

Many patients with ESRD experience various psychosocial issues that may lead to missing three or more specified dialysis treatments monthly, eventually leading to increased morbidity, mortality, social burdens, and costs (National Kidney Foundation

[NKF], n.d.; United States Renal Data System, 2013). Adapting the CCM in a practice setting has the potential to create a team-building environment that has a positive impact on the delivery of healthcare, leading to improved adherence and health outcomes (Agency for Healthcare Research and Quality [AHRQ], 2014; Kammerer, Garry, Hartigan, Carter, & Erlich, 2007; Lingerfelt & Thornton, 2011). Educating staff about the CCM is therefore warranted.

The nursing and medical literature supports the CCM framework as a means to change the cultural dynamics at all healthcare institutions and improve the clinical health outcomes of patients (Kammerer et al., 2007; Lingerfelt & Thornton, 2011). Consistent, coordinated care management and delivery within an organized practice system in the healthcare industry are supported by evidence-based studies (Wagner et al., 2005, 2010). Researchers have shown that when it is implemented in a structured environment, the CCM results in improved patient adherence and improved health outcomes. Structural changes can be accomplished through a series of practice improvement team meetings led by a trained practitioner to improve risk factor control (Parchman et al., 2008). To achieve productive interaction aimed at best practices, most studies applied the interventions toward changing four areas of practice within the CCM framework. The areas are self-management support (how help is provided for patients to live with their conditions), delivery system design (who is on the healthcare team and how the team interacts with patients to achieve best outcomes), decision support (what is the best care and how it is delivered to achieve the objective), and clinical information systems (how

information is captured and critical information is used for clinical care) (AHRQ, 2014; Wagner et al., 2005).

In this section, I describe the nature of the problem and background for the project, identify the problem statement, purpose statement, and project question using PICO, and provide definitions for all terms. I outline assumptions and limitations, the objectives of the project, its significance to practice, and implications for social change in practice.

Background

For the background of this project, I looked at several studies with a focus on adherence issues. Studies included use of the CCM with the ESRD population. Kammerer, Garry, Hartigan, Carter, and Erlich (2007) and other researchers using evidence-based methods recognized adherence issues among ESRD patients as a problem that should be solved through restructuring of the healthcare system (Fortin et al., 2013; Wagner, 2007). Adherence issues occur for ESRD patients when prescribed dialysis treatments are not fully attended, leading to an increased burden on healthcare resources (Kammerer et al., 2007; NKF, n.d.). Adherence issues in this population stem from the desire to exercise a sense of autonomy contributing to healthcare challenges (Wagner, 2004). Factors on patient perceived adherence issues may be managed after successful CCM staff education (AHRQ, 2014; Wagner, 2010).

Chronic illness prevalence is increasing among ESRD patients and the general population, burdening U.S. healthcare system resources (United State Renal Data System

[USRDS], 2007; Wagner, 2004). In 2009, the adjusted rate of kidney failure among diabetic patients was 2,423 per million population or 8.8% (USRDS, 2013). Several researchers have indicated that adherence to prescribed treatment regimens among the ESRD population is influenced not only by characteristics of the individual patient but also by factors within the patient's environment (NKF, 2007; Youngmee & Evangelista, 2010).

Healthcare system factors continue to challenge adherence to treatment. Adherence among ESRD patients is associated with follow-up care management in medical subspecialties and other challenging medical issues (NKF, n.d; USRDS, 2013). Systems factors that impact patient ESRD adherence issues are associated with limited predialysis education that leads to poor illness perception (Youngmee & Evangelista, 2010). The disease burden on ESRD patients faced with a lifetime commitment to adhere to rigid renal replacement therapy (RRT) is the underlying factor. Hemodialysis (HD) is the most common maintenance RRT for ESRD patients. Adherence issues are observed when any of the four areas of compliance are not observed. These areas are: attendance three times a week at HD treatment, prescribed medication adherence, fluid restrictions, and diet restrictions that lead to poor clinical outcomes (USRDS, 2009; Youngmee & Evangelista, 2010).

According to Lingerfelt and Thornton (2011), challenges of nonadherence are minimized when patient self-management support interventions are implemented within a structured healthcare environment. Wagner et al. (2005, 2010) and the World Health Organization (2003) identified that successful adherence requires active involvement of a

multidisciplinary team with the patient, the community, and the health system. Committed team members are to combine all efforts in promoting patient healthy behaviors and effective self-management strategies (WHO, 2003).

Wagner et al. (2005, 2010) recognized that healthcare systems need to be accountable for the improvement of patient care quality and health outcomes by changing ways of practice and restructuring systems. Wagner first addressed the rise of chronic illness that affects more than 45% of the U.S. population. Changing the culture of the healthcare environment in such a way that all staff members are knowledgeable about the CCM may reverse the persistent adherence issues that continue to plague practice settings. This staff education project will address barriers in the delivery system design that impact adherence to treatment regimens and focus on self-management support elements of the CCM. It has the potential to tackle adherence issues among the ESRD patients in the practice setting (Kammerer et al., 2007; Lingerfelt & Thornton, 2011).

Problem Statement

Certain populations of patients with ESRD do not adhere to their treatment regimens, that is, they fail to adhere to treatment plans established through negotiation between the patient and the healthcare provider (HCP). Successful adherence relies on therapeutic behaviors by all participants in the healthcare system, including patients and HCPs (Kammerer et al., 2007).

Many factors have an influence on health and illness and therapeutic behaviors by both the patient and the HCPs (Kammerer et al., 2007). Adherence issues among

populations with ESRD have been widely discussed as being associated with increased healthcare costs, increased morbidity, and high mortality rates (NKF, n.d.; USRDS, 2013). Kammerer et al. (2007) provided evidence that supports the significance of CCM adoption at the facility site for this project.

Kammerer et al. (2007) demonstrated that a specified dose of dialysis treatment is an important predictor of morbidity and mortality; therefore, it is reasonable to infer that improved adherence will decrease mortality. Kammerer et al. discussed other researchers work have shown that skipping three or more hemodialysis treatments out of 12 to 13 prescribed in a month is associated with increased morbidity and 20% mortality. The consequences of adherence issues have both financial costs and are a burden to the healthcare system. A plausible means to ameliorate adherence issues among specified ESRD patients is a structured interdisciplinary team (IDT) approach and follow-up management. The initiation of a team approach to addressing adherence issues to decrease noncompliance in chronic illness treatment is supported by evidence-based practice (AHRQ, 2014; Wagner, 2005).

Purpose Statement and Objectives

The purpose of this DNP project is to develop and plan CCM education for an interdisciplinary team to improve specified adherence issues among ESRD patients. The project objective is to create all documents needed for the practice site to implement and evaluate the educational program, which will focus on barriers that impact adherence to treatment regimens and self-management support for patients.

The planned educational sessions for staff use elements of the CCM, which are supported by several evidence-based studies on quality improvement interventions (AHRQ, 2014). The overall expected project outcome is effective coordination of healthcare service delivery that results in improved adherence for the specified population. Using the CCM as an interdisciplinary model provides a structured practice framework that has the potential to transform practice dynamics and improve patients' adherence to treatment.

Project Significance/Relevance to Practice

Based on published evidence, one would expect that CCM adoption is relevant to the ESRD population. Healthcare practice redesign with CCM is significant because it can modify the culture of the practice setting and thereby improve ESRD adherence. Chronic care management adoption is a multi-modal approach for adherence management that creates synergistic effects through the involvement of all healthcare providers. There is evidence that CCM can be integrated and implemented at chronic care facilities to improve adherence among the ESRD population. Among the studies supporting this claim is Murray et al.'s (2013) study on shared decision-making (SDM) strategies and delivery systems, elements of CCM, as a way to improve the coordination and integration of service delivery and lead to improved treatment adherence. This interdisciplinary intervention, which uses the delivery system design and self-management support elements of the CCM, is an appropriate measure to reduce poor adherence among ESRD patients.

Implementation requires a redesign of the entire system with the integration of the patient as a unit within the healthcare system. The intent of this DNP project is to produce a complete package on how to utilize elements of the CCM and toolkit as an interdisciplinary team approach to practice change at the practice facility to improve treatment adherence among the ESRD population. The adoption of the essential elements of CCM will bring uniformity and structure for managing ESRD patients and improving care coordination and adherence.

Project Question

The clinical question guiding this project is best asked in abbreviated format indicating population or patients, intervention, comparison, and outcome (PICO) (Melynk & Fineout-Overholt, 2011). The PICO question for this evidence-based practice project is: Will a CCM educational program enhance knowledge among the facility's staff and lead to the identification and removal of barriers that impact adherence issues and promote self-management behaviors in specified ESRD patients?

Evidence-Based Project Significance

Evidence-based studies by several scholars on CCM have led to recognition of its effectiveness and adoption by others. Its use in modifying workflow dynamics, improving communication patterns, and encouraging patient collaboration within the healthcare system to address and correct risks factors and achieve patient adherence has been cited in many research studies. Bissonnette et al. (2013) researched post-kidney-transplant-care management and Parchman et al. (2008) applied practice facilitation of

collaborative practice use elements of the CCM. Murray et al. (2013) used decisional support processes that are an element of the CCM, leading to an understanding that spending a reasonable amount of time interacting with ESRD patients and in appropriate follow-up care provides valuable decisional support. The CCM toolkit is an evidence-based module that addresses key aspects of developing and building a multidisciplinary team to deliver and achieve best practices for patient care (AHRQ, 2014).

Implications for Social Change in Practice

Implementation of the CCM framework has implications for social change. Patients as empowered individuals receive effective communications evidenced by productive interaction and involvement within the healthcare system. The health system environment benefits from well-structured, coordinated healthcare. These patient-centered strategic processes are conducive for cost-effective, efficient, timely, and safe care management (Wagner, 2004; Wagner et al., 2005).

Definitions of Terms

The following definitions are used for this project including the use of CCM and the CCM toolkit to guide the project:

Adherence: Defined by various scholars, including Kammerer et al. (2007), as the extent to which the patient follows medical instructions; the patient may be a passive, acquiescent recipient of expert advice, as opposed to an active collaborator in the treatment process. Adherence to any treatment regimen is reflected in the patient's behavior by following treatment as scheduled and/or making lifestyle changes

recommended by a healthcare provider. Mutual agreement by the patient and healthcare provider is necessary to achieve effective clinical practice with best health outcomes.

Adherence issues: Missing three or more treatments out of 12 to 13 within a month, a factor in the patient's health becoming compromised. There are other treatment modalities used as RRT; however, hemodialysis is the most common modality for the ESRD patients. (The project discusses issues specifically affecting HD patients.) Adherence issues among ESRD patients are noted when scheduled treatments, prescribed medication, and/or appointments for HD treatments are missed three or more times out of the 12 to 13 scheduled within a month (Kammerer et al., 2007).

Chronic care model (CCM): A conceptual framework applied by identifying the essential elements of the healthcare system and encouraging comprehensive, high quality chronic disease care. The CCM consists of six elements: the community, the health system, self-management support, delivery system design, decision support, and clinical information systems. Chronic care model as an innovative care model incorporates evidence-based change concepts under each of the elements to bring about productive interactions between an informed patient, who takes a proactive approach to care, and expert healthcare providers with resources (Wagner, 2004, 2010). This CCM staff education DNP project focuses on elements of the CCM, that is, self-management support and delivery system design.

CCM toolkit: Educational material was created by the Delmarva Foundation for the AHRQ to enable CCM implementation. The program helps identify barriers to successful team functioning through regular patient care meetings and shared

responsibility for tasks (AHRQ, 2014). The educational tool promotes team collaboration and enhances interactions between the patient and the multidisciplinary care team for the improvement of clinical outcome (AHRQ, 2014).

End-stage renal disease: An occurrence resulting from the failure of kidneys to remove toxins and fluid adequately to maintain a normal physiological state. Dialysis is instituted when the estimated glomerular filtration rate (eGFR) drops to less than 15ml/min (NKF, n.d.).

Assumptions and Limitations

It is important to understand common assumptions and limitations that may impact this project. An interdisciplinary workforce is required for successful implementation of the CCM. Therefore, this project is based on the assumption that multidisciplinary staff education regarding the CCM will lead to increased knowledge, improved delivery of CCM elements, and improved adherence issues. For successful implementation of CCM, it is assumed that all stakeholders will be motivated to achieve the common goal of improved patient adherence. Limitations are lack of resources, workforce coordination, and unmotivated internal and external key stakeholders (Parchman et al., 2008).

Another assumption worth noting is based on Starkstein, Jorge, and Robinson's study (2010) using Cutting's 1978 works. Many dialysis patients have been found to have numerous problems, such as anosognosia, a deficit of self-awareness of their disease state, poor acceptance of life's imperfections, sensitivity to others who manipulate them, and being belligerent toward others. For these patients, adherence issues with regard to

treatment regimens may be a way of taking control. Starkstein et al (2010) found that the disease state may be observed with patients after an acute stroke with a clinical manifestation of cognitive deficit. This assumption about patient deficits should not limit a best practice approach to treatment. It is important to motivate and empower internal and external key stakeholders to stay involved and committed to the practice restructuring and redesign through CCM implementation to improve ESRD patients' health outcomes.

Summary

In summary, evidence supports that CCM knowledge leads to successful adherence behaviors in patients. This team approach, within a redesigned infrastructure and with motivated care team members after educational workshops at the practice site, can provide optimal healthcare for the specified ESRD population. To restate, the educational format, which is based on segments of the CCM, will serve as an innovative practice guide to improve adherence issues. End-stage renal disease is a complex disease entity, and the ESRD population requires ongoing healthcare activities to achieve optimal health outcomes (NKF, n.d.). The CCM entails complete integration of competency requirements for all healthcare professionals, teamwork through collaborative functioning, patient-centeredness, and clinical informatics systems to achieve quality improvement, safety, and evidence-based care (Wagner, 2004, 2010). This staff education project focuses specifically on two elements of the CCM, that is, self-management support and delivery system design.

Section 2: Review of Scholarly Evidence

This DNP project consists of the development and implementation of an educational program for staff based on the CCM framework to improve adherence in a specified population of patients with ESRD. The focus will be on removing known barriers that impact adherence issues among the specified patients and the promotion of self-management support in the patient population to improve health outcomes. This section of the project will discuss the literature reviewed and the evidence-based theoretical framework underlying CCM use for the improvement of ESRD adherence issues.

End-stage renal disease is a debilitating condition that necessitates continuous dialysis treatments to maintain quality of health (NKF, n.d.). Patients with ESRD are among high-risk groups that have multiple compounding health issues that require follow-up to subspecialty care (NKF, n.d.). Adherence issues among patients with ESRD may require effective, structured health system coordination using elements from the CCM framework to improve treatment adherence (Fortin et al., 2013; Murray et al., 2013).

Literature Search Strategy

A comprehensive literature search on CCM planning, implementation, education, staff, and evaluation was initiated. Key words were used separately or in combination. The literature review considered studies that included search reviews from publications in the Walden library database. Multiple databases were searched including CINAHL, Ovid plus, ProQuest, EBSCO Medline, and PubMed. Scholarly articles not older than 10 years

were used for the search using the following keywords: *chronic care model, planning, implementation, evaluation, adherence, innovation, quality improvement, collaborative, renal disease, kidney disease, end-stage renal disease, healthcare, health system, education, staff,* and *organizational change.* The phrase "and" was used to connect information and to broaden the search. Initially more than 50 articles were reviewed including reference lists of the articles, textbooks, and specified databases. Selection criteria were based on studies that address CCM education, assessment, implementation, and/or evaluation as they relate to the ESRD population. Twenty-six articles pertinent to the project were selected. Articles older than 10 years were excluded from the analysis. All reviewed data were synthesized and are summarized below.

Literature Review

A plethora of information was found on CCM adaptation for various chronic conditions. In order to implement CCM elements to improve adherence for dialysis patients, a clear understanding of adherence issues among dialysis patients was needed. According to K/DOQI update 2009 and the Hemodialysis Adequacy Workgroup, there are important hindrances that are believed to impede patient adherence to all scheduled treatments (Kammerer et al., 2007; Lingerfelt & Thornton, 2011). Lingerfelt and Thornton (2011) reported that a structured educational program may increase patients' knowledge and awareness and positively impact self-management behaviors for improved health outcomes. Kammerer et al. (2007) suggested addressing adherence issues differently. Their study demonstrated the importance of minimizing blame for the

patient for adherence issues and improving the relationship among healthcare providers and patients within the health system to encourage adherence.

The use of CCM may improve adherence issues and the ability of patients to seek autonomy. Pearson et al. (2005) and others agreed that CCM is credible and fosters positive change within the workforce for collaborative interventions that lead to quality improvement (Mackay et al., 2011; Pearson et al., 2005; Walters, Adams, Nieboer, & Ball, 2012). Walters et al. (2012) conducted qualitative studies in the Netherlands using early intervention and five disease management programs that targeted project leaders for quality improvement feedback. They described CCM implementation that involved restructuring the entire healthcare system and transforming the roles of all involved, highlighting these changes as a paradigm shift for many stakeholders. Chronic care model was cited as a way to reduce the chronic diseases that are plaguing hundreds of millions of individuals globally through effective healthcare management redesign (Wagner, 2004, 2010). Studies have addressed collaborative efforts both in the healthcare academic and clinical practice domains (Holmes & Henderson, 2012; Holms & Severinsson, 2012; Stevens et al., 2010).

Stevens et al. (2010) utilized quality improvement themes or plan, do, study, act (PDSA cycles) to improve education and clinical performance on monthly measures in academic settings. The use of clinical systems improvement outcome processes, integrated with educational approaches for provider training for best practice and effective collaboration within the CCM, provided a proven framework (Jacobson & Glance-Cleveland, 2011; Stevens et al., 2010; Wagner, 2010). Other studies pointed to

significant improvement when CCM elements were used at the organizational level. Community health centers and various specialty practice centers in the United States and other countries supported the use of the CCM (Smith et al., 2008; Sunnaert et al., 2010; Tu, Belda, LittleJohn, Pedersen, & Tyndall, 2013; Vargas et al., 2007).

Vargas et al. (2007) performed a controlled pre- and post-intervention study using CCM collaborative elements to identify the effectiveness of an approach to reduce cardiovascular disease risks in patients with diabetes; 13 healthcare organizations participated in the study. Study results showed improved blood pressure, lipid levels, and HbA1c levels during the observation period. Random intercept hierarchical regression models showed that the intervention group had a 2.1% (95% CI -3.7%, -0.5%) greater reduction in predicted risk for future cardiovascular events when compared to the control group. The study also found reduced risks of cardiovascular disease and diabetes among the participants over a 1-year interval during the CCM collaborative intervention.

Chronic care model adoption for chronic care general practice had a significant impact on improving healthcare results with cost-effective measures (Mackay et al., 2011; Smith et al., 2008). Smith et al. (2008) examined the effectiveness of using the CCM for a telemedicine intervention for improving diabetes for the period 2001 to 2003. A mean 21-month follow-up result revealed that the intervention group incurred lower costs (p =. 02) but not lower diabetes-related costs. Pasricha et al. (2013) used elements of the CCM at an HIV clinic and also reported a positive impact. Their systematic review examined the effectiveness of the decision support and clinical information systems

elements of the CCM for people living with HIV. These two components of the model had a positive impact in changing provider performance.

Fortin et al. (2013) used a descriptive qualitative method to collect data from various stakeholders including decision-makers, primary care professionals, and chronic disease prevention management (CDPM) to evaluate the adaptation and implementation of an intervention involving the integration of CDPM services into primary healthcare for patients, before, during, and after implementation (Fortin et al., 2013). Most providers utilized CCM effectively; especially noted was the collaboration that took place between advanced practice nurses (APNs) and physicians.

Bissonnette, Woodend, Davies, Stacy, and Knoll (2013) evaluated whether an APN-led interprofessional collaborative chronic care approach would improve clinical outcomes for kidney transplant patients compared with a traditional physician-led model. The intervention included three elements from the CCM: strategies for disease self-management, shared decision-making, and healthcare system reorganization. The primary outcome cited was "the proportion of patients attaining at least seven of the nine targets as per published guidelines" (Bissoneette, et al., 2013, p. 232). A greater proportion of the intervention group had significantly fewer emergency room visits (68% vs. 10%, p = 0.0001) and had discussed end-stage treatment options (88% vs. 13%; p = 0.0001) compared with controls. Overall results demonstrated that the APN-led approach based on the CCM had the potential to improve clinical outcomes for renal transplant recipients.

Parchman et al. (2008) implemented a randomized controlled pilot study of practice setting redesign. The use of evidence-based practice facilitation (PF), a component of the CCM, involved a team approach to assess risks factors and practice experiences. The study aimed to build and modify work dynamics prior to future CCM adoption. The result of the study of workflow dynamics showed a significant impact on the healthcare setting. Communication problems were effectively resolved by interprofessional collaboration and teamwork.

Institution of the chronic care model is intended to achieve optimal patient care. Enhanced staff awareness of the CCM is important. The CCM can be implemented successfully within a practice setting serving the ESRD population through the integration of care via shared group appointments, decision support, self-management support, delivery system redesign, community resources, and information systems coordination (Wagner, 2004, 2010; Watts et al., 2009).

Adherence issues may be corrected by workflow dynamics that change the old ways of practicing to a culture that improves patient outcomes. There should be continuous strategic assessment and a goal-oriented, problem-solving approach, and follow-up management from the entire team working in concert. According to Parchman et al. (2008), traditional work dynamics are to be modified prior to future CCM implementation. The workflow dynamics that were utilized among the team are defined as transitioning from the traditional work settings to more culturally congruent work patterns to improve the current work duties for best results. Parchman et al. indicated that

workflow dynamics, coupled with communication problems, had a significant impact on the healthcare settings and were effectively corrected by inter-professional collaboration teamwork.

During this careful exploration of the literature on CCM and adherence issues among the ESRD population, it becomes evident that various directions are available through the adoption and implementation of the CCM framework. Therefore, enhanced staff knowledge of CCM through the use of CCM toolkit is important. Several researchers have addressed the poor clinical outcomes that are observed when adherence issues prevail, leading to increased healthcare burden. Therefore, IDT healthcare providers are to work collaboratively to enhance self-management behaviors. According to Lingerfelt and Thornton (2011), strategized self-management support provided patients with skills and confidence to make appropriate healthcare decisions.

Conceptual/Theoretical Framework

The CCM scholarly toolkit is a conceptual framework that serves as an interdisciplinary framework with social concepts to guide practice. A conceptual framework explains, predicts, and facilitates research (Grove, Burns, & Gray, 2013). Nursing practice will benefit from CCM staff education adoption because it facilitates the provision of a structured framework that impacts the health of society.

The CCM toolkit is based on patient-centeredness and supports the linking of group or individualized educational sessions, performance mastery, experience sharing, and stress management (AHRQ, 2014; Wagner 2010; Wagner et al., 2005). It involves a

well-structured, consistent interdisciplinary team approach to transform practice dynamics for best practice and quality health outcomes (Fortin et al., 2013; Wagner, 2004, 2010). In a complex environment such as an ESRD domain, organizing care according to a conceptual model can improve adherence issues. It requires the accountability of all practitioners in active involvement in care management and patient-centeredness and the integration of all health systems and policies for effective, efficient, and equitable patient care.

Summary

This project is supported by a combination of studies that include randomized controlled trials and expert opinion from peer-reviewed journals. Together this literature provides complementary strengths and project direction (Grove, Burns, & Gray, 2013). The accumulated evidence used for this project supports staff CCM education. Therefore, my project may serve as an integrated framework to guide practice design that will lead to improved patient care and better health outcomes.

All the supporting literature provided greater depth of knowledge for me during the project planning and the writing of the proposal for the DNP project, which will be implemented and evaluated by others. Creating change requires structured planning and an examination of the methods used to bring about best outcomes. The method selected should provide increased "knowledge, change attitudes, change social influence and build skills" (Hodges & Videto, 2011, p. 182). The CCM toolkit education has the potential to help health systems evolve. Enhanced staff knowledge of the CCM and its adoption may improve treatment adherence in ESRD patients and can be regarded as a social necessity

due to the financial burden the failure to address adherence issues places on society. The next section of the project outlines a plan for the CCM staff educational program.

Section 3: Approach

Introduction

To confirm, the purpose of this DNP project was to develop and plan CCM education for an interdisciplinary team to improve specified adherence issues among ESRD patients. The project objectives were to create all documents needed for the practice site to implement and evaluate the educational program. The project focus is on removing barriers to adherence and support for patient self-management. This section discusses how the CCM staff educational program activities were developed.

The 6-week structured staff educational workshop is based on segments of the CCM that address challenges in care management. Motivated team members will focus on patients' empowerment to improve adherence issues. There is evidence to support the efficacy of delivery system redesign and collaborative care management in the CCM toolkit. Parchman et al. (2008) described a randomized trial to evaluate a collaborative intervention to improve practice services among team members. Significant improvement was reported in the delivery of care consistent with the CCM toolkit module. The educational format, based on segments of the CCM, should serve as a ground-breaking practice guide to improve adherence issues in the patient population due to CCM validity. Adherence issues among ESRD patients are noted when scheduled HD treatments, prescribed medication, and scheduled appointments are missed consistently three or more times within a month. Improvement in adherence issues is observed when a dialysis patient attends all 12 to 13 scheduled therapy sessions within a month and continues to do so consistently with improved health outcomes. The overarching goal is to improve

health outcomes among the ESRD population in the practice setting. Institutional review board (IRB) approval by the organization and following Walden University IRB requirements is necessary before the commencement of CCM staff education and has been obtained.

Project Method/Approach

All resources and materials necessary for the development of the project are discussed in this section. A planned methodological approach for the staff education program was developed from the CCM toolkit with additional resources supported by evidence-based practice (EBP). Initial steps for CCM staff education and program implementation depend on stakeholder involvement and buy-in during planning and development. The support of key stakeholders will enhance the implementation process. The document deliverables for key stakeholders consist of training materials on CCM education with additional EBP supported resources. The supporting CCM training contents have been completed and the compiled document prepared for evaluation by key stakeholders is in one master folder Word document saved to a flash drive. It will be hand delivered to the regional educational director.

The project proposal audience for staff education includes all staff at the facility. Each 2-hour meeting, a total of 12 sessions over 6 weeks, covered the content areas as outlined in the educational program. This project was supported by the practice organization and presents no financial burden to the organization.

This following is an outline of the steps involved in implementing the educational program.

1. Identify and assemble a project team that comprise of all healthcare providers at the facility.
2. Establish agreements with all stakeholders that comprise of all employees at the facility.
3. Create a measurable timeline: A tentative plan for the CCM staff educational program is 6 weeks followed by evaluation to determine the program adaptability.
4. Review pertinent resources, and supportive evidence.
5. Develop, gather, and assemble all materials and update needed resources, such as PowerPoint presentations, for face-to-face workshops to take place in the conference room.
6. Develop an implementation and an evaluation plan.

In order not to disrupt work schedules, all participants were divided into two groups. Each group met twice weekly for 2 hours. Group 1 met on Mondays and Wednesdays; Group 2 met on Tuesdays and Thursdays. Members of the interdisciplinary team and participants from the practice division had mixed roles and responsibilities. They acted as advisors in sharing knowledge to improve the change process (Hodges & Videto, 2011).

Interdisciplinary Project Team for the CCM

The educational program at the ESRD practice site involves all interdisciplinary team members including nephrologists, nurse practitioners (NPs), registered nurses (RNs), care technicians, social workers (SWs), renal dietitians (RDs), secretaries, and administrative personnel. All personnel who work at the facility at various levels of collaboration will participate and include RDs, SWs, RNs, and unit dialysis technicians. It is crucial to establish appropriate team health based on mutual trust, respect, openness to maintain a collegial community of support in sharing and learning to achieve the project goal.

As the researcher, I am project team facilitator and planner of this project. I will deliver all documents and materials for the educational workshops to the practice site. Implementation and evaluation aspects of the program will be left to other team members as follows: (a) the team leader, the regional director of education, will be assigned to deliver the planned program workshop; (b) the area manager and quality manager will be the quality resource person to oversee the project integrity and its successful completion; (c) the administrative assistant will perform daily project recordings, coordination, and data collection, and will provide feedback; (d) the unit manager will be the coordinator and contact person; (e) nephrologists are included on the team for support and added guidance.

Review Resources and Develop Materials

The review of resources and supporting scholarly literature on the program sessions was initiated following lengthy discussions involving the DNP student, the regional

director of education (my mentor), the unit manager, and the medical director. All participants in these sessions added suggestions and agreed to the proposed 12 educational sessions spread over 6 weeks as follows:

1. Sessions 1 and 2. Overview of adherence issues and their effect on ESRD patients, outline of CCM staff education, and Team Health Audit Questionnaire survey, pretest (AHRQ, 2014).
2. Sessions 3 and 4. Team-building factors and collaborative care management (AHRQ, 2014).
3. Session 5 and 6. Four-step quality improvement strategy with Delivery System Support and Self-Management Support, Team Health Audit Questionnaire survey, posttest (AHRQ, 2014), summary, and evaluation.

It is expected that after the 6-week educational program, all staff attendees will verbalize a clear understanding of CCM adaptation and provide feedback on elements of the CCM framework. The IDT members will establish and maintain team agreement for a collegial of support in sharing and learning expert knowledge. The project will apply the team health audit survey pre and post study (AHRQ, 2014).

The completed presentation material, based on elements of the CCM, are in the form of PowerPoint presentations; educations sessions will involve participants' interaction. All participants will be encouraged to share their expert knowledge with the group and remain proactive for CCM staff education and during the evaluation stages. The initial role of the DNP student as planner was to design and produce needed

materials on the CCM for the practice facility. Implementation will take place by others at a later date at the Dialysis Center in New York City with ESRD patients who have a known history of adherence issues that affect health outcomes. The final documents will be delivered to the team leader who will implement the project.

Design Elements

The building block for the staff CCM education program is the CCM toolkit (AHRQ, 2014). The educational sessions include the following:

- CCM toolkit staff education with a focus on adherence improvement for the ESRD patient and self-management support
- Team Health Audit Questionnaire survey at baseline and end of 6 weeks
- Team-building factors and how to maximize participant strengths
- Collaborative Care Manager Model
- How to improve the environment with CCM knowledge and delivery system support and self-management support
- Four-step quality improvement strategy: assess, collect, evaluate, and sustain
- Feedback and evaluation at the end of the program

Strategies for the identification of barriers that impact adherence involve four quality improvement performance strategies. The steps are: assessment, collection of data, evaluation of data, and sustaining decisions for best practice. Moving forward with the CCM educational knowledge the team will assess needs and goals; create a proactive plan of care; monitor patients for adherence, follow up, and response to change; support

self-management goals; link to community resources; and align resources with changing patient and population needs. Staff knowledge of the CCM can be measured but should be reassessed periodically with the posttest. Best practice would be to review, summarize, and evaluate staff knowledge and competence regarding the CCM toolkit annually using the Team Health Audit Questionnaire. All educational sessions include a program outline and objectives to accomplish within the time allotted. All selected educational segments from the CCM toolkit (AHRQ, 2014) align with the institutional values to improve adherence issues through knowledge enhancement and collaborative teamwork.

Implementation Plan

The completed educational modules as planned were handed to the team leader, the regional director of education for the project institution, according to the facility's IRB requirements and Walden University's project approval. Since November 2014, the regional director of education and other key stakeholders at the facility have participated in meetings on how documents will be reviewed for completeness. Determination on moving forward with the completed generated product has come from key stakeholders. The expectation is that the entire interdisciplinary team will take part in the implementation of the project and the evaluation to achieve all project objectives.

Evaluation Plan

Developing a project evaluation plan has many parts comprising various activities and outcome measurements. A plan for the evaluation includes an assessment of whether the project performs what it is meant to do and whether objectives and goals are

accomplished. Evaluation is a vital part of any project and must consider the integrity of the project, for example, whether it fulfills ethical determinants, is feasible, and provides accurate data (Hodges & Videto, 2011).

Results from the Team Health Audit Questionnaire, pre- and post-intervention, will be evaluated to determine whether enhanced staff knowledge is accomplished based on CCM education. The long-term goal of the program is to identify challenges and remove barriers that impact adherence issues.

A Quality Assessment and Performance Improvement (QAPI) tool will be used to assess and evaluate improvement in patient adherence and QAPI results will guide the long-term evaluation process. The QAPI tool facilitates review and evaluation of laboratory values such as urea clearance, fluid volume status, anemia, infection rates, bone mineral metabolism, nutritional status, hospitalizations and psychosocial needs, which are indicators for adequate dialysis and treatment adherence. This part of the evaluation plan will be assessed after the CCM adoption at the practice site and will not occur during the DNP project. The QAPI enables facilities to evaluate performance based on benchmarks, compare results with other dialysis facilities, establish goals for the facility, and initiate plans for improvement as needed. The survey report and QAPI data generated will determine the CCM staff education program adaptability. This measurement is key to quality assessment performance improvement processes and the determination of adherence issues.

The proposed program aims to adopt and integrate the continuous use of CCM elements into an ESRD facility to improve treatment adherence and for effective

integrated services. Other aspects of the plan evaluation will include anonymous monthly quality improvement feedback questionnaires for team members, that is, all educational attendees. The questionnaire will ask about experiences during the program and use a satisfaction scale based on the Team Health Audit questionnaire completed at baseline and at the end of the 6-week staff training program. All data collected will be summarized at the end of the 6-month evaluation period.

Summary

Adherence improvement in the ESRD population benefits the healthcare system and society. It should be recognized that when CCM knowledge is infused within the facility environment, there is hope that adherence issues of patients with ESRD will improve. The educational sessions based on the CCM toolkit are evidence-based and designed to identify and remove barriers, improve and define leadership roles, increase collaboration, and support self-management in the patient population. This section of the project discussed the planning of the CCM staff education with the aim of facilitating CCM adoption and redesign for the practice site to improve adherence issues among the specified ESRD patient population.

Section 4: Findings, Discussion, and Implications

To recap, the purpose of this DNP project was to develop and plan CCM education for an interdisciplinary team to improve specified adherence issues among ESRD patients. Objectives were to create all documents needed for the practice site to implement and evaluate the educational program, which has as its focus barriers that impact adherence to treatment regimens and self-management support. The aim of the DNP project was to facilitate CCM adoption and redesign of the healthcare environment to improve adherence issues in a population with ESRD. CCM staff education and eventual CCM implementation for the practice setting have the potential to improve adherence issues among ESRD patients.

Discussion

Adherence issues among the ESRD patients are influenced by several factors; these include psychosocial issues, which arise when unavoidable healthcare demands are placed on the patient's lifestyle, and fragmented care management among subspecialties within health systems. The challenges that lead to nonadherence may include specified structured treatment plans and medications use. All these factors impact adherence issues, creating barriers for a complex environment and the need for transformation of the healthcare system (Wagner, 2004, 2010). The healthcare practice redesign is significant because it can modify the culture of the practice setting and thereby improve ESRD adherence (Fortin et al., 2013).

The process in the development of the CCM staff education plan for the practice site was comprehensive. The Dialysis Center in New York City performance scores

indicated deficiencies on clinical outcomes that stemmed from poor adherence. Clinical performance outcomes were recognized as not in parity with competing dialysis facilities. Findings on this practice issue of adherence continued for several months and were discussed at interdisciplinary team (IDT) meetings. Monthly IDT meetings led to the finding that unmet facility goals stemmed from certain patients with persistent adherence issues. Specified persistent adherence issues were noted among patients who missed three or more dialysis treatments within a month that led to the recurrence of active illness.

Upon receiving IRB approval from Walden University, I engaged in serial communications with key stakeholders by email and telephone conversations and, at times, during face-to-face interactions. Episodic meetings also took place at the practice site involving me, and my mentor, who is the regional educational director; the medical director of the facility; the administrator; the facility manager; the regional quality assurance manager; and the regional quality initiative manager. During these meetings, the CCM toolkit was accepted as best practice for educating staff to improve adherence issues among the ERSD patients.

Additionally, I addressed the idea of preparing a poster presentation of the project for the facility. Stakeholders accepted the suggestion to do a poster as a scholarly method for project information dissemination. The strength of a scholarly poster as a communication medium is its ability to share educational developments or initiatives (Hardicre, Devitt, & Coad, 2007). The poster I created is now displayed at the facility to enhance staff knowledge about CCM (see Appendix F), and the CCM staff educational PowerPoint presentation created from the poster is attached (see Appendix E).

Stakeholders provided assurances to move forward with the creation and development of all documents for interdisciplinary staff education including step-by-step plans for implementation and evaluation. A formal literature review pertaining to CCM and the CCM toolkit for staff educational was completed.

Many studies have confirmed CCM efficacy for various areas of specialty practice but few studies mention the ESRD population. Findings from the literature supported my interest to pursue the project and added further insight on using the CCM toolkit for implementation at the practice site. All resources and supporting literature were thoroughly reviewed for feasibility at the practice site with my mentor, who is the regional educational director; the medical director of the facility; the administrator; the facility manager; the regional quality assurance manager; and the regional quality initiative manager. They are educational experts for the facility and are key stakeholders. The materials were discussed with the educational experts who provided needed support.

First, an outline was created for the planned 6-week staff education (12 sessions) that included a four-step quality improvement approach incorporating CCM elements. Second, all educational sessions were developed from the CCM toolkit. The planned program was developed from the CCM toolkit and outlined as follows: Appendix A: The CCM framework; Appendix B: Educational Program; Appendix C: Team Health Audit Questionnaire; and Appendix D: Goal Setting Patient Worksheet. Appendix E is the Power Point presentation of staff CCM education that was shared for review with the regional educational director. The educational materials developed are as follows: three

educational sections for a total of 12 sessions spread over 6 weeks comprised of three modules for learning activities.

Sessions One and Two covers Module 1, which consist of a course overview, objectives, and baseline results of the Team Health Audit Questionnaire (THAQ) survey. This survey assesses strengths, weaknesses, and determines team knowledge (AHRQ, 2014). All participants begin the course with the pretest, the THAQ survey (see Appendix C). Test scores are reviewed with participants and will determine the direction of the CCM staff educational process. A face-to-face interactive teaching and learning format continues with the educational goals, mission, and objectives (see Appendix B).

Sessions Three and Four covers Module 2. This module reinforces sessions on learning activities, team building factors and building strengths, and harnessing the culture of the learning environment with CCM knowledge. These sessions will discuss the use of self-management support and the goal setting patient worksheet to identify problems with adherence. The four-step quality improvement strategy for problem identification with delivery system design will be discussed during this session (see Appendix D).

Sessions Five and Six cover Module 3, which focuses on the four-step quality improvement strategy with delivery system support, self-management support, and assessment of learners' level of knowledge on team-building factors through results from the THAQ survey. All participants will discuss the results of the THAQ. The team will review and summarize what was learned about the CCM toolkit at baseline and end of

program. Findings from the end of the 6-week educational program will be compared and areas that need reinforcement will be addressed.

Components of the educational sessions are discussed in further detail as follows.

Module 1: Educational series overview and objectives. The targeted goal is to improve the specified ESRD patients' adherence to treatment by enhancing staff knowledge on CCM with team-building factors. The purpose of the THAQ is to assess the strengths and weakness of the existing ESRD practices at the facility to identify barriers to successful functioning regarding survey measures. The THAQ (AHRQ, 2014) has 15 statements; all attendees rate their level of agreement using a scale of 1-10, with 1and 2 indicating Strongly Disagree, 5 and 6 indicating Not Certain, 9 and 10 indicating Strongly Agree. The statements are as follows: In your opinion:

1. The vision and mission of the team are clear and all members have agreed to work toward them.
2. Team members understand expectations and boundaries for team activities.
3. Specific and measurable goals have been defined.
4. The team purpose aligns with the large organization and with the needs and objectives of team members.
5. The team leader does a good job.
6. The contribution I can make to the team is clear to me and my fellow team members.

7. The knowledge, skills, and experience of our team members is appropriate for our mission.
8. Team members listen to and understand each other.
9. Information sharing is very good within the team.
10. The team delegates tasks and follows up very well.
11. Team members manage disagreements and conflicts constructively.
12. Plans are made, problems are solved, and decisions are analyzed effectively by the team.
13. Our team is making good progress toward our goals.
14. The team's measures are effective in tracking our progress.
15. Our team invests time in learning how to be a better team.

Module 2: The Team Health Audit Questionnaire will be used to uncover barriers to effective teamwork such as understaffing, undefined roles, lack of leadership, inefficient processes, burnout and low morale, and resistance to change and to more work being added to the existing workload (AHRQ, 2014). This training and development module will aim to address barriers by doing the following:

1. Define leadership roles.
2. Redefine team roles and responsibilities clearly.
3. Provide training on effective team practices and team competencies.
4. Provide leadership coaching for roles at the facility.
5. Implement guidelines for how team members treat one another.

6. Address Collaborative Manager Module, Delivery System Design, and Self- Management Support.

Module 3: The Collaborative Care Manager Module (AHRQ, 2014) displays and explains the relationships among all team members by defining the roles of staff members, clinical experts, and physicians as applicable to the unit team members. Roles are defined to apply the CCM elements for best practice. A team leader assignment will be addressed. The CCM as a conceptual framework is applied during a four-step quality improvement strategy by identifying the essential elements of the healthcare system and encouraging comprehensive, high quality chronic disease care.

The CCM consists of six elements: the community, the health system, self-management support, delivery system design, decision support, and clinical information systems. CCM as an innovative care model incorporates evidence-based change concepts under each of the elements to bring about productive interactions between an informed patient who takes a proactive approach to care and expert healthcare providers with resources (Wagner, 2004, 2010). The DNP project focused on how to improve the environment with CCM knowledge on self-management and delivery system support.

Delivery System Design (AHRQ, 2014; Wagner, 2004) addresses who is on the health care team and in what ways team members interact with patients and how care is delivered for best clinical, cost-effective, and functional outcomes. The focus typifying adherence issues among the ESRD population is as follows:

- Promote proactive delivery of clinical care and support of self-management within the system. Encourage active participation and membership on the patient

advocacy committee (PAC). The team should meet monthly to address and correct needs and concerns.

- Promote patient activation as a key component of the CCM. Patient activation affects delivery system design/decision support, goal setting, problem-solving/contextual counseling, and follow-up coordination.
- Encourage teamwork by distributing tasks among team members. There should be continuous quality improvement evaluation and continuing education for team members.
- Ensure continuous follow-up to achieve and sustain evidence-based practice by effective patient empowerment in quality health outcomes. Invite significant others and encourage them to participate.

Self-Management Support (AHRQ, 2014; Wagner, 2004) addresses how the healthcare provider can help patients live with their health conditions. The goal setting worksheet presented in Appendix D is used. Pertinent to the ESRD population is promoting self-management behaviors that may improve adherence issues as follows:

- Teach self-management through the use of tools and information to be shared in a group format. Health topics covered should enhance self-management.
- Examine inconsistencies in presenting for dialysis treatments and timely medication use.
- Ensure continuity in patient team meetings by empowering the use of effective self-management support strategies (the five As is the self-management support element of the chronic care model by Wagner, 2004) as follows:

  - Assess the knowledge, beliefs, and patients' behaviors to enable better understanding of their values.
  - Advise based on patient needs supported by scientific evidence, not provider biases.
  - Agree on goals that are essential to patients and provide achievable actions.
  - Assist by identifying barriers using a problem-solving approach.
  - Arrange a specific follow-up plan including use of community resources.
- Encourage patient-centered group dynamics and peer support to help with problem-solving for self-management, reinforced by team members (patients' support system and or healthcare team).
- Suggest support group weekly meetings based on identified problems.
- Motivate and empower patients to be proactive in their care management.

The four-step quality improvement strategy for performance education based on CCM elements for the identification of barriers that impact adherence consists of the following:

- Teach staff to assess and identify patient groups that have the tendency to miss treatments and have adherence issues. Apply elements of the CCM, such as decisional support, during assessment stages. Explain to staff the importance of involving patients in all decisions. Patients should be invited individually to team meetings for root-cause analysis, including the cause of the adherence issues and

patient preferences. CCM elements on delivery systems and community resources and policies are to be incorporated. Organizational support systems and information technology knowledge is crucial for evidence-based data collection. The implementation site has a full documentation system that is designed to support electronic medical records. This information technology system captures and uses critical information for clinical care. Use of this information can raise staff awareness of each patient's activation on the key components of the CCM: delivery system design/decision support, goal setting, problem-solving and contextual counseling, and follow-up coordination.

- Educate staff on how to collect data on high-risk groups and analyze results with team members. Self-management support systems of the CCM are individualized once the patients' preferences are identified and supportive counseling is provided. The purpose of collecting the identified risk groups is for problem-solving.
- Reinforce education on the importance of evaluating and analyzing collected data for best practice. Emphasize that all decisions should be supported by scientific evidence. The planned implementation is to be continuously analyzed and evaluated for best practice.
- Advise staff of the need to sustain decisions for best practice that are based on scientific research outcomes.

Moving forward with the CCM educational knowledge the team will assess needs and goals, create a proactive plan of care, monitor patients for adherence, follow up and

respond to change, support self-management goals, link to community resources, and align resources with changing patient and population needs. Staff knowledge of the CCM can be measured but should be reassessed periodically with the posttest. Best practice would be to review, summarize, and evaluate staff knowledge and competence regarding the CCM toolkit annually using the THAQ.

There should be a plan for building on the CCM knowledge and for training new employees to improve care for ESRD patients. Risk factors need to be identified, with motivated team support focused on patient empowerment to improve adherence. The project involves a face-to-face interactive teaching and learning approach to be instituted among all attendees. A sound measurable operational approach is proposed to identify barriers and target areas for quality performance improvement such as adherence rates/numbers, clinical outcomes, patient safety, and patient satisfaction.

The QAPI tool used by the facility to determine overall quality evaluates improved adherence among the ESRD patients. The facility's quality improvement agenda is to involve all caregivers and to commit to high quality performance that will bring about increased patients' satisfaction. The CCM educational project mission aligns with the facility's mission for improving clinical outcomes through collaborative teamwork. The program outline, the pretest, and the posttest are the deliverables from this project. The pretest and posttest will measure whether the education intervention enhanced staff knowledge on the CCM toolkit, and the QAPI instrument will measure whether its adaptation improved clinical outcomes.

Implications for Evidence-Based Practice

Policy

Current evidence shows that a growing number of chronic diseases have an impact on society and healthcare expenditures (Wagner, 2004). Current movements to implement the CCM to improve health care outcomes have been hopeful in several countries (Murray, Bissonnette, Kryworuochko, Gifford, & Calverley, 2013). A meaningful gap in healthcare policy development was addressed by Lingerfelt and Thornton (2011) and the Murray et al. (2013). In a study of self-management behaviors among ESRD patients, Lingerfelt and Thornton (2011) showed significant improvement on self-management and better clinical outcomes through structured education to increase knowledge on the patients' condition. Murray et al. (2013) focused on a shared decision-making approach for the dialysis patients who are faced with numerous decisions across the course of their disease. Shared decision-making (SDM) strategies and delivery systems, elements of the CCM, created a meaningful, patient-centered approach to managing ESRD patients. Shared decision-making involves patient care and the coordination and integration of service delivery with the hope of improving treatment adherence. An enhanced academic environment with CCM knowledge facilitates SDM, which should improve the healthcare practices.

The existing evidence shows increasing healthcare needs among the ESRD population who underutilize dialyzes treatments (Kammerer et al., 2007). There is limited literature pertaining to CCM use among the ESRD population. However, many studies confirmed the CCM's usefulness for various areas of specialty practice. Therefore,

creation of policies and guidelines such as the adaption of an enhanced CCM knowledge program at the clinical site leads to an improved healthcare environment (AHRQ, 2014). Healthcare policies for advocacy at the organizational level that encompasses all disciplines should make progress to support initiatives that ameliorate disease and improve ESRD patients' adherence issues. The DNP project addressed best strategies to combat specified adherence issues among the ESRD patients.

Practice

The focus of modifying the practice at the implementation site with the DNP project has both policy and practice implications. The project is designed to improve the culture of healthcare professional education and equip staff with enhanced knowledge of the CCM and has the potential to improve specified adherence issues and clinical outcomes. The quality of healthcare delivery based on evidence-based practice creates social and physical environments within the practice setting that will promote the best quality health outcomes (Zaccagnini & Waud White, 2011). The impact of the CCM on nursing practice with regard to patient health and safety has resulted in its adoption as a conceptual framework for practice in some healthcare institutions (Bissonette et al., 2013).

Research

The CCM toolkit has been validated in healthcare settings as a scientific tool to improve patient outcomes and to influence successful team functioning (AHRQ, 2014). These findings support the project feasibility and it identification as evidence for best clinical health outcomes and, therefore, the basis for future research. The CCM

educational initiative for staff forms the basis for institutional quality improvement. The CCM utility is used globally and has broad international recognition as an EBP with a focus on healthcare transformation. The CCM represents a paradigm shift from traditional healthcare practices to improved, innovative healthcare. The future project implementation at the practice site after an evaluation at 6 months should be to compare results with facilities that have not used the CCM toolkit for team-building. Future studies should include longitudinal studies on team-building using the CCM toolkit to determine if its adaption enhances team effort and the collaborative workforce that improves clinical outcomes.

Social Change

The implementation of the CCM has social implications in improved adherence when a multidisciplinary team (MDT) is committed to helping patients achieve healthy behaviors by means of effective self-management strategies (WHO, 2003). Social change can be actualized by coordinated action from health professionals, researchers, health planners, and policy-makers (WHO, 2003). Patients become empowered through effective communication within the healthcare system. The CCM implementation at the practice setting will modify the culture of practice, improve patient care, and create a framework that serves as an innovation to decrease ESRD adherence issues. Additionally, it can be translated into programs related to self-management of other chronic illnesses. The use of an evidence-based professional practice model such as the CCM among the ERSD population has the potential to enhance the professional practice of nursing.

Strengths, Limitations, and Recommendations

The evidence supports the use of the CCM toolkit for improvement of health care outcomes (AHRQ, 2014). Therefore, a strength of the project is the wide use and international acceptance of the CCM model and the CCM toolkit. A particular strength of the toolkit is the Team Health Audit Questionnaire. Its use as a pretest and posttest is designed to evaluate the team knowledge level and enhance team functioning in redesigning the healthcare environment to improve adherence issues.

A major potential limitation is that key stakeholders in the organization are identified as strong barriers to the adoption of the CCM. The ability to involve and engage all key stakeholders for successful CCM implementation will not only benefit the practice through healthcare cost burden reduction, but also through patients' increased quality of life and improved treatment adherence. A number of studies have shown that key stakeholder disengagement during the CCM implementation led to program failure. Findings regarding the results of health providers' lack of interest and organizational key stakeholders' resistance to change were cited by Holm and Severinsson (2012).

Holm and Severinsson (2012) reviewed 13 articles to identify barriers and facilitators of success when implementing the CCM for the management of depression in primary care. Barriers were found to derive from a lack of organizational, administrative, and professional ability to change and implement the components of CCM. The study also cited a lack of clarity in the leadership roles by the clinical care manager in promoting patients' self-management abilities; that may serve as a limitation to CCM adoption and a potential limitation to my DNP project. Facilitators of success were found

to emerge from leadership support, vision, and redesigning the delivery system. Another limitation worth mentioning is that program success has not yet been established. Determination of the project strengths and limitations is inconclusive until the CCM staff educational series is fully completed and evaluated after 6 months of implementation.

The best recommendation for a complex environment such as the ESRD care setting is to redesign the healthcare environment with staff knowledge of the CCM to improve clinical outcomes as supported by the science (AHRQ, 2014; Fortin et al., 2013; Wagner, 2010). The CCM and the CCM toolkit hold the keys to success for ESRD adherence improvement.

Analysis of Self

The DNP role definition affirms the acquisition of special leadership skills in formulating clinical problems and making concrete judgments for best practices (AACN, 2008). *As scholar*, the development and design of the DNP project was a challenging experience. I have understood the need to address critical issues that impact clinical expertise and the importance of education that improves patients outcomes (AACN, 2006; Zaccagnini & Waud White, 2011). Practice base-knowledge gap identification led to the development of the DNP project. This initiative is intended to be communicated for broad knowledge dissemination in the healthcare community (AACN, 2006). Many strides for the mission of spreading increased knowledge of the DNP project for the improvement of patient outcomes were accomplished during the DNP assignments. I engaged in leadership roles in accordance with advanced nursing practice responsibilities by being involved actively in practice setting redesign to promote quality

of health and reduce adherence issues for ESRD patients (AACN, 2006). These achievements link to the DNP Essentials I, II, III, and VI (AACN, 2006).

As practitioner the DNP project redefined my confidence in communicating effectively by bringing my point across to those who can influence the project and drive its implementation. My roles have been redefined in leadership skills and clinical judgment within the complex healthcare system of the ESRD domain. With DNP status, one must thoroughly understand the clinical as well as ethical aspects of healthcare (Zaccagnini & Waud White, 2011). These competencies of the advanced practice nurse are tied to DNP Essential VIII (AACN, 2006).

As project developer and manager I have engaged in many activities, striving to promote quality improvement strategies and sustain best health care practices. Since the planning and development of the DNP CCM staff education project, I have been delighted to share my ideas by communicating ways to address clinical problems and use academic knowledge to promote best practices. When the clinical environment is aligned with academic knowledge, specifically with CCM knowledge, there is the hope that the pressing issue of adherence in healthcare can be addressed successfully (Wagner, 2005). I am hopeful that the impact of this DNP project on the ESRD population will be positive. The project was designed to focus on educational sessions regarding the CCM toolkit, the design of the care delivery system, and self-management support. These foci are evidence-based and have the potential to remove barriers, improve and redefine leadership roles, and increase collaboration with the ultimate goal of improving patient clinical outcomes.

Summary

After completion of the drafted document, all materials were compiled for evaluation on one master Word document file that was shared for discussion June 30, 2015 through e-mail to the regional educational director. A draft of the document file has been saved on a flash drive and given to the head of the educational department for the practice site; the final version will be hand delivered when it is ready at the completion of the DNP coursework. The CCM functional and clinical outcomes expected are a prepared, proactive practice team that, through productive interaction, leads to well-informed and motivated patients (Wagner, 2005). The management of adherence issues for best clinical outcomes requires a team effort and collaborative workforce. A future recommendation for the practice setting is to recognize and incorporate the CCM framework as a professional guideline for practice due to its potential to improve clinical outcomes and decrease treatment adherence issues. It is hoped that the educational sessions from the CCM toolkit that served as the basis for this DNP project will stimulate groundbreaking practice to address adherence issues among the ESRD population.

Section 5: Scholarly Product

The purpose of this project was to develop and plan CCM education for an interdisciplinary team to address adherence issues among patients with ESRD. Objectives were to create documents needed for the practice site to implement and evaluate the educational program, which focuses on barriers that impact adherence to treatment regimens and self-management support for patients.

The reviewed scientific evidence supported the use of the CCM in redesigning the healthcare environment to bring about productive healthcare practices (Wagner, 2010; Fortin et al., 2013). Staff education on the CCM with a focus on how care is delivered can improve staff interactions with patients. In turn, improved staff interactions can reduce healthcare fragmentation and costs, improve staff collaboration, and lead to improved clinical outcomes among patients with ESRD (AHRQ, 2014).

Background, Nature of the Project

The project consisted of a review of several supporting evidence-based studies surrounding ESRD adherence issues. Chronic dialysis is instituted by nephrologists and the work team when the patient is classified with ESRD Stage 5, a glomerular filtration rate of less than 15/ml/min (NKF, n.d; USRDS, 2013). Adherence issues occur when the prescribed dialysis treatments and medication use for ESRD patients are not fully utilized, leading to disease exacerbations and an increased burden on healthcare resources (Kammerer et al., 2007; NKF, n.d.). Adherence issues are observed in the particular case of dialysis therapy as missing three or more treatments out of 12 to 13 within a month, a documented factor in patients' health becoming compromised.

According to the United States Renal Data System [USRD], 2013), newly reported cases of ESRD are as high as 318.5 per million population. The prevalence of chronic kidney disease is predicted to increase by 2030 with estimated new onset of ESRD exceeding 450,000 cases (Counts, 2008; USRDS, 2013). Even though ESRD is a complex condition, it is modifiable condition. The project consisted of a study of best practices to reduce treatment adherence issues among ESRD patients.

Adherence issues among ESRD patients are influenced by several modifiable factors that include psychosocial issues stemming from healthcare provider behaviors (Kammerer et al., 2007). The problem statement associated with ESRD adherence issues is discussed in various studies. The National Kidney Foundation (n.d.) reported on adherence issues cited by patients as consisting of discomfort, complications during treatment, and attempts to exercise autonomy and maintain a form of independence. Fluid and diet restrictions, as well as adherence to multiple prescribed medications, must be reached.

Lingerfelt and Thornton (2011) discussed how challenges among vulnerable populations may be modified by promoting self-management behaviors that impact adherence. The complexity of ESRD requires the involvement of healthcare providers, the patient, and the healthcare system to avoid increasing health consequences that lead to greater social and financial burdens (Kammerer et al., 2011). The adoption of the CCM knowledge using the CCM toolkit for staff education is supported by scientific evidence to improve health outcomes. Lingerfelt and Thornton demonstrated the importance of promoting self-management behaviors among the ESRD patients to improve clinical

health outcomes. Kammerer et al. (2011) showed how healthcare providers can build strong supportive relationships with patients in the identification of barriers that impact adherence and impede success.

The CCM toolkit is an evidence-based educational guide that addresses key aspects of developing and building a multidisciplinary team to deliver and achieve best practices for patient care (AHRQ, 2014; WHO, 2003). The best approach is observed when the patient, the family, the community, and all healthcare providers work together for effective coordination to achieve best outcomes (AHRQ, 2014; WHO, 2003). The goal of this DNP project initiative was to serve as a roadmap for practice improvement for ESRD patients with adherence issues.

Project Design/Development

Upon receiving IRB approval from the university, serial communications took place among the key stakeholders. All the key stakeholders involved agreed collaboratively that I should continue developing the CCM staff education project for the improvement of specified ESRD patients' adherence issues. I created the initiative aiming for successful team building to improve ESRD patient outcomes and reduce unnecessary cost burdens at the practice site. In discussing the DNP project plan and the CCM staff education and implementation, all healthcare providers trained at the facility to perform work in a professional and organized manner, were actively engaged with the goal of improving patients' adherence to vital treatments. Directed interventions were designed

to promote support for patients' self-management by providing a goal setting worksheet and identifying barriers that impact adherence.

A face-to-face interactive teaching and learning approach was designed to be instituted for all point-of-care interdisciplinary team members at the facility. The CCM toolkit instrument has been validated in healthcare settings and identified by evidence-based studies to influence successful team functioning (AHRQ, 2014). Included in this project are a pretest and posttest survey. The completed documents were compiled for evaluation on one master Word document file that was shared for discussion through e-mail to the regional educational director. A draft of the document file has been saved on a flash drive and given to the head of the education department for the practice site; the final version will be hand delivered when it is ready at the completion of the DNP coursework. A sound, measurable operational approach was designed to overcome barriers, achieve costs savings, and achieve greater patient satisfaction by targeting quality performance and improving adherence issues, patient clinical outcomes, patient safety, and enhanced self-management behaviors.

The development and presentation of the CCM staff education plan focused on barriers that impact adherence to therapy and self-management support among specified ESRD patients. The site for this project uses Quality Assessment Performance Improvement (QAPI) as its benchmark for performance scores; the facility compares results with other dialysis facilities to establish goals and initiate plans for improvement as needed. The incorporation of the DNP project, which focuses on CCM staff education,

has been confirmed to add quality to patient care and improve adherence. I supplied the details of supporting scientific evidence on the CCM framework and a scholarly project poster that showed a cultural reorientation based on new processes of teamwork. The planned program was developed as follows: Appendix A: The CCM Framework, Appendix B: Educational Program, Appendix C: Team Health Audit Questionnaire, and Appendix D: Goal Setting Patient Worksheet.

The step-by-step project outline, the poster, and the PowerPoint slides were designed based on the CCM toolkit and were thoroughly reviewed by the facility's educational expert. Three educational sections, a total of 12 sessions, will be spread over 6 weeks and are based on three modules for learning activities as follows:

Module One consists of the introduction to the 6-week course, a general overview of the course, a discussion of objectives, baseline results of the Team Health Audit Questionnaire (AHRQ, 2014), and learning activities focused on successful teambuilding.

Module Two covers staff education selections from the CCM toolkit. Module objectives are discussed in detail with ongoing learning activities, team building, building on strengths, and harnessing the culture of the learning environment with CCM knowledge. Module Two addresses the core subjects of delivery system design with four-step quality improvement strategy, self-management support, collaborative care manager role responsibilities. A team leader positioned the regional educational director as the collaborative manager with the qualifications and responsibilities to oversee the success of the project (AHRQ, 2014).

Module Three focuses on reinforcing a four-step quality improvement strategy that involves assessment, collection of data, evaluation of data, and sustaining evidence-based practice with Delivery System Support and Self-Management Support. The approach assesses learners' level of knowledge through interactive feedback and Team Health Audit results. Activities include team plans to distribute the self-management support worksheet for patient record keeping that should help identify and target issues of adherence (AHRQ, 2014). Activities will include reviewing program objectives and findings from the evaluation of team health audit results, which will be compared at baseline and at the end of the 6-week program.

A draft of the created course content has been delivered to the educational experts as one master Word file document via a flash drive. I hope that the final content, when delivered to the educational experts, will be implemented after a thorough review and evaluated to achieve project objectives.

Interpretation of Findings

The limitations of this DNP project have not been determined as the program has not yet been implemented; however, there is concern regarding some stakeholders' unwillingness to adopt the CCM. Research has shown limitations of CCM adoption stemming from unmotivated key stakeholders (Parchman et al., 2008). Determination of the program strengths and limitations will be inconclusive until the project is fully completed and evaluated after 6 months of implementation. It will be best to follow the plan for measuring outcomes that is included in the project.

With regard to the CCM staff educational plan, recommendations for future completed CCM adaptation for the facility may enhance the practice image and improve fiscal prospects of the clinical site. It is recommended that the best gauge of progress in the improvement of ESRD adherence issues is by benchmarking (i.e., comparing QAPI results with other dialysis facilities that have not implemented CCM staff education). The recommendations for future improvements should focus on tracking patients' consistencies on dialysis treatment adherence and adherence issues through the integrated use of the CCM and QAPI measurements.

Implications for Evidence-Based Practice

For this DNP project and EBP initiative, findings and interpretations are aimed at alleviating specified adherence problems among the ESRD patients. Murray et al. (2013) reported that shared decision-making (SDM) strategies and delivery systems, elements of the CCM, created a meaningful patient-centered approach to managing ESRD patients. Shared decision-making involves patient care and the coordination and integration of service delivery with the hope of improving treatment adherence. Murray et al.'s study on shared decision-making strategies and delivery systems improved the coordination and integration of service delivery.

The focus is to build an ideal team comprised of mixed roles and responsibilities, needed to deliver the best quality care using the CCM framework to improve adherence among ESRD patients. Many studies on the adoption of the CCM discuss the importance of teamwork based on collaboration. In addition, CCM adoption serves as both a change

process and an evidence-based theoretical framework to guide the project plan. The intention of the project was to foster sustained practice change and leadership activities based on heightened communication skills among patients, family, and the facility staff to coalesce effectively with outside resources to improve best health outcomes.

Effective communication and successful teambuilding can lead to a transformed healthcare discipline where system changes are sustained and patient safety and quality healthcare delivery are improved (AACN, DNP Essentials, 2006). Quality healthcare delivery through CCM staff education and knowledge enhancement is the basis for practice change, modifying the social and physical environments of practice and promoting best quality health outcomes (Zaccagnini & Waud White, 2011).

Evaluation

Following implementation of the DNP education program, QAPI results should be used to guide the evaluation process. Further, the Team Health Audit Questionnaire report should be used along with anonymous monthly quality improvement feedback questionnaires for all educational initiative attendees. The questionnaire will ask about experiences during the initiative and use a satisfaction scale based on the THAQ survey at baseline and 6 weeks after staff training. All data collected should be appraised, synthesized, and summarized at the end of the 6-month evaluation period.

CCM has the potential to improve adherence and clinical outcomes. Also, the use of an evidence-based professional practice model such as the CCM staff education initiative has the potential to enhance the professional practice of nursing. CCM implementation at the practice site has the potential to change the culture of practice,

improve patient care delivery, and promote patients' self-management behaviors. It is hoped that this DNP project will serve as an adjunct to existing practice guidelines, serving as an innovative standard of practice to improve ESRD adherence.

Summary and Conclusions

Many scholarly works recommend that the health system culture needs modification, coupled with behavioral changes by healthcare providers, to achieve best practices and high quality patient care. I, the project planner, initially completed the needs assessment at the practice facility, which determined there is a need for staff education regarding the CCM framework to improve treatment adherence among ESRD patients. ESRD patients with adherence problems pose a great healthcare challenge that requires team-based efforts in care management to accomplish goals and objectives. In healthcare management, when patients do not utilize the prescribed treatments, it is unrealistic to expect them to achieve the maximum health benefit. Research data provided some assurance that the CCM implementation can change and may improve adherence and quality of life in patients with ESRD.

The generated team health audit survey report serves as project strength. With monthly QAPI data, findings from the report can be used to measure clinical health outcomes. QAPI results should be the guiding force during the evaluation process. I postulate that, with the QAPI tool integration, enhanced CCM knowledge among staff, and the use of evidence-based tools, adherence issues among the specified ESRD patients will improve. Studies of the CCM toolkit demonstrated its feasibility, measurability, transferability, adaptability, and cost-effectiveness (Fortin et al., 2013). Studies support

the CCM toolkit for improving clinical data, reducing practice costs, and improving patient adherence to treatment. These expected outcomes serve as project strengths. In conclusion, recommendations for the practice site aim to improve CCM knowledge and to promote the CCM framework as a professional guideline for practice due to its potential to improve clinical outcomes and address adherence issues.

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Appendix A: The CCM framework developed for the ESRD Population

CCM framework (Wagner, 2004) copyright by Emilia Addo with modification (2014).

Appendix B: Educational Program

Learning objectives: After the 6 weeks educational session all staff attendees will verbalize clear understanding and provide feedback on the CCM educational program. Establishment of appropriate team health based on mutual trust, respect, openness to maintain a collegial support in sharing and leaning to achieve the project goal.

Educational project goal: To improve the specified ESRD patients' adherence by enhancing staff knowledge on CCM with team-building factors.

Mission: To harness the practice site with academic culture of the CCM knowledge focusing on delivery system design and self-management support.

Planned Staff Educational Session:

Session One and Two	Plan for staff education on CCM Implementation for the ESRD patients
Week 1	1. Overview 2. Objective 3. Adherence issues improvement for the ESRD patients 4. CCM toolkit staff education 5. Team Health Audit Questionnaire survey; pre test 6. Review CCM toolkit and Team Health Audit Questionnaire
Week 2	1. Review and discuss CCM toolkit education 2. Team Health Audit questionnaire; pretest review 3. Identification of barriers that may impact team building 4. Team building factors and evaluation
Session Three and Four	Staff education on CCM plan for the facility to improve adherence
Week 3	1. Objectives 2. Team building Factors and Building strengths 3. Collaborative Care Manager Module 4. Roles and responsibilities

Week 4	1. Four-step quality improvement strategy 2. Assess, Collect, Evaluate, and Sustain 3. Focus on adherence issues improvement 4. Harness the culture of learning environment with CCM knowledge. 5. Delivery System Design and Self-Management Support
Session Five and Six	Staff education on CCM plan for the facility to improve adherence
Week 5	1. Moving forward on the educational knowledge on CCM 2. Review CCM toolkit staff knowledge and competence 3. Posttest of Team Health Audit Questionnaire survey
Week 6	1. Summary 2. Evaluation 3. Provide an educational resource website and References 4. CCM toolkit educational website for staff; http://www.ahrq.gov/professionals/education/curriculum-tools/chroniccaremodel/chronic2a.html

Appendix C: Team Health Audit Questionnaire (AHRQ, 2014)

1. **Toolkit for Implementing the Chronic Care Model in an Academic Environment**

   a. To assess its strengths and weaknesses, facility teams can use the Team Health Audit to identify barriers to successful team functioning.

2. **Team Name:** _____
3. **Audit Date:** _____
4. **Directions:** Rate your level of agreement to the statements below, using a scale of 1-10. Write your rating on the blank line for each statement.

1	2	3	4	5	6	7	8	9	10
Strongly Disagree		Disagree		Not Certain		Agree		Strongly Agree	

5. In your opinion:

_____ a. The vision and mission of the team are clear and all members have agreed to work toward them.
_____ b. Team members understand expectations and boundaries for team activities.
_____ c. Specific and measurable goals have been defined.
_____ d. The team purpose aligns with the large organization and with the needs and objectives of team members.
_____ e. The team leader does a good job.
_____ f. The contribution I can make to the team is clear to me and my fellow team members.
_____ g. The knowledge, skills, and experience of our team members is appropriate for our mission.
_____ h. Team members listen to and understand each other.
_____ i. Information sharing is very good within the team.
_____ j. The team delegates tasks and follows up very well.
_____ k. Team members manage disagreements and conflicts constructively.
_____ l. Plans are made, problems are solved, and decisions are analyzed effectively by the team.
_____ m. Our team is making good progress toward our goals.
_____ n. The team's measures are effective in tracking our progress.
_____ o. Our team invests time in learning how to be a better team.

(http://www.ahrq.gov/professionals/education/curriculum-tools/chroniccaremodel/chronic2a.html)

(http://www.ahrq.gov/professionals/education/curriculum-tools/chroniccaremodel/chronic2a.html)

Appendix D: Goal Setting Patient Worksheet

Worksheet to assist patients in setting goals for the improvement of adherence issues among the specified End Stage Renal Disease patients.

Setting a Self-Management Goal

What is self-management?

Self-management is what you do every day.

Everyone does self-management, but the best self-management leads to better health.

What is Adequate dialysis?

Adequate Dialysis means:

- Your Urea Kinetic Modeling achieved spKt/V more than 1.2 or Urea reduction ratio of more than 65%
- Your systolic blood pressure (top number) is less than 130.
- Your diastolic blood pressure (bottom number) is less than 70.
- Your Hemoglobin is between 10-12gm/dl and Hematocrit 30-36%.
- **It is crucial to attend all scheduled dialysis sessions 12- 13 times within a month**
- **If your numbers is not in good control, something needs to change.**

Some changes that you can do to achieve good health include:

- Choosing healthier types and amounts of food specified by your renal dietitian.
- Including walking or other exercise in your normal daily routine.
- Monitor and record how you feel more often and report to your dialysis team/NP/Nephrologist.
- Changing your dialysis times that may require extra time or treatments and medications by your dialysis healthcare provider only
- Stopping smoking.
- Managing stress and depression.
- Attending all dialysis treatments as scheduled.

You must communicate to your dialysis healthcare provider/work team for any changes that impact your health that may need modification.

To start, answer this question***" What is the one thing you would like to do this week to improve your health?"***Write your answer below:

_____
_____

_____
_____

_____
_____

To reach your goal, you need to have a plan. Your plan needs to be specific.

Now, *turn the page* and write down your answers to these questions. Your doctor or nurse will discuss your goal and help you plan for success.

What will you do? _____ ____	**When will you do it?** _____ _____
How will you do it? _____ ____	**Where will you do it?** _____ _____
How often will you do it? _____ ____	**The things that could make it hard to achieve my goal are:** _____ _____
My plan for overcoming these difficulties is: _____ ____	**People who can help me achieve my goal:** _____ _____

We want to *support you and help you* make your healthy change. The best way for us to help is to hear from you about how things are going.	Please *call in one week* to tell us about your progress or tell us about problems that are making progress difficult. Call xxx-xxx-xxxx and leave a voice message for your **Dialysis Team Nurse or the NP/Nephrologist.**
Change is difficult	You may not succeed at first. You ***can*** always start over. Every day is a new chance to do something good for yourself.

Modification made by Emilia Addo, May 2015

Page last reviewed October 2014

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http://www.ahrq.gov/professionals/education/curriculum-tools/chroniccaremodel/chronic2a11.html

Appendix E: Power Point presentation of CCM Staff Education

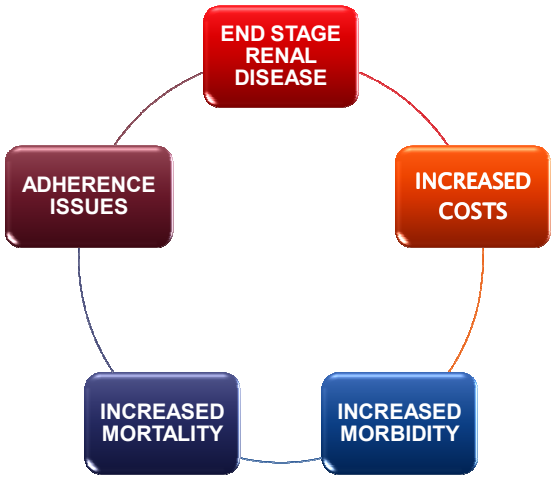
Introduction and Background

- Adherence issues improvement for the ESRD
- The educational sessions based on the CCM toolkit.
- Team Health Audit Questionnaire (THAQ) survey pretest
- Review CCM toolkit and pretest THAQ and postest

Question

Will a CCM Staff educational program enhance Team-building among the facility's staff and lead to the identification and removal of barriers that impact adherence issues and promote self-management behaviors in specified ESRD patients?

Problem Overview



Purpose Statement/Objectives

- Purpose of the Educational program/project
- Objective, Goal and Mission of program

Discussion

- Discussed facility's performance scores deficiencies
- The creation and development of CCM staff Education
- Evidence –based significance

CCM Staff Educational Approach

Learning objectives:

- Program goal is to improve the specified ESRD patients' adherence by enhancing staff knowledge on CCM with team-building factors and self-management support.
- Mission is to harness the practice site with academic culture of the CCM knowledge
- Educational Program Objectives are: After the 6 weeks educational session all staff attendees will verbalize clear understanding and provide feedback on the CCM educational program

Outline of the CCM Staff Educational program

- Module1. Overview and objective of CCM staff education; pre and post Team Health Audit Questionnaire
- Module 2. Team-Building Factors, CCM knowledge on Delivery System Design and Self- Management Support
- Module 3. Collaborative Care Manager (AHRQ
  - Four Quality improvement strategies
  - THAQ posttest

CCM Educational and Quality Assessment Approach

- A four-step quality improvement strategy for performance incorporated with CCM elements;
  - Assess
  - Collect
  - Evaluate
  - Sustain

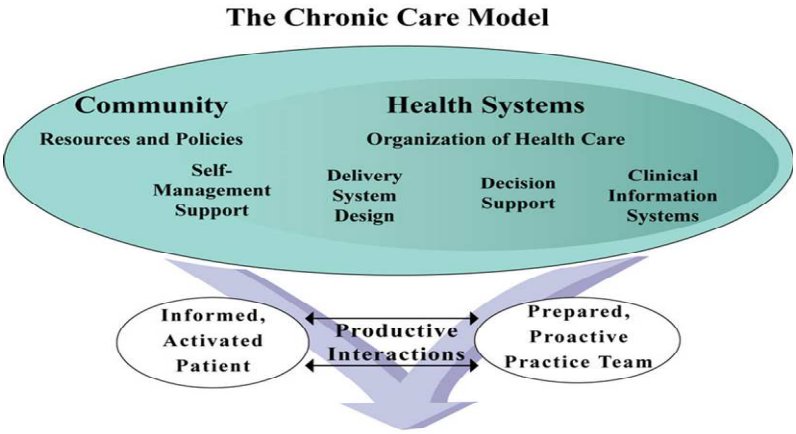
Educational Modules cont…

- Collaborative Care Manager Module
- Evaluation

Educational Modules cont…

- Feedback assessment on the staff enhanced knowledge on CCM using THAQ
- Summary
- Evaluation
- Provide an educational resource website
  - CCM toolkit educational website for staff;
  - http://www.ahrq.gov/professionals/education/cu

CHRONIC CARE MODEL STAFF EDUCATIONAL ACTIVITIES



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Appendix F: Poster of CCM Staff Education

CHRONIC CARE MODEL EDUCATION FOR THE STAFF TO IMPROVE ADHERENCE ISSUES FOR THE SPECIFIED ESRD PATIENTS

BY EMILIA ADDO DNP Student at Walden University

ABSTRACT

The project plan of CCM implementation actively engages all healthcare providers at the facility with high quality professionally trained and organizationally directed interventions, engaging patients in improved adherence to treatment.

Introduction

Adherence issues have many faces that may include psychosocial issues, patients seeking autonomy, uncoordinated, fragmented care management within the health systems that hosts those patients.
ESRD population adherence improvement has a great financial impact on society and healthcare systems. When the facility environment is harnessed with academic culture of the CCM knowledge, there is hope that the adherence issues of the specified ESRD patients will improve. The educational sessions based on the CCM toolkit is evidence-based that removes, barriers, improves and defines leadership roles and increase collaboration

Purpose Statement

The purpose of this project is to develop an educational program for staff regarding the Chronic Care Model. The aim of this program is to improve adherence among specified ESRD patients and their clinical outcomes. The objective of this project is to develop the documents needed for the staff education in CCM, focusing on barriers to adherence in ESRD patients.

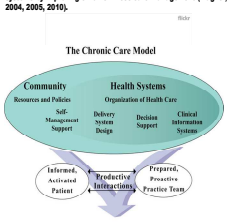
❑ Background

- Systems factors that impact patient ESRD adherence issues is studied to be associated with limited pre-dialysis education that lead to poor illness perception (AHRQ,2014).
- The disease burden on ESRD patients faced with lifetime commitment to adhere to rigid renal replacement therapy (RRT) is studied to be the underlying factor.
- Kammerer,et al. (2007) recognized adherence issues among the End Stage Renal Disease (ESRD) patients as a major problem that need restructuring the healthcare system in order to improve adherence (2007).
- Studies cited in Kammerer et al. works had mentioned that, shortening three or more dialysis treatments in a month is associated with 20% mortality rate (2007)

The burning clinical question;

Will a CCM Staff educational program enhance Team-building work among the facility's staff and lead to the identification and removal of barriers that impact adherence issues and promote self-management behaviors in specified ESRD patients?

To improve this myriad of health problems surrounding the dialysis patients, the ultimate goal is to plan and to orchestrate healthcare management utilizing in a more comprehensive care coordination that will center on the patients' needs using the CCM. Current evidence supports the CCM as an interdisciplinary team approach may transform the culture of the healthcare systems by improving chronic illness care management (Wagner, 2004, 2005, 2010).



Evidence- based significance of the project

❑ Studies including Bissonnette et al. (2013) research on post kidney transplant care managements and Parchman et al. (2008), applied collaborative practice using elements of the CCM .

❑ Murray et al. (2013) scientific studies used decisional support processes, spending a reasonable time interacting with ESRD patients, and appropriate follow-up care reveals valuable decisional support processes.

CCM EDUCATIONAL APPROACH

Adherence issues may be corrected by workflow dynamics that change the old ways of practicing to a change of culture that improves patient outcomes. There should be continuous strategic assessment; goal-oriented problem-solving approach and follow up management from all team working in concert with each other.

Studies by Lingerfelt and Thornton (2011) and Wagner, et al.'s (2005) reports, challenges of non-adherence are minimized when patient self-management support interventions are implemented within a structured environment.

The project include four-step quality improvement approach:

1. Assess by identifying all risks groups that have the tendency to miss treatments and have adherence issues. Apply elements of the CCM, such as Self-Management support work sheet for problem identification, during assessment stages. Explain to staff the importance of involving patients in all decisions.
2. Collect data on the high-risk groups and analyze results with team members.
3. Evaluating and analyzing collected data for best practice. Emphasize that all decisions should be supported by scientific evidence.
4. sustain decisions for best practice that are based on scientific research. Resources and training materials will be based on formulated three educational sessions spread over 6 weeks.

Session 1.Overview on Team Health Audit Questionnaire (THAQ) pretest and review of educational program

Session 2. Team-Building Factors, based on; a). holding regular patient-care team meetings where team members work, b). empowering team with shared responsibility c). building trust putting the chronic care model into practice

Session 3. Collaborative Care Manager (AHRQ, 2014).

Posttest THAQ

Feedback, review and evaluation at end of program

Limitations

A significant Limitations are lack of resource, workforce coordination and unmotivated internal and external key stakeholders (Parchman et al., 2008).

Evaluation Plan

- Results from the Team Health Audit Questionnaire will be evaluated to determine enhanced staff knowledge resulting from the CCM education. The aim is to enhance team-building workforce that has the potential to improve clinical outcomes.
- The program objective is to identify challenges and remove barriers that impact adherence issues.
- A Quality Assessment Performance Improvement (QAPI) tool will be used to assess and evaluate improvement in patient adherence.
- The processes of the plan evaluation will use anonymous monthly quality improvement feedback questionnaires for team members.

Conclusion

- When the facility environment is harness with academic culture of the CCM knowledge, there is hope that the adherence issues of the specified ESRD patients will improve.
- The educational sessions based on the CCM toolkit is evidence-based that removes, barriers, improves and defines leadership roles and increase collaboration.
- CCM comes with full integration; competency requirement for all healthcare professionals to achieve quality improvement methods, safety, teamwork through collaborative functioning, patient-centeredness, evidence-based and clinical informatics systems.

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