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Transitional Care for the End Stage Renal Disease Patient

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This is to certify that the doctoral study by

Elaine Vitto

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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Walden University
2022

Abstract

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MSN-Informatics, Walden University, 2015

BSN, Manila Doctors College, 1996

Project Submitted in Partial Fulfillment

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February 2023

Abstract

The prevalence rates for end stage renal disease (ESRD) have continued to rise by approximately 20,000 cases per year, and the number of patients with kidney failure requiring dialysis in the United States had reached 554,038 at the end of 2018. Transition of care for patients between acute care facilities and other care facilities such as dialysis centers remains challenging for providers. Lack of clear communication between providers, poor patient understanding of post-hospital self-care, and gaps in healthcare scheduling contribute to a high rate of adverse events. This facility did not have a detailed clinical guideline for ESRD communication between the inpatient and outpatient dialysis centers. The purpose of this study was to use an inter-professional team to develop a guideline specific to the transition of dialysis patients. The practice question was: Was an interprofessional team able to develop a new clinical practice guideline for the transition of ESRD patients? As the new guideline was developed, the expert committee reviewed the drafts using the consensus model approach with virtual conferencing. The final draft was reviewed by the committee using the AGREE II instrument to assess the validity and applicability of the proposed recommendations into clinical practice. There was 100% agreement on the quality of the guideline to recommend for practice use. However, the score on individual intent to use was lower, indicating more attention is needed to translating education to practice change. Inclusion in the electronic health record will help institutionalize this change. The project may improve communication among care providers, improve care for dialysis patients, and prevent adverse events.

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Section 1: Introduction

Introduction

The prevalence rates for end stage renal disease (ESRD) have continued to rise by about 20,000 cases per year, and the incidence of kidney failure requiring dialysis in the US had reached 746, 557 in 2017 (USRDS, 2019). This number is expected to rise as the two leading medical conditions that contribute to ESRD, diabetes and hypertension continue to rise. Hospitalization is common among ESRD patients. Inpatient treatment constitutes 40% of Medicare expenditures for dialysis patients alone (CMS, 2014). ESRD beneficiaries make up less than 1% of Medicare population but the overall paid claims cost to Medicare was estimated over 32.8 billion (CMS, 2017). The overall cost for ESRD patients totaled $35 billion, accounting for 7.2% of the overall Medicare-paid claims (USRDS, 2019).

Transition of care for patients between acute care facilities and other care facilities such as dialysis centers remain challenging for providers. Lack of clear communication between providers, poor patient understanding of post-hospital self-care, and gaps in healthcare scheduling contribute to a high rate of avoidable readmissions (Finlayson et al., 2018). Poor communication between the hospital and dialysis provider can contribute to adverse events (Reilly et al., 2013). There is a need for interventions and strategies to ensure coordination and continuity of care. Creating a standardized communication process between inpatient and outpatient hemodialysis units with standardized specific content of discharge summary can facilitate improvement in hand-off communication (Reilly et al., 2013). Enhanced care coordination can potentially

improve patient outcomes and reduce overall costs in healthcare system (Mathew et al., 2015)

This facility did not have a detailed clinical guideline for ESRD communication between the inpatient and outpatient dialysis centers. The purpose of this study was to utilize an inter-professional team to develop guideline specific to the transition of dialysis patients. The positive social change may occur by improving communication among care providers and enhancing the quality of care for dialysis patients.

Problem Statement

Poor communication and inadequate care coordination between the hospital and outpatient dialysis clinics leave patients at risk for adverse events (Joint Commission International, 2019). Lack of a coordinated effort between the hospital and outpatient dialysis facility upon discharge is a significant risk factor for hospitalization (Mathew et al., 2015).

The gap in nursing clinical practice is that no clinical guidelines currently existed for the coordination of discharge care of ERSD patients from the acute care hospital to the outpatient dialysis center. Development of an effective transition process and care coordination is important for the continuity of care and safety for patients. A high-quality discharge summary specific to ESRD population promotes patient safety during transitions of care. Hemodialysis discharge information should include current vascular access, anemia management, blood transfusions, target weight, medication changes,

nutritional status, immunizations, recent laboratory results and dialysis treatment sheets in the Transfer of Care Summary (ESRD Network, 2017).

A specialized integrated care program is the key strategy for achieving safe and effective transition of care in patients with chronic disease. A clear guide has the potential to provide significant information for the receiving team and helps ensure the coordination and continuity of care. Nurses play a vital part in coordinating successful care transitions with other health team members guided by post-discharge hemodialysis components. Nurses identify the patient's goals, develops plan of care, and initiates communication with the inter-disciplinary team to facilitate continuity of care and enable safe return of ESRD patients to outpatient hemodialysis clinics (Hakim et al., 2014).

Purpose Statement

The gap in nursing clinical practice is that no clinical guidelines currently existed for the coordination of discharge care of ERSD patients from the acute care hospital to the outpatient dialysis center. The purpose of this quality improvement study was to develop a clinical practice guideline for hospitals and dialysis centers to use in the process of transitioning ESRD patients on dialysis among facilities and services. The practice question was: Will an interprofessional team produce new guideline using consensus model to improve transitional care among ESRD patients? It is hoped that the use of these new practice guideline will prevent adverse events associated with dialysis treatment. Standardized components of discharge summary combined with dialysis specific information could improve patient hand-off and clinical outcomes. This

transitional care intervention bridges the gap after discharge thus preventing clinical adverse events and improving the quality of care (Rennke et al., 2013).

Nature of Doctoral Project

The purpose of this study was to develop a guideline using a consensus model among an inter-professional team following the Walden Manual for Clinical Practice Guidelines. Best practice guidelines are systematically developed statements to assist clinicians in decision making in clinical setting (AAFP, 2020). Best practice guidelines provide clinicians and other members of the inter-professional team with recommendations based on the best available evidence for patients undergoing a care transition.

A literature review was conducted on dialysis-specific components for discharge plan of care to understand the current transitional care coordination between acute care setting and dialysis facilities. The literature review also explored best practice guidelines and evidenced-based literature on transition of care, safe patient hand-offs, and reducing human error using evidence from Medline, CINAHL, and Cochrane databases. Search words included combinations of the following terms: research, continuity of patient care, patient transfer, discharge planning and transitional care, and human factor analysis and medical error. The background literature review also investigated evidence from the Medical Advisory Council (MAC) of the Forum of ESRD Network website for resources that were created for the Conditions of Coverage. The search period was from 2012-2021 for peer-reviewed, full-text, English only articles.

The literature was used to develop a first draft of dialysis specific transition guidelines, focusing on core competencies and concepts known to facilitate safe and effective transitions. The GRADE (grading of recommendations, assessment, development and evaluations) approach was used to detail evidence for making clinical practice recommendations. GRADE is used as an appraisal for quality of evidence and strength of recommendations for the formulation of clinical guideline (Meader, et al, 2014).

As the new guideline was developed, the committee reviewed the drafts using the consensus model approach with virtual conferencing. The final draft was reviewed by the committee using the Appraisal of Guidelines for Research and Evaluation (AGREE) II instrument to assess the validity and applicability of the proposed recommendations into clinical practice (National Collaborating Center for Methods and Tools, 2017). The AGREE was developed to address the issue of variability in guideline quality. It is recognized to ensure practice guideline's reliability, validity, feasibility, and usability among intended users (AGREE, 2014).

Significance

Successful transitional care for the ERD patient involves bridging care gaps from hospital to outpatient dialysis clinics. Specific measures and components that address patient's condition during transitional care impacts potential readmissions. Strategic care interventions aim to smooth transition from inpatient to outpatient setting and improve continuity of care. This intervention would involve patients, caregivers, nephrologists,

nurses, social workers and dieticians. A proactive collaborative care plan should be shared by the care team with the patient and family in a joint effort to enable appropriate education, timely care coordination, and support (Nobel, 2013). Nurses contribute to improving quality by coordinating and improving patient care experiences through adequate communication and interventions in the transition of care.

The Positive social change would result from the prevention of adverse events through enhanced communication during transitions of care (Patel & Landrigan, 2019). Ensuring safe care transitions and giving high importance to transitional care strategies can improve quality care to patients. The optimized transitional care with requisite follow-up provides a unique opportunity to streamline and facilitate hospital discharge process and coordinate outpatient care (Mathew et al., 2018).

The hospital may benefit by aligning with the new Centers for Medicare and Medicaid (CMS) program for ESRD. The reduction in readmissions will improve the financial reimbursement rates from CMS, which currently penalize hospitals for readmissions of patients prior to 30 days of discharge. Once in place the hospital can apply for the special CMS program.

The American Nephrology Nurses Association (ANNA) defined nephrology nursing practice as a specialty practice that spans the continuum of care for patients with kidney disease with various comorbid conditions. The focus of the nephrology nurse is to manage the care to meet the individualized needs of the patient. Care requirements extend beyond kidney disease to address acute and/or chronic causative disease processes, as

well as comorbid complications. Optimal individual physical and cognitive function and family support throughout the phases of disease management are the primary goals of Nephrology nursing (ANNA, 2020). Nephrology nurses play an integral role in coordinating care. The adoption of high-quality transitional care can potentially improve care coordination and integration, health continuity and eventually promote safe and quality care among chronically ill.

High quality transitional care is important for patients with multiple chronic conditions and complex therapeutic regimens. Camicia and Lutz's (2016) article on the nursing role in successful transitions across settings for stroke survivors stated that nurses support stroke survivors and their families through care transitions by providing training on care needs, information and resources on stroke prevention and recovery, and strategies to manage survivor and caregiver socioemotional needs, financial concerns, and family issues. To achieve optimal outcomes, specific interventions such as medication management, patient and family education training, information transfer, follow up care and healthcare provider engagement are recommended (Camicia & Lutz, 2016).

Summary

The purpose of this quality improvement study was to develop a clinical practice guide for hospitals and dialysis centers to use in the process of transitioning ESRD patients on dialysis among facilities. Improved care collaboration and coordinated discharge care improve communication. Readmission among patients requiring dialysis

can potentially be avoidable by establishing standardized communication between hospital and outpatient dialysis clinics. Section 2 will detail the background and context of the study.

Section 2: Background and Context

Introduction

Transition of care for patients between acute care facilities and other care facilities such as dialysis centers remain challenging for providers. Lack of clear communication between providers, poor patient understanding of post-hospital self-care, and gaps in healthcare scheduling contribute to a high rate of avoidable readmissions (Finlayson et al., 2018). The practice question was: Will an interprofessional team produce new guideline using consensus model to improve transitional care among ESRD patients? The purpose of this scholarly project was to develop a clinical practice guideline using a consensus model among an inter-professional team. The guide emphasized dialysis-specific components in discharge summary to facilitate effective transition to outpatient dialysis facility. This section will discuss the concepts and models, the background and context of the project, and the role of the DNP student with the project team.

Concepts, Models, and Theories

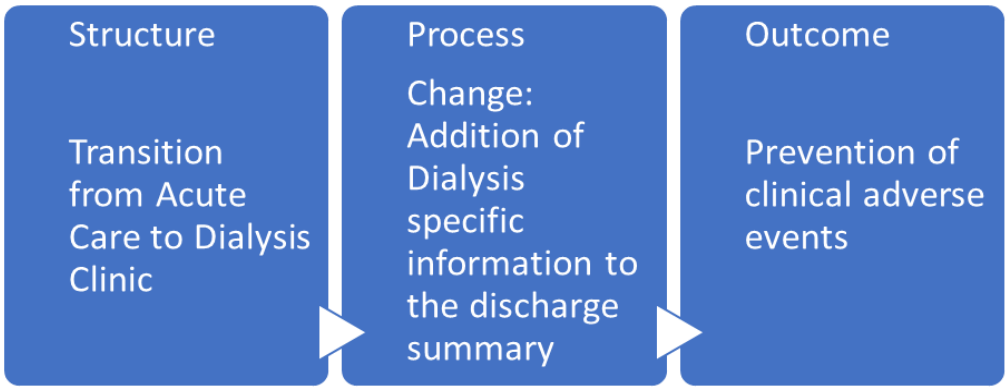
The Donabedian's structure-process-outcome model provided a conceptual framework for evaluating measurement of improvement and quality of healthcare (Berwick & Fox, 2016). It implies structural characteristics where care takes place, influences the process of care, and in turn, influences patient's' health. The model examines the quality of health provision by means of structure, process and outcome. Structure describes the physical and organizational setting in which healthcare is delivered, including healthcare facilities, personnel, equipment, and the financing that

supports medical care. Process which relies on structure to provide for the mechanism of patient care, describes the actions that allow for the adequate delivery of healthcare, diagnosis, patient treatment, patient education and preventative maintenance care naturally improve patient outcomes. Outcomes describes the effect of healthcare on patient and population status. The information gathered from structure, process and outcome may be analyzed in order to make inferences or draw conclusions about the healthcare quality of a given healthcare system.

The quality-of-care transition among ESRD patients will be assessed through Donabedian's model. Dialysis specific components will be identified, collaborated, analyzed. Improvement in the transition of care will lead to change and improvements in the clinical processes that could potentially improve patient outcome.

Figure 1

: *Structure, Process, Outcome*



Conceptual Model: Chronic Care Model

The chronic disease care model offers means of providing healthcare services to a specific population. The model aims to improve health of a population through systematic and measurable changes, and positive and productive integration by all health professionals including primary care clinicians, nurses, pharmacists, dieticians and community health workers (Narva, 2018). The approach incorporates patient, provider, and system level intervention with a major focus on the patient being at the center of care (Rosenberg, 2016). Chronic care model has been applied in nephrology through outpatient dialysis clinics. According to Rosenberg (2016), when there is interdisciplinary team involved with ESRD patient in clinics, there is improved outcomes including better adherence to clinical practice guidelines, reduced hospitalizations, improved survival and decreased progression. The interdisciplinary team approach to care is required in the Conditions of Coverage for dialysis units that dictate the minimum health and safety rules that all Medicare and Medicaid participating dialysis facilities must meet. ESRD care requires collaboration by a diverse team of health professionals to provide improved outcomes and optimal clinical care through enhanced population management capabilities (Drawz et al., 2015). The authors further stated that the members of the entire ESRD care team need to have accurate and timely information to appropriately assess care needs, prescribe and adjust medications, optimize patient education and ensure a coordinated transition (Drawz et al., 2015). Appropriately incorporating and implementation of electronic health record to support the widespread interoperability of

data related to kidney health will enable providers to improve care for patients with ESRD (Drawz et al., 2015).

Relevance to Nursing Practice

Miscommunication between hospitals and outpatient dialysis clinics contribute to safety failure. Care providers and care settings provide prime opportunities for communication errors (Garrick et al., 2012). Studies demonstrate that hospitalized patients with ESRD on dialysis are vulnerable to adverse events and at risk for errors that might lead to readmissions (Reilly et al., 2013). Poor or absent communication contributes to adverse events, including omission of antibiotics, mismanagement of congestive heart failure, readmissions, and loss of patient trust (Reilly et al., 2013)

Nurses are vital in clinical communication to coordinate a successful transition throughout the care continuum. They play a key role in promoting successful transitions by developing and evaluating the transition plan and identifying and communicating barriers to the plan (Camicia & Lutz, 2016). Authors further stated that safe, timely, and efficient transitions across care settings are promoted through effective communication transfer that contributes to optimal collaboration and coordination among the patient, family, and interprofessional team (Camicia & Lutz, 2016). Nurses across all levels of care are ideally positioned to lead through innovation and execution of patient centered processes that enable effective transitions in care and impact health outcomes. Identified dimensions can serve as a guide to the development of metrics to assist in improving outcomes (Malley & Kenner, 2016).

Transitions in care in today's healthcare are viewed as high-risk venture that nurses play a major role in facilitating care. The Joint Commission recognizes that ineffective transitions play a major role in serious medical errors (Joint Commission, 2012). Study on consequences of poor communication during transitions of care had recognized that with poor quality discharge communication being identified as the major barrier to safe and effective transitions (King et al., 2013). Mathew et al. (2015) foundational research proposed a framework to reduce readmission risk for ESRD patients. This includes a standardized metric that will accurately identify avoidable readmissions to the hospital. Determinants of avoidable readmission includes patient, index hospitalization, active involvement of nephrologists, coordination of patient in dialysis units, and aligning payment reimbursement with high-quality patient care (Mathew et al., 2015).

Lack of care coordination and ineffective communication on specific information upon hospital discharge contributes errors following a patient's return to the dialysis facility (Reilly et al., 2013). Dialysis patients have high degrees of comorbidity and disability needing highly coordinated care. Care coordination and communication of changes in hemodialysis therapy such as initiation of intravenous antibiotics, change in electrolyte bath, or adjustment in fluid goal removals are critical (Reilly et al., 2013). Effective patient handoffs are essential for maintaining patient safety to avoid errors related to poor information exchange (Kear et al., 2016).

Local Background and Context

The hospital discharge summary serves as the primary document in communicating significant information to the receiving care team. It has been the preferred method for communicating vital information from the hospital (Drawz et al., 2015). Gaps in the transition of care increase a patient's risk for adverse outcomes. To promote care and coordination between hospital and dialysis facilities, CMS released guidelines that hospitals are required to communicate required clinical information to outpatient facilities including dialysis facilities upon discharge (Hakim & Collins, 2014). However, this facility's discharge summary lacked information specifically relating to dialysis care. Standardized components of discharge summary combined with dialysis specific information would be of great help in the transition of care.

This is an 864 bed hospital in rural area of the country. The facility approximately had 210,020 emergency visits in 2017 and 43, 222 admissions per year. The acute care facility works with nine dialysis centers in the region. This facility serves 12% of families below the poverty level, including single individuals and considerable portion of senior adults on fixed incomes. According to the Annual Community Health Assessment Report (LRH, 2018) the community that the facility serves above sixty percent of adults that are overweight and obese. The diabetes hospitalization rate is getting worse and death rate has been consistently higher in the last 10 years. The steady increase in the number of residents with chronic medical conditions including obesity and diabetes is a threat to the financial viability of the health system. Collaboration among community partners on health education and promotion is an area for improvement.

Role of the DNP Student

Adaptation of new evidence requires a team to provide input and expertise. DNP student facilitates communication within the clinical practice, think collectively and strategically about advances for best practice, and put processes into place to promote systemic and optimal change across the care continuum (Peterson & Stevens, 2013). I will be responsible for planning and directing the completion of this project. I will provide leadership through furnishment of information and resources that can be used in the development of clinical guide. I will promote good communication to allow better understanding of the timeline and goal as well as the importance of collaborative effort. Collaborative relationships promote understanding, facilitate integration, and raise level of motivation between healthcare practitioners and interdisciplinary team (Al-Sawai, 2013).

Summary

Effective communication during transitions in care has been investigated due to its relationship with patient safety, quality care and efficiency (Kear, 2016). To facilitate successful transitions in care, identification of specific interventions should be developed which will create an opportunity for changes that will contribute to the quality transition of care. Avoidable adverse events due to lack of effective communication among patients requiring dialysis can potentially be avoidable by establishing standardized communication between the hospital and outpatient dialysis clinics. Section three will detail the methods and sources of information.

Section 3: Collection and Analysis of Evidence

Introduction

Transition of care for patients between acute care facilities and other care facilities such as dialysis centers remain challenging for providers. Lack of clear communication between providers, poor patient understanding of post-hospital self-care, and gaps in healthcare scheduling contribute to clinical adverse events (Finlayson et al., 2018). The practice question was: Will an interprofessional team produce new guide using consensus model to improve transitional care among ESRD patients? The purpose of this DNP scholarly project was to develop a clinical practice guideline using a consensus model among an inter-professional team. The guide will emphasize dialysis-specific components in discharge summary to facilitate effective transition to outpatient dialysis facility.

Sources of Evidence

Expert panel participants were volunteers from the hospital and the dialysis care centers, including a nephrologist, nephrology nurses, social workers and case managers. They were informed of the purpose of the project and that their participation was voluntary. Those who have discussed this issue were very interested in participating. The project proposal was submitted to hospital IRB and regarded determination of not research. This was then submitted to the Walden IRB for approval.

A literature review was conducted on dialysis-specific components for discharge plan of care in order to understand the current transitional care coordination between

acute care setting and dialysis facilities. The literature review also explored best practice guidelines and evidenced-based literature on transition of care, safe patient hand-offs, and reducing human error using evidence from Medline, CINAHL, and Cochrane databases. Search words included combinations of the following terms: research, continuity of patient care, patient transfer, discharge planning and transitional care, and human factor analysis and medical error.

The background literature review also investigated evidence from the Medical Advisory Council (MAC) of the Forum of ESRD Network website for resources that were created to assist dialysis facilities in meeting the requirements for the Conditions of Coverage (The National Forum of ESRD Networks, 2019). The 2008 CMS Conditions of Coverage for End-Stage Renal Disease provide specific guidance concerning safety in the dialysis setting (CMS, 2019). Care transitions among dialysis patients are common as they undergo access procedures, hospitalizations, and specialist consultations (Garrick et al., 2012). The transition toolkit resource from ESRD Network forum is a reference tool that furnishes health providers and practitioners information, ideas and suggestions to create solutions specific to care transitions quality improvement among ESRD patients. The search period was from 2012-2021 for peer-reviewed, full-text, English only articles.

Erickson and Tamura's (2015) review of overlooked care transitions in ESRD identified transitional care as potential solution to reduce readmissions. Authors further stated that ESRD is a unique population that may benefit from an extra care transition, creating an additional dimension needed for care coordination (Erickson & Tamura, 2015). The Mathew et al. (2015) literature review proposed a framework to define the

determinants of avoidable readmission in ESRD. Authors stated that ESRD patient's requisite follow up in the outpatient dialysis facility provides an opportunity to improve transitional care at the time of discharge (Mathew et al., 2015). Regge et al.'s (2017) systematic literature review on hospital's role in bridging the care continuum identified the impact of transitional care interventions initiated from the hospital side, the role of specialized care settings, the comparison of inpatient and outpatient care and the effect of chronic care coordination. The review further stated that as chronic patients require long term, complex healthcare responses, optimal collaboration and coordination between professionals is necessary to provide integrated and continuous care for the chronically ill (Regge et al., 2017).

Analysis and Synthesis

The synopsis of the literature was utilized to develop a first draft of dialysis specific transition guidelines focusing on core competencies and concepts known to facilitate safe and effective transitions. The GRADE approach was used to detail evidence for making clinical practice recommendations. GRADE is used as an appraisal for quality of evidence and strength of recommendations for the formulation of clinical guideline (Meader et al., 2014).

As the new guideline was developed, the committee reviewed the drafts using the consensus model approach with virtual conferencing. The consensus process is concerned with reaching a certain level of consensus among the groups. A feedback mechanism was incorporated to provide reasonable advice to distinguish among experts when providing recommendations to improve and reach the highest-level consensus (Zhang, Ge & Tan,

2017). The final draft was reviewed by each committee member using the AGREE II instrument to assess the validity and applicability of the proposed recommendations into clinical practice (National Collaborating Center for Methods and Tools, 2011). The AGREE was developed to address the issue of variability in guideline quality. It is recognized to ensure practice guideline's reliability, validity, feasibility, and usability among intended users (AGREE, 2014).

Summary

Improved care collaboration, communication and coordinated discharge facilitate successful transitions. To facilitate successful transitions in care, identification of specific interventions should be developed that will create an opportunity for changes that will contribute to the quality transition of care. Adverse events among patients requiring dialysis can potentially be avoidable by establishing standardized communication between the hospital and outpatient dialysis clinics.

Section 4: Findings and Recommendations

Introduction

Transition of care for patients between acute care facilities and other care facilities such as dialysis centers remains challenging for providers. CMS released guidelines that hospitals are required to communicate required clinical information to outpatient facilities including dialysis facilities upon discharge to promote care and coordination between hospital and dialysis facilities (Hakim & Collins, 2014). Major contributing cause for adverse events is ineffective handoff communication (The Joint Commission for Transforming Healthcare, 2019). Operationalizing a standard communication format can potentially prevent adverse events. The practice question was: Will an interprofessional team produce a new guide using the consensus model to improve transitional care among ESRD patients? The purpose of this DNP scholarly project was for an interprofessional team to develop a clinical practice guideline using a consensus model. The guide was intended to emphasize dialysis-specific components in the discharge summary to facilitate effective transition to outpatient dialysis facility.

Findings and Implications

The synopsis of the literature review was summarized and the Medical Advisory Council (MAC) of the Forum of ESRD Network website resources were provided to the committee members. I used this information to develop a first draft of the guidelines to initiate the review process. As the new guideline was discussed and modified, the committee provided input using the consensus model approach with virtual conferencing.

The consensus process is concerned with reaching a certain level of consensus among the groups. Once the consensus was reached, the final draft was reviewed by the committee utilizing the AGREE II instrument to assess the validity and applicability of the proposed recommendations into clinical practice (National Collaborating Center for Methods and Tools, 2017).

Key Aspects of the Guideline

Identification of specific interventions to facilitate successful transitions in care create opportunity for changes that will contribute to the quality transition of care. Readmission among patients requiring dialysis can potentially be avoided by establishing standardized communication between hospital and outpatient dialysis clinics. The guide emphasized dialysis-specific components in the discharge summary.

Determinants of avoidable readmission include active involvement of nephrologists and coordination of outpatient dialysis units (Mathew et al., 2015). Care coordination includes communication of changes specific to dialysis therapy such as initiation of antibiotics, fluid removal goals, and electrolyte bath which are critical to renal patients (Reilly, 2013). Standardized components of discharge summary combined with dialysis specific information will significantly assist professionals in the transition of care.

The interprofessional team recommended creation of a specific dialysis discharge template in collaboration with hospital EMR to be used by nephrology nurses and case workers for record sharing and communication. The committee collaboratively identified specific discharge information for this unique population. The committee integrated a set

of discharge information as a tool to ensure that essential information is consistently included for safe and effective transition. Members of the interprofessional team recommended a checklist that contains dialysis specific information: history and physical, nephrology consults, estimated dry weight, recent labs, vascular access information, blood transfusions, special procedures or surgical procedures done, vaccinations, medication list and dialysis treatment records. This summary report will be used by nephrology nurses and case workers as a standardized tool and communication strategy for clear and timely transition of care.

The committee recommendations guide the outpatient dialysis clinic in accurately following up with the patient's specific needs: changes in dry weights to prevent fluid overload, nutritional status to prevent further nutrition decline, changes in blood pressure medications to prevent hypertension/hypotension, and antibiotic orders to prevent missed medication administration and avoidable adverse events. This enhanced coordination greatly contributes to a structured, proactive, and collaborative approach in post hospitalization care to improve the quality of care. It also enables the receiving care team to efficiently provide high risk patients with customized plan of care for early identification and intervention following discharge. Figure 2 illustrates the flow of the guideline between organizations.

Figure 2

: *Workflow for Nephrology Nurses*

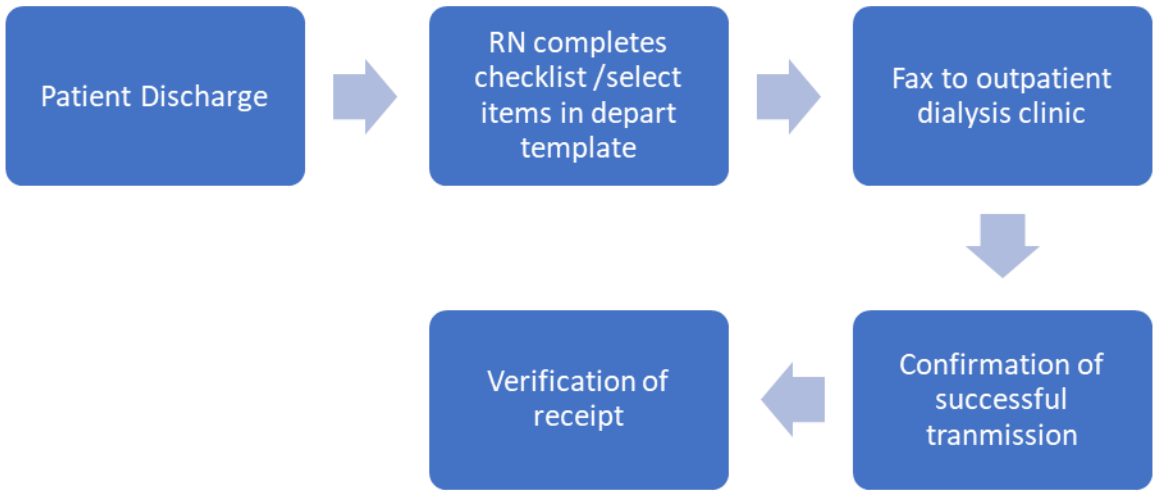


Table 1 shows how the quality score was calculated for each of the five AGREE II domains. Four appraisers participated. The AGREE II formula for the scaled domain score to calculate the percent of agreement:

$$\frac{\text{Obtained score} - \text{Minimum possible score}}{\text{Max, possible score} - \text{Min, possible score}} \times 100 = \text{Percent of Agreement}$$

The maximum possible score was calculated by summing up the product of the highest score and number of items in each domain. The minimum possible score was calculated by summing up the product of the lowest score, number of items in each domain and four appraisers. The domain scores were calculated by summing up all the scores of individual items in a domain and by scaling the total percentage of the

maximum possible score for that domain. Percentage for each domain are as follows: Domain 1: Rate the overall objectives of the guideline (83%); Domain 2: Rate the overall quality of guideline development (80.5%); Domain 3: Rate the overall quality of guideline development methods (66.1%); Domain 4: Rate the overall quality of guideline presentation (83%); and Domain 5: Rate the overall quality of the guideline applicability (78.1%). The two items in Domain 6: Editorial Independence were skipped by the appraisers due to its inapplicability. There is no funding body influencing the content of the guideline and no competing interest among members. All except Domain 3 scored more than 70%. There were only some useful evidence found. The latest qualitative study on handoff communication between hospital and outpatient dialysis units was 2013. Despite the score of less than 70%, there was a team consensus that the overall quality rate results indicate agreement to recommend the guideline for use and agreed with the guideline quality.

Table 1

Calculating Domain Scores: Domain 1 Scope and Purpose

	Item 1	Item 2	Item 3	Total
Appraiser 1	6	6	6	18
Appraiser 2	6	6	6	18
Appraiser 3	6	6	6	18
Appraiser 4	6	6	6	18
			Total	72

Maximum possible score (84) = 7 (strongly agree) x 3 (items) x 4 (appraisers)
Minimum possibe score (12) = 1 (strongly disagree) x 3 (items) x 4 (appraisers)
Obtained score – Minimum possible score x 100 = Percent of Agreement
Max, possible score – Min, possible score

72 - 12 = 60 x 100 = 83%

84 -12 = 72

Table 2

Calculating Domain Scores: Domain 2 Stakeholder Involvement

	Item 4	Item 5	Item 6	Total
Appraiser 1	6	6	5	17
Appraiser 2	6	6	6	18
Appraiser 3	6	6	5	17
Appraiser 4	6	6	6	18
			Total	70

Maximum possible score (84) = 7 (strongly agree) x 3 (items) x 4 (appraisers)
Minimum possibe score (12) = 1 (strongly disagree) x 3 (items) x 4 (appraisers)
Obtained score – Minimum possible score x 100 = Percent of Agreement
Max, possible score – Min, possible score

70 - 12 = 58 x 100 = 80.5%

84 -12 = 72

Table 3

Calculating Domain Scores: Domain 3 Rigour of Development

	Item7	Item8	Item9	Item10	Item11	Item12	Item13	Item14	Total
Appraiser1	5	5	5	5	5	5	5	5	40
Appraiser2	5	5	5	5	5	5	5	4	39
Appraiser3	5	5	5	5	5	5	5	5	40
Appraiser4	5	5	5	5	5	5	5	5	40
								Total	159

Maximum possible score (224) = 7 (strongly agree) x 8 (items) x 4 (appraisers)
Minimum possibe score (32) = 1 (strongly disagree) x 8 (items) x 4 (appraisers)
Obtained score – Minimum possible score x 100 = Percent of Agreement
Max, possible score – Min, possible score

159 - 32 = 127 x 100 = 66.1%

224 -32 = 192

Table 4

Calculating Domain Scores: Domain 4 Clarity of Presentation

	Item 15	Item 16	Item 17	Total
Appraiser 1	6	6	6	18
Appraiser 2	6	6	6	18
Appraiser 3	6	6	6	18
Appraiser 4	6	6	6	18
			Total	72

Maximum possible score (84) = 7 (strongly agree) x 3 (items) x 4 (appraisers)
Minimum possibe score (12) = 1 (strongly disagree) x 3 (items) x 4 (appraisers)
Obtained score – Minimum possible score x 100 = Percent of Agreement
Max, possible score – Min, possible score

72 - 12 = 60 x 100 = 83%

84 -12 = 72

Table 5

Calculating Domain Scores: Domain 5 Applicability

	Item 18	Item 19	Item 20	Item 21	Total
Appraiser 1	6	6	6	6	24
Appraiser 2	6	6	6	5	23
Appraiser 3	6	6	6	4	22
Appraiser 4	6	6	5	5	22
				Total	91

Maximum possible score (112) = 7 (strongly agree) x 4 (items) x 4 (appraisers)
Minimum possibe score (16) = 1 (strongly disagree) x 4 (items) x 4 (appraisers)

$$\frac{\text{Obtained score – Minimum possible score}}{\text{Max, possible score – Min, possible score}} \times 100 = \text{Percent of Agreement}$$

$\frac{91 - 16 = 75}{112 - 16 = 96} \times 100 = 78.1\%$

There was 100% agreement to recommend the guideline for practice use. However, the score on individual intent to use was lower, indicating more attention is needed in the process of translating education to practice change. This indicates a need for additional provider education to increase understanding to promote practice change. Additional benchmark data and information can also cultivate readiness, support, and commitment to this change. Once the guideline is adapted and implemented, it should ensure continuity of care and prevent clinical adverse events. In addition, inclusion in the electronic health record will help institutionalize this change. The final guideline will be sent to the appropriate approval committees prior to implementation.

Recommendations

Effective transitional care aims to prevent adverse events among ESRD patients. Over the years, research has identified specific quality of care indicators and factors unique to dialysis patients, but this but has not been fully applied and implemented in this setting. The chronic care model guided this project as it emphasizes providing services to specific populations improve the health of a population through productive integration of interdisciplinary team. ESRD care requires collaboration by a diverse team of health professionals. Identification of specific interventions should be developed to create opportunity for changes. Standardized communication between hospital and outpatient dialysis clinics should be established. The team highly recommend the use of the committee approved guideline. Further research is warranted to evaluate the effectiveness of the guideline in improving patient and family self-efficacy.

Discharge planning should include dialysis specific template added to electronic health record for decision support on transition of care. There will be more useful information and data that can enhance the project when fully applied and implemented. It is recommended that the health system approve and implement these guidelines and that both a formative and summative evaluation be used to assess the impact on the clinician performance on patient outcomes and premature readmission rates. If successful, this program could be replicated across the United States and by other countries.

Contributions to the Doctoral Project Team

The collaborative relationships in the development of the clinical guideline promoted understanding and integration between practitioners. A care transition is a dynamic process requiring a team of healthcare professionals. The utilization of interprofessional team in the development of clinical guideline specific for ESRD improves the process of hand off communication between the inpatient and outpatient dialysis clinics. Successful transitional care bridges the gap and smoothens transition from inpatient to outpatient setting. Incorporating dialysis specific templates added electronic health record formalizes the use of this discharge planning tool.

Strengths and Limitations of the Project

A major identified strength of the project was the collaboration and coordination that was facilitated between volunteer members from the hospital and outpatient dialysis units. The current hospital dialysis discharge workflow was also reviewed for enhancement. Team members were consulted on templates for decision support for dialysis specific information on transition of care. A limitation is that this is only one health system and may not be applicable to all systems.

Summary

The interdisciplinary team collaborated to produce evidence-based practice guidelines for the successful transition of the ESRD patient from the hospital to dialysis

centers. The purpose of this guideline is to standardize communication, add additional data important to dialysis care, and assist the patient and family in self-care. Consensus was validated using the AGREE II instrument.

Section 5: Dissemination Plan

The findings of this project will be disseminated using face to face interaction through power point presentation. The partnering organization will be asked to post publications to increase project's exposure. The development of free webinar will also be accessible to hospital staff, nephrology/dialysis nurses for promotion. A lunch and learn will be hosted to the receiving facility to present the project. Additional dissemination will occur through presentations at conferences such as Annual Hospital Research and ANNA conferences nationally.

Analysis of Self

Essential II: Organizational and Systems Leadership for Quality Improvement and System Thinking

The DNP program enhanced my expertise and skills to lead in developing a tool for quality improvement and patient safety initiatives. I was able to evaluate effective strategies to improve healthcare outcomes. Based on the project findings, I demonstrated knowledge and skills to enhance healthcare designs and how transitional care programs can be improved.

Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

The DNP project enabled me to identify gaps in practice, develop and implement identify key data and the process to evaluate the outcomes of practice. It also permitted

me to i data and analyze outcomes. The use of information technology helped me to lead the interprofessional team to improve in the development of guidelines.

Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

The DNP project enabled consistent and effective sharing of information among interprofessional team that led to a successful collaboration. I was empowered to engage effective communication and collaboration skills in all levels of interactions thus helped me developed harmonious relationship with other committee members.

Summary

The guideline emphasized dialysis-specific components in the discharge summary to facilitate successful transitions of care among ESRD patients. It can be used as a standardized communication by nephrologists, nephrology nurses and case workers in the hospital to outpatient dialysis clinics. I plan to connect with end users by face-to-face interaction through PowerPoint presentation. Feedback from end users will be encouraged through SurveyMonkey, an online survey tool.

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Appendix A: Practice Guidelines

Purpose

To provide practice guide for hospitals and dialysis centers to use in the process of transitioning ESRD patients on dialysis among facilities.

Category

Transition of Care

Intended Users

Nephrology nurses

Case Managers/Social Workers

Target Population

ESRD patients requiring dialysis discharging from hospital to outpatient dialysis clinic

Interventions and Practices Considered

1. Utilize standardized communication with dialysis specific information in transition of care.
2. Communication and collaboration between hospitals and outpatient dialysis clinics.
3. Establishment of organization-wide communication to support effective care transitions.
4. Education to Nephrology nurses about the care transition process.

Appendix B: Care Transition Checklist (Hospital to Dialysis Clinic)

Patient Name
Admission Date
Discharge Date
History and Physical
Nephrology Consult
Estimated Dry Weight
Recent lab results (Including blood cultures)
Vascular Access Information
Vaccinations
Blood Transfusions
Special Procedures/Surgical procedures
Reconciled Medication list
Dialysis treatment sheets