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Fluid State and Diet Control in Patients With Acute Kidney Injury on Hemodialysis

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by

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Abstract

Prolonged hospitalization, high number of readmissions, and high mortality rates are associated with patients diagnosed with Acute Kidney Injury (AKI). The purpose of this quality improvement proposal is to address the need for more education for nurses caring for these patients. If the kidneys shut down temporarily due to acute illness or medication taken, fluid and toxins will build up in the body with no way of being released. It is proposed that if dietary and fluid restrictions are followed it may help the patient recover faster. The method proposed is to have nurses learn the necessary dietary and fluid restrictions through a PowerPoint educational presentation and the addition of an informational bulletin affixed to a magnet to hang on the refreshment room refrigerator. Research indicates that dietary and fluid restrictive management results in decreased toxins and create a manageable fluid balance with less adverse events and quicker recovery related to AKI.

Keywords: acute kidney injury, hemodialysis, dietary/fluid restrictions, education

Table of Contents

List of Figures

CHAPTER I

Introduction

Many individuals become a nurse because of desiring a career that is interesting, challenging, and makes a difference in people's lives. Nursing is much more than administering medications and giving patient care such as positioning, bed baths, starting intravenous therapy, etc. All nurses should possess certain skills such as communication, confidence, professionalism, empathy, conflict resolution, and most of all critical thinking. Nursing is a unique blend of art and science. Art being the value the nurse brings to patients and science including physical tasks such as medication administration. Florence Nightingale believed a patient has a key role in his or her own health, and that health is a function of the interaction between person, nurse, and environment.

Nurses should understand that the kidneys play a vital role in an individual's health. Kidneys, bean-shaped and the size of a fist, are organs that filter blood for the body. Many people know that kidneys filter the toxins from the blood and produce urine; however, many do not know the numerous functions the kidneys control. Kidneys are responsible for producing renin, which controls blood pressure, and erythropoietin which helps make red blood cells and actively converts vitamin D in the bloodstream. Vitamin D is essential for maintaining strong bones and preventing osteoporosis. Calcium can only be absorbed by the body when vitamin D is present. Vitamin D also promotes immune health, muscle function, and brain cell activity. The kidneys are important organs that work to keep the whole body in a state of chemical balance by filtering fluid from the renal blood flow allowing for toxins, metabolic waste products, and excess ions to be excreted while keeping essential substances in the blood. When the kidneys are

affected by acute or chronic illness many other organs can be affected such as the brain, heart, and lungs.

There are many reasons acute/chronic kidney injury can happen. For example, blockage in urine that causes infections in the kidney, medications, toxins, and autoimmune deficiencies can all cause acute kidney injury (AKI). The National Kidney Foundation (2022) states, "AKI causes a build-up of waste products in your blood and makes it hard for your kidneys to keep the right balance of fluid in your body and is common in patients with acute illnesses" (National Kidney Foundation, 2022, Acute Kidney Injury section). Nurses should have the knowledge needed to educate patients about fluid and food restrictions while in acute kidney injury (AKI). Nurses also need to be sure dietary guidelines are in place for the patient while hospitalized to promote healing. It is estimated in the United States the readmission rate of patients with AKI is 21% greater than a patient without AKI (Thakar et al., 2012). This costs the United States healthcare system great amounts of time and money. If nurses educate patients with AKI this could possibly bring down healthcare costs.

Problem Statement

If too much fluid builds up in the body, it can have harmful effects causing difficulty breathing and edema. To properly manage the care of patients with a diagnosis of AKI, nurses must have the knowledge to establish dietary and fluid restrictions. Statistics show high readmission rates in patients with AKI. According to Abebe et al. (2021), even less critical patients with a diagnosis of AKI may experience adverse events such as a 50% higher risk of death. This statistic may indicate there is not enough

education for the patient's primary nurses to follow fluid and dietary restriction guidelines in patients diagnosed with AKI.

Significance

In an acute care community hospital located in the southeastern United States with approximately 247 staffed beds, many patients have been diagnosed with AKI leading to fluid overload. A refocus is needed to educate patients' primary nurses on dietary and fluid restrictions to promote healing. When a patient is diagnosed with AKI, some of the symptoms they experience are swelling of legs, ankles, and around the eyes, shortness of breath, confusion, nausea, and chest pain or feelings of chest pressure. Medical providers can prescribe hemodialysis to help "jump start" the kidneys and decrease edema. In the first days or weeks of dialysis, the patient should be restricted on fluid intake and have a renal diet prescribed. In advocating for the patients, the nurse needs to make sure the diet is ordered properly and that fluid restrictions are in place. Vaara et al. (2020) explain, "Restricting fluid input among patients with AKI might be beneficial in terms of reducing edema formation, which could potentially improve organ function and prevent further injury, and subsequently lead to increased survival" (p. 382). Often, the patient does not understand they are not to drink water, because it is taught to drink plenty of water as it is good for the body's organs. In the patient's case, the kidneys are not disposing of the excess water, and it is causing edema throughout the body. Hemodialysis can remove 3 liters of fluid, but if the patient afterward drinks 6 liters, the patient is in excess of 3 liters, causing more edema, and hemodialysis is not beneficial.

According to Vaara et al. (2020), "Acute kidney injury (AKI) is a frequent syndrome during critical illness affecting approximately 40%-57% of patients in the

intensive care unit (ICU)" (p. 832). Vaara et al. (2020) also indicate that with AKI comes adverse effects such as increased lengths of stay, and higher hospital costs and mortality rates. The purpose of this project is to provide education targeting the importance of dietary restrictions and fluid intake to nurses who are caring for patients with AKI.

Purpose

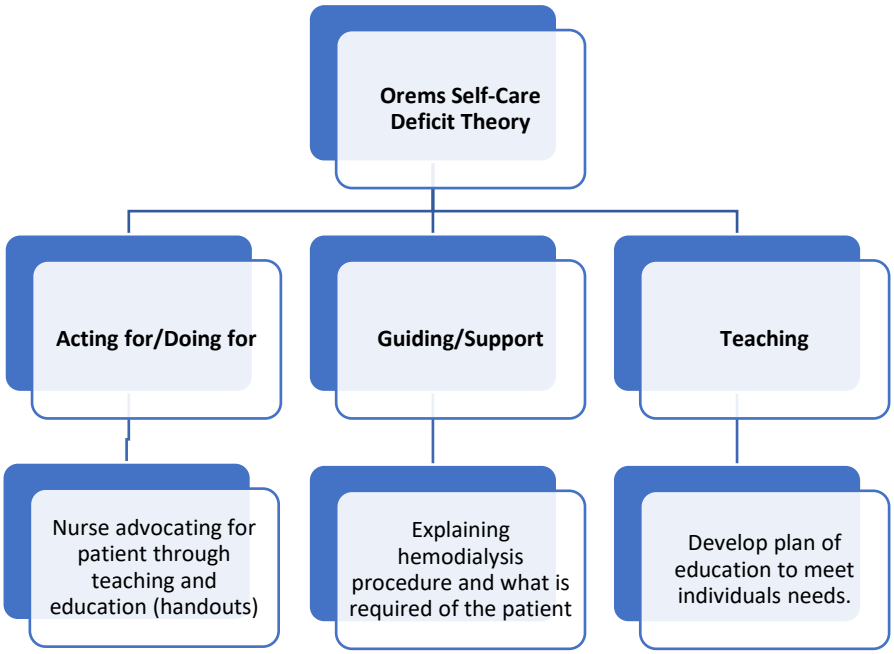
The purpose of this project proposal is to educate primary care nurses on fluid restrictions and dietary guidelines related to acute kidney injury. The clinical significance of how AKI affects the renal system, the dietary needs to reduce excess edema, and how the promotion of educational material promotes the healing of AKI patients will be the focus of this project.

Theoretical or Conceptual Framework

The project will be guided by Orem's self-care deficit theory (Simmons, 2009). The theory is patient focused and promotes recovery and healing. After the nurse confirms the needs and limitations of the patient, the method of helping is established. The theory identifies five methods of helping: acting for and doing for others, guiding others, supporting another, providing an environment promoting personal development in relation to meeting future demands, and teaching another. For the purposes of this quality improvement project proposal, Orem's self-care deficit theory concepts of acting for/doing for, guiding/supporting, and teaching will be used. Figure 1 provides a conceptual-theoretical diagram of the use of Orem's self-care deficit theory as it relates to the care of patients receiving hemodialysis.

Figure 1

Orem's Self-Care Deficit Theory as it Relates to Improving Care of Hemodialysis Patients



Summary

In summary, fluid overload increases hospital stays and raises the mortality risk of patients. In patients with a diagnosis of AKI, an early transition to a fluid-restrictive strategy may be beneficial. Primary nurses should have educational materials to recognize diet and fluid restrictions in these patients. Also, correct assessments of fluid status are needed at all stages of illness to improve clinical outcomes. As patient advocates, following Orem's self-care deficit theory, nurses should create a positive environment for the patient, help the patient gain knowledge of the illness, and promote patient healing through fluid restrictions, diet, and education. Patients' health should always come first, compassion kept for all, and nurses are patient advocates.

CHAPTER II

Literature Review

In order to produce a comprehensive literature review, a search of online scholarly articles was performed. The literature review was conducted by searching a variety of databases. Key terms used during the literature review were: renal diet, fluid restrictions in patients with AKI, nutrition support for AKI, 30-day readmission rates in patients with AKI, nursing education with AKI, and Orem's Self-Care Deficit Theory. The literature reviewed was limited to the past 15 years.

The literature review will examine areas related to fluid restriction and renal diets in relation to patients with AKI. It will consist of a review of research associated with the statement of purpose, the clinical significance of how AKI affects the renal system, and the dietary needs to reduce excess edema. The review will also center on how a focus on educational material promotes the healing of AKI patients.

Literature Related to Statement of Purpose

According to Ávila et al. (2020), AKI is a problem in critically ill patients and can affect them short or long term. A study was conducted to evaluate positive fluid balance as early detection of AKI in critically ill patients. The sample size was 233 patients who were over 18 years old and were admitted to the intensive care unit for 3 days or longer for evaluation of fluid balance. Serum creatinine and urine output were assessed daily. Ninety-two patients developed AKI, all showed significantly higher fluid balance before AKI diagnosis. The results of this study indicate that positive fluid balance in critically ill patients put them at risk for developing AKI and correcting fluid balance could possibly correct serum creatinine levels. This suggests that positive fluid balance, referred to as

fluid overload, is early detection of AKI diagnosis. A downfall of these results is that there were not enough patients assessed with positive fluid balance. Also, the authors only found four previous studies on this subject, and this was a larger study due to the number of patients evaluated. The study is relevant to this project proposal in that there needs to be educated nurses to know the fine line between fluid overload and AKI.

AKI is correlated with heightened risks and adverse outcomes in intensive care unit (ICU) patients. The common treatment for critically ill patients is fluid therapy. This treatment can put a patient with AKI in fluid overload and has a high mortality rate. A study was conducted about the management of restricting fluids versus usual care for patients with AKI diagnosis (Vaara et al., 2020). Vaara et al. (2020) compared the management of restricting fluids to patients who received initial fluid resuscitation. The purpose of this study was to evaluate if a more fluid restrictive approach to patients' care with AKI results in improved outcomes by reducing congestion and helping improve organ function. The sample in this study was 100 ICU patients over the age of 18 with an arterial line placed, hospitalized in ICU for 12-72 hours with a diagnosis of AKI but not receiving dialysis. The sample was spread between seven ICUs. The fluid restriction consisted of evaluating negative or neutral fluid balance by minimizing fluid intake or maximizing fluid output by utilizing diuretics under the clinician's care. Patients were evaluated within 72 hours. The results of this study indicate restricting fluids resulted in less risks and adverse outcomes to patients compared to initial fluid resuscitation. A strength of this study is that it was spread across seven ICU's and the selection of patients was randomized to minimize selection bias. The authors pointed out a flaw with the study in that fluid balance measurements are not exact. There are also a limited number of

similar studies, but the results suggest that further studies should be conducted to change the fluid balance protocol. This information is significant in that current protocols of AKI are enhancing hemodynamics and fluid status and in serious cases dialysis.

Xu et al. (2014) conducted research to assess the baseline knowledge and confidence of clinicians treating patients diagnosed with AKI. The aim of the research was to investigate if an educational intervention led to clinicians having more knowledge and confidence in treating patients with AKI. The research was conducted over a year based on the academic year. It involved two large teaching hospitals located in the United Kingdom (UK) with the focus on acute medical admission units, but the education was made available to all clinicians. Three hundred nineteen clinicians participated in this study. Results from the study indicate that there is no correlation between educational intervention and the improvement in outcomes for patients with AKI. However, a benefit that came from the study was that basic components of care must be delivered well. Also, more clinicians, after receiving the education, showed an increase in initiating analyses and making an AKI diagnosis. This study is significant because it indicates that education is needed for an AKI diagnosis and that if the clinician is educated the patient will have better outcomes. A limitation of the research is that it was not conducted on a larger scale. Further research is needed to evaluate the effect of educational interventions in treating patients with AKI and having better outcomes.

Serum creatinine is a marker for renal dysfunction and is the main laboratory result used for the management of AKI diagnosis. Cerda et al. (2007) found that there is a significant lack of consistent measures of AKI. The aim of research conducted by Cerda et al. (2007) was to explore if there is a correlation between the serum creatinine at the

initiation of continuous renal replacement therapy (CRRT) and better outcomes for the patient, as well as finding possible reasons for the correlation. The sample consisted of 134 male patients around the age of 67 who were all critically ill and requiring CRRT. The results of this study indicated that serum creatinine is not an accurate determinant for AKI. According to the results from the study, better markers are being developed but need to be studied further. The possible reasons for correlation found in this study are: a lower serum creatinine may be indicative of fluid overload; patients with underlying chronic kidney disease (CKD) may be exposed to a lesser degree of disease and have better outcomes than a patient with normal kidney function at initiation; patients with small muscle mass may be overloaded with fluid but laboratory results show lower serum creatinine level so dialysis is not initiated as quickly; better health and muscle mass are associated with a higher creatinine creating better patient outcomes. A limitation of this study is that it is one of the first studies on this subject; therefore, further studies need to be conducted to support the hypothesis and to promote change in protocol. This research is relevant because it shows further research is needed for proper education related to patients with the fluid imbalance and a diagnosis of AKI.

Raji-Amirhasani et al. (2022) conducted a study on nutrition in correlation to AKI. The purpose of this study was to analyze four diet types in relation to improving AKI. The hypothesis was that a healthy diet may improve health and increase life expectancy without the progression of chronic diseases. The population for this study was 60 male rats, 10 weeks old with AKI induced by injecting glycerol. The four diets studied were calorie restriction, time restriction eating, intermittent fasting, and high fat. The study found that in all diets, AKI improved with the exception of the high-fat diet. The

research concluded that calorie restriction was the best diet to decrease creatinine and improve AKI. The high-fat diet worsened AKI. Also, in conclusion, it is recommended that the diets should be studied further for the positive effects on AKI. The research results also suggest that calorie restriction and time restriction eating should be considered as a treatment to prevent AKI. This is relevant information in consideration of nursing care for patients with AKI because nurses need to be educated to know the proper diets for AKI patients. If the patient's diet is not renal or calorie/fluid restrictive then the patient may progress into renal failure. Nurses need to have the education to be aware of the patient's diet and question if the patient is not on the correct diet to speed up recovery time. However, a limitation of this study is, there is a limited number of studies on diet in correlation to improving AKI.

Sileshi and Shaw (2015) discussed the results from the Australasian Resuscitation in Sepsis Evaluation (ARISE) and Transfusion Requirements in Septic Shock (TRISS) trials. The trials were conducted related to a protocol that aggressively treats AKI by giving fluid and blood products to investigate their helpfulness in the improvement of AKI. Three hundred and thirty critically ill patients with AKI participated in this study. Some of the patients received early goal-directed therapy and others received the usual care. The conclusion of the trials indicates that resuscitation with fluids in the first 6 hours does not protect the kidneys from AKI. A second result suggests that higher hemoglobin does not reduce the requirement for dialysis. Sileshi and Shaw (2015) concluded that the care of critically ill patients should shift to less fluid resuscitation and blood products. This information is relevant because it indicates that initial fluid

resuscitation does not protect the kidneys and may put the patient at risk for poorer outcomes.

Kirwan et al. (2016) performed a study on nursing education for increasing understanding of AKI in the high dependency units at Queen Elizabeth Hospital in Malawi. Recognizing AKI early requires clinical knowledge of its risk factors. The aim of this study was to educate nurses by increasing clinical recognition of AKI and keeping track of input and output (fluid balance), and creatinine levels. The goal is for nurses to be able to show an understanding of this information 3 months later. The setting of this study was a unit consisting of a higher level of AKI diagnosis with all patients 16 years and older. One hundred and four patients participated in the study. A limitation of the study is that this is one of the first studies analyzing nursing education in a clinical setting on a specific subject. However, there is much more documentation showing that education gives knowledge in specific subjects having great advantages for patient care. Another limitation of the research is that the Malawi clinical site has limitations in care such as limited resources; it is also underdeveloped economically. It is concluded that an educational intervention on AKI increased nurses' knowledge base and improved recognition and management of AKI. Based on the results of this research, it is suggested that nurses need education regarding AKI to recognize and manage care for patients. If early detection improves patient outcomes and lessens risks, then nurses should get the education needed to improve their facility's patient outcomes.

The aim of Asrar et al. (2018) research study was to set up a program to educate nurses in the recognition and care of patients with AKI. The goal was early detection of AKI. A questionnaire was given to nurses to complete for evaluation of baseline

knowledge. Nine hundred and ninety-six nurses and nurse practitioners participated in the study. The education was taught during three classes over a year by a nephrologist and a discussion took place after the classes. The results of this study were that educational interventions can improve knowledge and management of AKI. This study suggests that tailored educational classes in specific subjects can have a positive impact on nursing care and management of AKI. It also indicates that further education helps nurses know how to detect AKI earlier.

Panu et al. (2021) performed a study with the purpose of correlating fluid balance in the first 72 hours of continuous renal replacement therapy resulting in increased hospital mortality. Three hundred ninety-nine critically ill patients requiring CRRT with a mean age of 64 and a diagnosis of AKI were included in this study. This research indicates that strict fluid balance in the first 72 hours is crucial. Fluid balance should be restrictive for more positive patient outcomes. The limitation of this study is that it was conducted in only one ICU. There should be further studies conducted to support the data. The result of this research is that positive fluid load in patients is related to hospital mortality rates. This study directly correlates to this proposal in that education should be provided to the medical staff showing fluid overload affects patients negatively and in a majority of cases can cause death. Fluids should be restricted to improve AKI outcomes and morbidity rates.

Research on the correlation between the fluid balance in critically ill patients with AKI and clinical outcomes was conducted by Wang et al. (2022). The purpose of the research was to associate different ranges of fluid balance with fluid overload and mortality. One thousand five hundred twenty-nine critically ill patients participated in this

study over 6 months. The study was conducted with three groups with low fluid balance, decreasing fluid balance, and high fluid balance. The protocol for AKI is to give patients fluids; however, this could lead them to fluid overload causing an increased risk of mortality. This study had a limitation in that it was observational so adjustments could not be made. Also, fluid intake/output was not considered before admittance to the ICU. Another factor of this study is that different fluids such as vasopressor versus normal saline do not have the same fluid effects on patients. The results showed that decreasing fluid balance decreased 28-day mortality. Further results showed that fluid balance above a certain percentage and below a certain percentage increased poor patients' outcomes. Further studies should be conducted to support and strengthen this evidence. This is significant due to showing fluid overload causes poor patient outcomes and mortality. Education should be provided to staff so that nurses can recognize fluid overload and AKI earlier so management can be provided by the nursing staff.

Summary

Fluid overload is associated with AKI and increased mortality rates. All studies have strengths and limitations; however, all indicate education is needed in the care and management of patients with AKI. Educational interventions in specific areas in clinical settings could increase staff knowledge, have positive outcomes for patients and decrease hospital length of stay. Further educating nurses may help with early detection and better management of AKI.

CHAPTER III

Needs Assessment

The design of this project proposal consisted of a retrospective chart review in a community hospital, hemodialysis unit, in a county of approximately 180,000 people in the southeastern United States. A needs assessment was conducted that consisted of the identification of the target population, project setting, and stakeholders. It also includes desired outcomes, SWOT (strengths, weaknesses, opportunities, threats) analysis, costs and benefits of the project, and an identification of the project team members.

Target Population

The target population of this project proposal is the facility's registered nurses (RN) who work on medical/surgical floors and the oncology/renal floor. There are approximately 500 registered nurses who work for the community hospital. The nurses involved in the project proposal work on floors that have a wide variety of diagnoses, not just patients receiving hemodialysis due to AKI. Therefore, these registered nurses may greatly benefit from education dealing with the specialized needs of hemodialysis patients due to AKI.

Target Setting

The target setting for this project proposal is a non-profit community hospital’s hemodialysis unit, two medical/surgical floors, and one renal/oncology floor, in a small city in the southeastern United States. The units are part of a well-established community hospital. The hospital provides inpatient hemodialysis services for acute kidney disease (AKI), chronic kidney disease (CKD), and peritoneal dialysis services. The institution employs an estimated 1,600 people and has 247 staffed beds. The hospital serves

approximately 250 patients and provides only in-hospital patient hemodialysis services. The medical/surgical and renal/oncology floor nurses have a great deal of contact with hemodialysis patients and possess a need for additional education.

Stakeholders

Stakeholders related to the project proposal are registered nurses who are gaining knowledge related to patients receiving hemodialysis due to AKI diagnosis. Patients and their families are also stakeholders because of the results from the project proposal and benefiting from better patient outcomes. Effective care and education related to patients receiving hemodialysis due to AKI may decrease 30-day readmission rates.

Desired Outcomes

The goal of this project is to educate floor nurses who care for hemodialysis patients on fluid restrictions and renal diets. The desired outcome is to increase nurses' knowledge of fluid restriction and renal diets for patients who are receiving hemodialysis. This increase in knowledge can assist patients to achieve fluid balance faster through fluid and diet restrictions and recover quicker from AKI. A secondary outcome is for patients to be educated on fluid and diet restrictions to manage their lifestyle outside the hospital and decrease readmission rates.

SWOT Analysis

An analysis of strengths, weaknesses, opportunities, and threats (SWOT) will assist in the successful planning of the project. This analysis will help in anticipation of strengths and opportunities available. It will also help anticipate areas of threats and weaknesses to overcome or factor into the project to lend to success. Figure 2 includes the SWOT Analysis for this project proposal.

Figure 2

SWOT Analysis

Strength	**Opportunities**
• Partnerships with local hemodialysis agencies • Educational level of faculty • Education department involvement	• Partnerships with hemodialysis agencies in the communities • Continuing education
Weaknesses	**Threats**
• Reduced amount of faculty time • Educational level of patients	• Limitations in technology • Educational level of patients

Resources

The success of a project is somewhat affected by the availability of needed resources. The needed resources for this project have been identified and are available. The resources needed to complete this project are as follows:

- Unit educators to help promote and organize the project
- Availability of time to present the educational presentation
- Availability of nursing faculty
- Classroom space
- Audio/Visual technology

Team Members

This project will have a project leader who will describe and develop project information and education. The project leader will also organize the process of disseminating and developing educational materials. A project chair will also be a team member of this project. This team member will provide support and add oversight and development to the project. The third team member will be a practice partner. This person will be the unit nursing educator and will be called upon to help execute the project.

Cost-Benefit Analysis

The cost for this project should incur no additional costs to the organization. The process, time, and materials are already a part of the hospital education department's budget funding. The classroom, audio, and visual technology are also already a part of the hospital budget. An informational handout mounted on a magnet will be made for the refreshment rooms' refrigerators to remind RNs of dos and don'ts for hemodialysis patients, however, this is also included in the yearly budget.

Summary

The purpose of this project is to provide education for floor nurses who care for hemodialysis patients to promote recovery from AKI faster and reduce hospital readmissions. Nursing faculty will be given the educational tools to increase their knowledge to restrict fluids and ensure patients' strict renal diet. This project will benefit the hospital by helping to reduce the length of stay for patients and readmission rates. Nurses' increase in satisfaction may occur from patients' improved recovery rate. A key point is that patients will benefit from this project. The patient may experience a faster recovery and quicker discharge.

CHAPTER IV

Project Design

Goal and Objective

The purpose of this project proposal is to help nurses who work on medical/surgical and renal/oncology floors caring for patients with wide varieties of diagnosis gain knowledge of fluid restrictions and renal diet for patients receiving hemodialysis due to AKI. Improving nurses' knowledge may decrease hospitalization time, readmission rates, and result in better outcomes for patients receiving hemodialysis due to AKI. This project proposal includes the following goal and objective.

- Goal—Improve nurses' knowledge related to the care of patients receiving hemodialysis who require fluid restrictions and renal diets.
- Objective—Provide facility nurses with education related to the restriction of fluids and dietary guidelines for patients with the diagnosis of AKI who are receiving hemodialysis.

Plan and Material Development

The plan for this project is to provide an educational session with facility registered nurses. An educational PowerPoint containing information regarding fluid restrictions and the renal diet will be presented. An informational handout will be used to improve knowledge and awareness of necessary fluid restrictions and renal dietary guidelines. This informational handout will be mounted on a magnet and placed on the refrigerators in the refreshment rooms, making it available for quick access to information related to fluid restrictions and renal diet. Information will also be provided

on where to access the magnet showing the foods dialysis patients can eat and cannot eat as well as fluid restriction guidelines.

Timeline

To develop a successful project proposal, a timeline has been determined. The timeline phases are as follows:

- Phase 1—Problem development: A practice gap has been identified in nurses' knowledge of fluid restrictions and the renal diet which has resulted in the development of the problem put forth in this project proposal.
- Phase 2—Evidenced-based information: evidenced-based literature was acquired following a search of the literature.
- Phase 3—Completing needs assessment: The needs assessment is important to complete to identify strengths and weaknesses as well as identify aspects such as target population, setting of the project proposal, available resources, and cost benefit.
- Phase 4—Project development: Development of a project design that includes educational materials contained in the education process to address the identified problem statement.
- Phase 5—Dissemination: The project proposal will be presented to facility nurses for feedback that will be used to make any necessary revisions.

Evaluation Plan

Following the educational session participants will be invited to voluntarily complete a survey to evaluate the education presented. The survey was developed by the project leader and reviewed by the project chair for face validity.

Summary

The goal and objective of this project are to educate facility nurses on fluid restrictions and renal dietary guidelines in patients diagnosed with AKI who are receiving hemodialysis. For this project to be completed successfully, phases 1-5 as described in the timeline will be followed. The project proposal will include an educational session for registered nursing staff providing necessary dietary guidelines for patients with AKI. A survey has been developed to evaluate nurses' understanding of the educational materials.

CHAPTER V

Dissemination

Dissemination Activity

The quality improvement project proposal information was shared with the director of education and an educator who is over the medical floors. The information that was shared consisted of the educational PowerPoint and the informational bulletin adhered to a magnet as well as the evaluation method. The informational handout mounted on a magnet is designed to be placed on all floors in the refreshment room, and the refrigerator. A refocus is needed to educate patients' primary nurses on dietary and fluid restrictions to promote healing. It has been found that educational interventions on fluid and dietary restrictions may lead to decreased adverse events and promote better patient outcomes. After the dissemination of the project proposal, feedback was provided. The feedback included adding dark soda to the magnet as an item not to give to AKI patients. The director of education recommended more elaboration on several slides. She also indicated that the educational bulletin magnet is a great idea and that it is easy to use and inexpensive to duplicate. The educator over the medical floors felt the presentation had great visuals and the visuals made the presentation enjoyable to watch.

Recommendations

Upon completion of the dissemination of the project proposal, the director of education and the educator for medical floors reflected that this is a valuable educational tool that could reflect the decreased length of hospital stay and better patient outcomes. Based on feedback and recommendations from the dissemination of the project proposal, certain additions will be made. These will include the addition of dark soda to the magnet

as an item that patients with AKI should not receive. It is also recommended that the presentation and information bulletin magnet be used for education information as an ongoing continuing educational opportunity for nurses.

Implications for Nursing

There are positive implications found after dissemination. The educational presentation will empower nursing in the care provided to patients. It will also increase knowledge for better patient outcomes. The information bulletin magnet is a resource that is readily accessible for nurses and certified nursing assistants. The educational bulletin magnet is an easy resource to create and inexpensive for the hospital to duplicate.

Conclusion

In conclusion, if the kidney's suddenly shut down and the patient is volume overloaded, the body has no way to release excess fluid or toxins. Many patients with the diagnosis of AKI do not receive proper education on fluid restrictions and are not given a renal diet when hospitalized. AKI-causing fluid overload results in increased hospitalization and adverse events which could include mortality. The goal of this project proposal is to help nurses gain knowledge to identify and prioritize appropriate nursing assessments, goals, and evidence-based nursing interventions for patients. It may also help nurses to be able to recognize the symptomology of acute kidney injury faster so the patient may have less adverse outcomes. Evidence in literature indicates educational interventions in specific areas in clinical settings could increase staff knowledge, have positive outcomes for patients, and decrease hospital length of stay. Additional education for nurses may help with early detection and better management of AKI. By utilizing an

easy and inexpensive informational bulletin magnet, nurses will have the necessary information for diet and fluid restrictions for AKI patients easily accessible.

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