

**Evaluation of the Influence of Nutritional Training for Staff Working with Dementia**  
**Patients in a Dementia LTC Facility**

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## PART II: DNP FINAL PROJECT

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## Abstract

### Introduction/Purpose:

Dementia is a significant public health challenge in the United States. In 2017, the CDC attributed more than 260,000 deaths in the US to dementia as an underlying disease (Douglas et al., 2020). Dementia is a general term for the progressive decline in cognitive and behavioral functions that interfere with a person's ability to remember, think, and make decisions. It often leads to complex nutritional problems and admission to a long-term care facility.

The prevention of nutritional problems related to dementia is a challenging task, and improvements are needed to promote health and quality of life and to decrease physical and mental decline that may lead to premature death. Dementia patients experience behavioral, emotional, and physical changes that make eating and drinking more complex, resulting in dehydration, weight loss, or weight gain. Therefore, effective strategies in providing adequate nutritional intake can lead to a better quality of life and potentially decrease the rate of premature death among dementia patients living in a long-term care facility is needed.

The aim of this evidence-based practice (EBP) change was to evaluate the use of a Person-Centered Nutritional Care Protocol (PCNC) for patients with dementia in a long-term care facility (LTCF) and the impact on patient's weight gain or loss over six weeks. Nutrition care includes assessment of nutritional need, provides supportive interventions that ensure sufficient intake of energy, protein, vitamins, and essential nutrients that are culturally appropriate in a safe environment that promotes both independence and function. Providing the ADRC Eating and Drinking Well with Dementia: A Guide for Care Staff was implemented as the PCNC protocol by the LTCF. The nutritional protocol provided LTCF staff a tool outlining supportive interventions to optimize nutritional support for dementia patients in a LTCF.

**Methods:**

A retrospective chart review of the recorded weights was collected for 16 weeks prior to implementation of the protocol and six weeks following the implementation of the nutritional protocol. Additional data collection included the number of times in one day that the ADRC Eating and Drinking well with Dementia protocol was followed during the first six weeks of implementation.

**Results:**

The nutritional protocol was used 96.82% daily by the LTCF staff during the first six weeks. When comparing the end of the six weeks weight loss and weight gain with the sixteen weeks prior nutritional protocol found a statistical significance was found using a t-test. A retrospective chart review was completed to record the previous four months' weights, and post-implementation weight was collected for data analysis. A t-test was used to compare pre and post weights. The t-test for dependent samples determined whether the patients' weight changed at the end of the period of interest. After calculations, the mean value of 2.72, a standard deviation of 1.77 were acquired. A t-test for dependent samples was 7.77. The level of significance from the table of critical values of the t-test was determined. The degree of freedom, in this case, is equal to  $25 - 1 = 24$ . In the line for the degree of freedom of 24, the values of the t – criterion are found. The value is more significant than 3.745 for a significance level of 0.001. The level of significance is less than 0.001. Based on this, patients' weight at the beginning and end of the period differs with an error probability of less than 0.1%. A percentage of inpatient average weight gain was identified at the end of the project. It constituted 1.5% weight gain (see Appendix 2 and Appendix 3 to view average patient weight dynamics in five months).

Therefore, the results of the project demonstrate statistically significant patient weight change after protocol implementation.

**Discussion:**

The hope was that providing LTCF staff a tool for nutritional guidance would provide dementia patients at this LTCF optimal nutrition. The evidence from this project supports that the PCNC protocol did have a statistically significant effect on the weights of patients with dementia in the long-term care facility and supports the continuation of the protocol.

**Conclusions:**

The results of this project served as evidence that using a PCNP can provide LTCF staff daily guidance in promoting optimal nutrition to patients with dementia. The results served as the foundation for a new nutrition training protocol in a facility hosting the project to foster the staff training process in the facility to achieve improved outcomes in patients with dementia. The care staff were instructed to use the nutritional protocol daily to provide adequate nutrition for dementia patients. The care protocol was implemented 96.82 % of the time when serving food to patients during all six weeks of the project realization. An increase of 1.5% in average patient weight post the PCNC protocol implementation did support the continuation of the protocol.

## **The Influence of Nutritional Training for Staff Working with Dementia Patients in Long-Term Care Facilities**

In patients with dementia living in long-term care facilities, the problem of weight gain or loss due to their inability to eat a balanced diet is a serious health concern. Both weight gain and weight loss could result in negative implications for a patient. Weight gain leads to further metabolic disruptions, causing more health issues, including hypertension, heart disease, and stroke risk. Weight loss results in progressive health status deterioration, increasing frailty, and infirmity. Patients with dementia cannot eat healthily on their own because their diminished cognition results in ineffective feeding, including the inability to recognize food, difficulty bringing food into the mouth, inability to chew and swallow well. With all these activities, assistance from caregivers is necessary. LTCF care staff needs to provide person-centered care to promote appropriate nutrition in patients with dementia. The individual approach should be implemented to help serve each patient depending on his or her needs and functional status. LTCF staff needs effective care protocols to provide patient-centered care during feeding sessions.

### **Background**

Dementia is a chronic, broad-spectrum, general, usually irreversible decline in cognitive function that affects all aspects of cognitive performance. A patient's cognition is affected to the degree when he or she cannot perform simple daily activities such as eating (Alzheimer's Disease International, 2021). Dementia is usually progressive. However, the rate of progression varies widely and depends on many factors. Dementia shortens life expectancy, but estimates of survival can vary, depending on the quality of life of a patient affected (Batchelor-Murphy et al., 2015). Currently, there are no treatment approaches for dementia that proved successful.

Nutrition is an essential factor that impacts life expectancy in patients with dementia.

In many cases, dementia patients suffer from nutritional insufficiency due to their inability to eat normally, and their life expectancy shortens considerably (Batchelor-Murphy et al., 2017). Today, well over five million Americans have different forms of dementia, making this problem a national concern (Alzheimer's Disease International, 2021). By the year 2050, it is expected that over fourteen million people in the United States will have dementia. Many patients with progressive dementia will need specialized, facility-based care. To meet the growing care need, the staff of long-term care facilities working with dementia patients will need effective nutrition protocols and training.

Staff participated in a mandatory in-service before the implementation of the PCNP. A retrospective chart review was performed to assess staff protocol implementation rate using the new standard of care. The LTCF set a minimal standard of 90% compliance to be maintained during the newly implemented PCNP, or the staff would receive a facility mandatory in-service retraining. Finally, a retrospective chart review was performed once again on week 6 to check for staff protocol implementation rate using this new standard of care.

### **Problem Statement**

Patients with dementia are at an increased risk of mortality and other negative outcomes related to nutritional deficiencies due to their progressive decline in mental and physical health. LTCF staff is responsible for recognizing, evaluating, and addressing all needs of the dementia patients in their facility, including nutrition. Upon admission to long-term care, residents undergo an assessment that includes a history of weight loss or gains before admission, medical conditions such as cerebrovascular accident, and medications which may affect a patient's nutritional status. Residents are weighed on admission and each month thereafter to identify and

document trends such as weight loss or gain. Due to the various medical, psychosocial, and functional considerations based on the dementia patient assessment and routine weights, LTCF staff need an evidence-based protocol as a guide in providing optimal nutritional support to their dementia patients. This quality improvement project will evaluate the impact of a PCNP when implemented into an LTCF for dementia patients. Due to the lack of evidence to support a specific PCNP and the need for optimal nutrition support, this quality improvement project is conducted.

### **Organizational "Gap" Analysis of Project Site**

The project site is the ALF/Long Term Care Facility that provides care to patients with mental health concerns, including patients with dementia. Based on the current standard of care residents at this LTCF were found to be underweight or overweight thus prompting the need for a change in nutritional support for the dementia patients at this LTCF. A PCNP the ADRC Eating and Drinking Well with Dementia: A Guide for Care Staff was adopted for use to improve dementia patients in a LTCF nutritional status.

### **Review of the Literature**

After an initial search strategy was conducted utilizing the database of Cumulative Index to Nursing and Allied Health Literature (CINAL), PubMed, OVID and Cochrane to identify available resources on approaches to staff nutrition training for patients with dementia and staff training for feeding patients with dementia , nutritional protocols for dementia patients in a long term care facility, dementia, and long term care staff with an application of an evidence-based protocol to support nutritional care in a LTCF. PubMed searches using the terms protocol, pathway and feeding were completed. The above terms were combined with Orem's Self Care Deficit Theory to obtain more specific resources. The selection was further restricted to original

research in the English language, humans, and within the last five years. The exclusion criteria were articles addressing staff training experiences from facilities other than long-term care centers. In PubMed, 211 articles were found, but only 34 met the inclusion and exclusion criteria. In Medline, 227 articles were found, but only 37 met the inclusion and exclusion criteria. In Ovid Nursing, 147 articles were found, but only 18 met the inclusion and exclusion criteria.

### **Overview of Findings Made**

Dementia is understood as a progressive impairment of cognitive functions with a sharp decrease in memory, intelligence, and ability to abstract thinking, emotional impoverishment, personal degradation, decrease or disintegration of professional, social, and everyday activities. Dementia bereaves its victims of their quality of life and limits life expectancy. On average, the life expectancy of patients with dementia is between 3 to 15 years (Luk et al., 2017). With progression, the condition results in problems with gait, feeding, continence, self-care, and infections (Relph, 2016). These are all contributing causes of death. Today, over five million Americans are affected by this problem.

In a pilot study conducted by Batchelor-Murphy et al. (2017), found supportive and feeding methods were more effective in feeding patients with dementia to increase meal intake in patients with advanced dementia. Next, a feasibility study by Batchelor-Murphy et al. (2015) researched the effectiveness of an evidence-based dementia feeding skills program based on the data obtained in 2 nursing homes in the United States. The research subjects were 35 members of staff and ten patients with dementia. Within the frames of this study, a randomly selected group of staff members had web-based training of dementia patients feeding skills. The intervention group and control group were measured using pre-test post-test to evaluate feeding skills and knowledge, feeding behaviors in both staff and patients, time of feeding, and meal eaten

percentage. It was found that an increase of knowledge in the intervention group occurred on the post-tests from 77.1 to 95.6 after training which remained at 91.8 after eight weeks. In control group participants, scores at baseline were 82.2 and were still 86.7 after eight weeks (Batchelor-Murphy et al., 2015). The percent of eaten also increased for the intervention group from 6.8 to 18.4. In the control group, the percent of eaten lessened from 29.7 to 13.2. Consequently, this study shows that the implementation of staff training to improve feeding in patients with dementia helps achieve better meal intake.

A group of studies addressed the issues caregivers in long-term care facilities face when they attempt to feed patients with dementia. A mixed-method study by Hammar et al. (2016) found that the caregivers struggle because of the lack of knowledge to enhance the feeding of patients with dementia. They would like to improve their knowledge base, but they are lacking time and need informational support. The study by McGinley (2015) found that with atrophy of some parts of the brain due to dementia, disorders may occur, leading to dysphagia. Dysfunction of the muscles that regulate the passage of food into the esophagus is observed. There may be problems associated with narrowing of the esophagus and pain with swallowing. Due to all these concerns, caregivers in long-term care facilities need the training to select optimal approaches to feeding their patients. The study supports the implementation of staff training to improve the manner of feeding, the pace, and stimulation approaches. Similar findings were made in the study by Douglas et al. (2020) that listed caregivers' concerns when working with patients with advanced dementia. These include loss of appetite, depression, dysphagia, inability to chew, pain with meals, and slow eating.

Studies demonstrating staff training in effective nutritional practices improve patient outcomes are Pouyssegur et al. (2015), Chang et al. (2015), and Kimber et al. (2015). A

randomized control trial by Pouyssegur et al. (2015) found that meal intake can be improved if staff is trained to create a relaxed, pleasant environment, with no rush, and select a nutrition mode that is best suitable for a particular patient, depending on their condition. Change et al. (2015) describes the way the loss of physical autonomy due to dementia may lead to a change in food preference, difficulty chewing and swallowing, and a decrease in food intake. This study and a study by Kimber et al. (2015) both indicate that giving clear, protocol-based instructions to caregivers feeding patients with dementia may be the most effective way to increase food intake among dementia patients.

Douglas and Lawrence (2015) found that buffet-style and family-style dining can improve dietary intake in older adults living in long-term care facilities. The environment in the dining areas is vital for improved nutrition. This includes consistent seating plans, atmospheric lightning, home-style design of the premises, enhanced aromas in the room, peaceful and familiar music contributing to the atmosphere. Douglas et al. (2020) found that implementing a PCNP to increase food intake in patients with dementia results in improved health outcomes and increased life expectancy in this population category.

### **Problem Impact**

This literature review has found that the elderly population with dementia is susceptible to malnutrition, gradual decline, and degenerative changes leading to death. In a long-term care facility, inadequate nutritional support is preventable. Eating a healthy diet and drinking enough water prevents cognitive decline in older people with dementia. Caregivers need to ensure that their patients are getting the sufficient food intake they need for normal functioning. Implementing a PCNP protocol is an effective approach to improving dietary intake in patients with dementia, thereby improving their health outcomes.

### **Evidence-based Practice: Verification of Chosen Option**

This project focuses on a quality improvement option using a nutritional protocol, the ADRC Eating and Drinking Well with Dementia: A Guide for Care Staff in a Dementia long-term care facility. It will measure how staff training sessions impact compliance in caregivers in terms of implementation of the given nutritional protocol, the ADRC Eating and Drinking Well with Dementia: A Guide for Care Staff in a Dementia long term care facility. This project aims to evaluate the impact of a PCNP on the weights of dementia patients in an LTCF. The evidence-based intervention is the PCNP “the ADRC Eating and Drinking Well with Dementia: A Guide for Care Staff in a Dementia.” The use of this intervention provides staff the background on using the instrument for individualized patient centered care daily. The project used the following PICOT to perform research: In dementia patients living in the ALF/Long Term Care Facility, does the implementation of a PCNP “the ADRC Eating and Drinking well with Dementia A Guide for Care Staff“ improve nutritional intake tool compared to the current nutritional standard of care.

### **Theoretical Framework**

Orem's Self-Care Deficit Nursing Theory guided this project. This theory helps identify the self-care deficits that exist in a patient due to health limitations. Orem's theory is widely used for managing the care of patients with dementia because self-care deficit in them is remarkable and requires close attention from nurses and caregivers (Altay & Çavuşoğlu, 2013). The ability to self-care is defined as a set of learned skills that make it possible to satisfy constant needs for care, with which life processes are regulated, the structural and functional independence of a person in society is maintained, and their development is carried out (Fahim et al., 2019; Hellqvist, 2021). The ability to self-care is determined by the amount of knowledge, motivation,

and practical experience that make it possible to judge a person's ability to self-care. Orem connects the concept of self-care ability with various physical and mental characteristics of a person, believing that these abilities develop partly spontaneously during self-care in everyday life, partly during learning (Riegel et al., 2020). The limited ability to self-care is defined as an imbalance between self-care and the need for therapeutic self-care. The impossibility of self-withdrawal is an extreme manifestation of the limitation of the possibility of self-withdrawal.

At the heart of the self-care deficit is the concept that each patient is different. Thus, each person has unique needs and unique ways of meeting those needs. The only way to meet these needs is to allow the patient to fulfill them independently, which provides a greater degree of autonomy while the patient is under medical care (Hellqvist, 2021). However, if a patient can no longer identify the deficit of self-care one is facing, then the nurse should do this for such a patient. In the case of patients with dementia, it is the role of nurses to identify their self-care needs (Peng & Xu, 2018). For instance, their care needs in terms of helping them to consume food need to be assessed and satisfied based on the theoretical framework provided by Orem.

Self-care deficit due to health abnormalities is a condition in which an individual suffers so much from their health limitations that the prospect of meeting their own needs is challenging. For example, patients with dementia can no longer remember their needs regarding nutrition; they may forget to eat. They often forget how to consume food, how to chew, and even swallow. Nurses as caregivers are expected to evaluate their needs and select effective approaches to satisfy those needs (Fahim et al., 2019). In other words, Orem's theory entails helping the patient move to a space of self-care. From there, a person can continue to function to meet their basic needs again. Overall, the concept of "the need for therapeutic self-care is defined by Orem as the totality of all self-care actions necessary for a person to meet the universal needs of self-care, and

the needs that have arisen because of health disorders (Peng & Xu, 2018). In a generalized form, the main thesis of the theory can be presented as follows: if a person, under some circumstances, is not able to maintain life, ensure their health and well-being, then this becomes the responsibility of the nurse, who compensates for this opportunity and helps the patient so that they can gain independence, as fully as possible (Hellqvist, 2021).

Dementia patients need nursing care because they are dependent individuals due to their inability to maintain self-care for life sustenance. Dementia often results in cognitive and physical changes leading to a decline in the patient's functioning. This problem affects thinking ability, understanding, memory, orientation, judgment, and learning (Riegel et al., 2020). Consequently, the affected individuals develop increasing limits of self-care. Orem's Self-Care Deficit theory applies well to address the limitations that dementia patients face using nursing care (Fahim et al., 2019). Orem's theory offers nurses a framework to assess patients' self-care deficits and meet the existing demands using nursing interventions. Building a therapeutic bond between patient and nurse is necessary to meet patient's demands through interactions and relationships. Nurses act as assistants in helping to meet the self-care nutrition-related needs of a patient affected by dementia.

### **Goals, Objectives, and Expected Outcomes**

This project aimed to evaluate the impact of a PCNP, “the ADRC Eating and Drinking well with Dementia A Guide for Care Staff on the weight loss or weight gain of patients with dementia in an LTCF. The main objective was to promote appropriate and adequate nutrition for dementia patients in an LTCF using the PCNP “the ADRC Eating and Drinking Well with Dementia: A Guide for Care Staff in a Dementia” instrument. The goal was to evaluate the impact of the PCNP following six weeks of daily use by the LTCF staff. A retrospective chart

review compared pre and post protocol implementation weights for weight loss or weight gain. The number of times the PCNP protocol was used during the six weeks post-implementation was evaluated to determine if additional staff training was needed to promote the daily protocol. The primary expected outcome of this project was 95% use of the PCNP by the LTCF staff members and improved nutritional intake in patients with dementia. It was anticipated that the use of the PCNP would achieve stabilized weight in patients affected by dementia within two months.

### **Setting Facilitators and Barriers**

The main setting facilitators for this project were the desire of the facility's leadership to promote the quality of life and health indicators in patients with dementia by paying more attention to staff training. The leadership in the organization is aware of the complexity of the problem of feeding patients with dementia and ensuring they have sufficient dietary intake. They, therefore, seek opportunities to guide the staff members and provide them with more effective instructions allowing them to achieve better outcomes in patients.

The main barriers were related to the very nature of the dementia problem and the limitations it placed on the affected patients. Patients with dementia, in most cases, are not able to be autonomous. The only opportunity to manage their nutritional intake is through engaging caregivers, who are well-trained and experienced in feeding patients with mental incapacities. In addition, as a patient's weight is not only affected by caregivers' feeding behavior, but so many other factors, it was not easy to make conclusions regarding the dependence between patient weight indicator and caregivers' feeding behavior.

## **Methods**

The study is a quality improvement initiative that measured the impact of the PCNP protocol implemented one day after a mandatory educational in-service training. It was expected that the staff would need to implement the protocol 21 times weekly (mealtimes take place three times daily, and the counting period is 7 days – so 21 feeding sessions take place during this period). The number of times of implementation of the protocol was counted. The procedure was repeated on week two and week three. These calculations took place to conclude if the staff members used the protocol introduced, and if staff retraining was necessary by the facility to meet minimal standards set by the facility. At the end of the quality improvement initiative on week six, the final calculations for staff protocol implementation rate were reviewed.

## **Project Design**

The project design is a quality improvement initiative. Quantitative methods were used to obtain the project data to conclude the link between staff training and staff protocol implementation rate. In addition, the connection between staff protocol implementation rate, improvement of food intake in patients with dementia, and patient weight data was observed.

## **Project Site and Population**

The project setting is a long-term care facility in Riverdale, Georgia, which is in the suburbs of Atlanta, Georgia. The 40-bed facility is currently 90 percent occupied. It serves a population of long-term care patients, most with cognitive impairment diagnoses and short-term rehabilitation patients, which comprise approximately 10% of the total patients. Caregivers include seven nurses in a direct care role and three nurses in a supervisory or administrative role. There are also one physical therapist and one physical therapy assistant, and fifteen CNAs. The

study subjects are the members of staff involved in the feeding of patients with dementia. The dementia unit has 25 patients.

### **Measurement Instrument**

After three phases of the project, the measurement of data was reviewed. The goal was to ensure the minimal compliance standard goal of 90% was being met. In addition, post-intervention data measurement was used in this project.

### **Data Collection Procedure**

The PCN protocol was implemented one day following a mandatory educational session in service. Twenty-five long-term care staff members participated in the data collection process. The staff members were not recruited for this procedure because it was a part of their job to implement its quality improvement initiatives. The facility implemented a staff sign-in sheet that was to be signed by all staff that assists with daily meals. This sheet was used daily and was kept in a logbook in the director of nursing's office. At the end of week one and week three, a retrospective chart review was performed to assess staff protocol implementation rate. If below 90%, staff would receive mandatory in-service retraining by the facility. Finally, a retrospective chart review was performed once again on week 6 to check for staff protocol implementation rate using this new standard of care.

### **Data Analysis**

The data analysis counted the staff protocol implementation rate. Pre-tests measured staff knowledge of feeding protocol guidelines before the training session was administered. Calculations and analysis of the results were performed using a t-test with the implementation of the Statdisk-13 program.

A t-test was used for dependent samples, and it determined whether the patients' weight changed at the end of the period of interest. To do this, calculations of the difference between the weight values of each patient at the beginning and end of the period were made. After calculations, the mean value of 2.72, a standard deviation of 1.77 were acquired. A t-test for dependent samples was 7.77. The level of significance from the table of critical values of the t-test was determined. The degree of freedom, in this case, is equal to  $25 - 1 = 24$ . In the line for the degree of freedom of 24, the values of the t – criterion are found. The value is greater than 3.745 for a significance level of 0.001. This means the level of significance is less than 0.001. Based on this, it can be said that the weight of patients at the beginning and end of the period differs with an error probability of less than 0.1%.

#### **Cost-Benefit Analysis/Budget**

The costs of this project realization are zero. Since the facility uses a mandatory training process for their staff and pays these workers, there are no additional costs of project realization. The training procedure under research is a part of the normal working activity of the institution. Nutrition protocol development and implementation in the LTCF regularly ensure optimal care outcomes for patients served.

#### **Timeline**

The PCNC protocol was implemented one day following a mandatory in-service and continued for six weeks. The procedure was repeated on week two and week three. After the final week of the PCNC protocol implementation, the last measurement of patient weight and project results evaluation took place.

### **Ethical Considerations/Protection of Human Subjects**

This DNP project is a quality improvement project, and it focused on caregivers' compliance with the suggested nutrition protocol for patients with dementia. The University of Alabama (UA) Institutional Review Board (IRB) approval was obtained before initiating the project. The Health Insurance Portability and Accountability Act (HIPAA) regulations were thoroughly followed during this project completion.

Research participants were guaranteed privacy and personal data security. Federal regulations require that study data and consent documents be kept for a minimum of three years. HIPAA documents are kept for a minimum of six years after completing the study by the principal investigator (PI). Information was recorded on forms without any identifiable patient information.

The PI did not have access to any patient identifiers. Also, the PI was not reviewing the patients' charts. The director of nursing completed the chart reviews and extracting data. However, a list of patients' weights was given to the PI after the facility (director of nursing) has de-identified the data. Caregivers were eligible to participate in this project if they worked shifts when meals were served and were permanent staff in the facility. Temporary or agency workers did not participate in this project. The exclusion criteria for the study participants were insufficient knowledge of English and not being a part of the permanent caregivers' team. The study participants were not compensated.

### **Results**

The measurement of protocol implementation rates was taken for six weeks, and each week, the indicator was above 90% (see Appendix 1). For six weeks, the nutritional protocol was used 96.82 % of the time. The most flawed compliance rate was 19 times out of 21 in week 4. The highest compliance rate of 21 out of 21 was registered in weeks 2, 5, and 6.

The study also aimed to trace the way patients served by the staff benefit from the improvement of nutrition protocol implementation among their caregivers. In Appendix 2, the weight data of 25 patients served by the staff participating in the project is provided. The weight data is provided for five months. The significance was identified with the use of a t-test. A percentage in weight gain after project implementation constituted 1.5%. The dynamics of patient weight change can be seen in Appendix 3.

### **Interpretation/Discussion**

This EBP aimed to evaluate the use of a PCNC for patients with dementia in an LTCF and the impact on patient's weight gain or loss over six weeks. The project also aimed to determine if the new protocol was sustainable. The care protocol was implemented 96.82 % of the time during six weeks of the project realization. Analysis of patient weight indicator change has concluded that staff protocol implementation rate has direct implications for stabilizing patient weight. For most patients, weight indicators were stable during the months of project intervention implementation. The rate of 1.5% weight gain in patients demonstrated that the offered intervention is associated with stable patient weight.

Upon evaluating this project, its strength was the focus on the link between caregivers' training and the rate of protocol implementation during dementia patients' feeding sessions. Thus, the dependence between these two indicators was traced, and it was possible to identify the way staff training improves staff performance. The main limitation was related to other factors rather than the performance of the staff that impacts patient weight.

The selected theoretical framework of Orem's Self-Care Deficit Nursing Theory guided this project development by indicating the way caregivers' role is critical for helping patients with dementia improve their self-care. Due to the debilitating impact of dementia on patient's

thinking ability, the affected patients cannot care for their basic needs, including feeding. Caregivers compensate for this need by providing their assistance during dementia patients' feeding sessions.

The significance of the findings of this project to nursing lies in the field of importance of staff training to increase protocol implementation rate. Staff training provides employees with explicit instruction on what they can do to achieve optimal patient care outcomes. With clear guidance, staff members can address typical problems they face when managing dementia patients feeding behavior. The staff also has a clear plan of best practice nutritional methods they can use.

### **Conclusion**

This EBP aimed to evaluate the use of a PCNC for patients with dementia in an LTCF and the impact on patient's weight gain or loss over six weeks. The project counted how many times the staff implemented the offered PCNC after training. The selected toolkit for caregivers' training was the ADRC Eating and Drinking Well with Dementia: A Guide for Care Staff developed by British specialists on nutrition. The theoretical framework for this project was Orem's theory of Self-care Deficit. This theory is widely used for managing patients with dementia because self-care deficit in them is remarkable and requires close attention from nurses and caregivers. The project setting was a long-term care facility in Riverdale, Georgia, which is in the suburbs of Atlanta, Georgia. Patients' pre-weight, monthly weights, and post-weights will be monitored throughout the project realization timeline. Pre-test and post-test were taken by caregivers, pre-implementation, and post-implementation of the protocol of patient nutrition. The primary expected outcome of 95% of the PCNC staff implementation rate was achieved. In addition, for the sake of identifying a link between PCNC staff implementation rate and patient

weight, patient monthly weight indicators taken before, during, and after project implementation were evaluated to make conclusions if there was any trend noted. The link between PCNC staff implementation rate and stable patients' weight indicators was established. Based on the patient weight gain rate of 1.5% after the six weeks of the project intervention implementation, it was concluded that improved staff performance during patients' feeding sessions contributes to the stabilization of patient weight.

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## Appendix 1

### **STAFFS COMPLIANCY TRACKING FOR THE PROJECT**

1. Week one, the staff implemented the protocol 20 out of 21 times for 95.23%
2. Week two, the staff implemented the protocol 21 out of 21 times for 100%
3. Week three, the staff implemented the protocol 20 out of 21 times for 95.23%
4. Week four, the staff implemented the protocol 19 out of 21 times for 90.47%
5. Week five, the staff implemented the protocol 21 out of 21 times for 100%
6. Week six, the staff implemented the protocol 21 out of 21 times for 100%

## Appendix 2

### Patients Weight Chart

	January	February	March	April	May	Comments / Notes
1	155	157	158	156	157	
2	165	164	168	169	166	
3	240	235	233	235	240	
4	207	206	206	205	210	
5	221	219	220	218	222	
6	176	175	173	175	179	
7	171	169	170	169	173	
8	155	153	154	155	161	
9	192	189	188	188	195	
10	218	215	213	212	221	
11	247	244	243	242	249	
12	110	108	111	107	115	
13	145	144	138	140	148	
14	124	122	122	121	127	
15	104	103	101	102	109	
16	202	198	196	197	205	
17	141	138	135	136	144	
18	166	162	163	161	170	
19	154	154	151	150	161	
20	158	160	155	154	162	
21	251	245	243	242	252	
22	174	168	169	167	174	
23	218	217	216	214	219	
24	206	206	202	200	207	
25	170	168	165	164	172	

### Appendix 3

