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# Staff Education on Chronic Obstructive Pulmonary Disease Self-Management Using Teach-Back

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*Walden University*

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# Walden University

College of Health Sciences

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Yvonne Fomengia

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Walden University  
2019

Abstract

Staff Education on Chronic Obstructive Pulmonary Disease Self-Management Using

Teach-Back

by

Yvonne Fomengia

MSN, Bowie State University, 2011

BSN, University of Maryland, 2007

Project Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

Walden University

May 2019

## Abstract

Exacerbation of chronic obstructive pulmonary disease (COPD) is the leading cause of hospital admissions and an estimated 120,000 deaths among older adults in the United States. In the community health clinic that served as the project site, more than 80% of patients with a COPD diagnosis had frequent exacerbations, with a hospital readmission rate of 23.2%, which was higher than the national benchmark of 21%. The clinic did not have a COPD discharge education plan with a teach-back tool for staff to teach patients. The purpose of the project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational plan for patient self-management. Guided by Orem's self-care theory and Rosswurm and Larrabee's model of evidence-based practice, the project focused on whether the literature supported the use of the teach-back method of teaching for COPD self-management. Participants reviewed the packet and evaluated the content using a Likert-type scale with 1 = *strongly disagree* to 5 = *strongly agree*. Ninety percent of the clinic's stakeholders and staff *agreed/strongly agreed* to all factors evaluated, and the educational packet was recommended for use on the unit. The teach-back method and educational packet for COPD might bring about positive social change by decreasing exacerbations, improving health-related quality of life, and improving stewardship of healthcare investments thus improving the human condition.

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## Dedication

I would like to dedicate this capstone project to my loving husband, Dr. Fomengia Julius, and our four awesome kids, for their immense support and encouragement given throughout the entire project. I am forever grateful, and may God bless you all.

## Acknowledgments

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## Table of Contents

List of Tables .....	iv
Section 1: Nature of the Project .....	1
Introduction.....	1
Problem Statement .....	2
Purpose.....	3
Nature of the Doctoral Project .....	4
Significance.....	6
Summary .....	9
Section 2: Background and Context .....	11
Model and Theory.....	11
Orem’s Theory of Self-Care .....	12
Rosswurm and Larrabee’s Model .....	12
Synthesis of Writings .....	13
Description of Terms .....	15
Relevance to Nursing Practice .....	16
Local Background and Context .....	18
Institutional Context.....	19
Definition of Self-Management and the Teach-Back .....	19
Federal Context.....	21
Role of DNP Student .....	21
Summary .....	23



Section 3: Collection and Analysis of Evidence.....	24
Introduction.....	24
Practice-Focused Question.....	25
Sources of Evidence.....	26
Literature Review.....	27
Evidence Generated for the Doctoral Project .....	31
Analysis and Synthesis .....	34
Summary .....	34
Section 4: Findings and Recommendations .....	36
Introduction.....	36
Findings and Implications.....	37
Implications.....	41
Recommendations.....	42
Strengths and Limitations .....	43
Summary .....	44
Section 5: Dissemination Plan .....	45
Analysis of Self.....	45
Scholar .....	45
Practitioner.....	46
Project Manager .....	47
Challenges, Solutions, and Insights .....	47
Summary .....	49

References .....	50
Appendix A: COPD Education Packet .....	58
Appendix B: Literature Matrix .....	64
Appendix C: Teach-Back Method .....	67
Appendix D: Staff Teaching Plan .....	68
Appendix E: Poster Board .....	70
Appendix F: Self-Management Packet Survey .....	71

List of Tables

Table 1 *COPD Education Initiative Using Rosswurm and Larrabee's Model* .....13

Table 2 *Results From the Surveys*.....40

## Section 1: Nature of the Project

### **Introduction**

Chronic diseases, such as cancer, cardiovascular diseases, and chronic obstructive pulmonary disease (COPD), are major causes of morbidity, disability, and mortality, with COPD now the third leading cause of death in the United States and across the world (Centers for Disease Control and Prevention, 2017). COPD-related exacerbation is the leading cause of hospital admissions among older adults and is the cause of an estimated 120,000 deaths annually in the United States (Schnell et al., 2012). For patients to manage COPD effectively, providers need to effectively relay appropriate information to their patients regarding self-management of COPD (Bentsen et al., 2012). Research affirms the benefits of training and education for health care professionals' knowledge about practices of COPD treatment (Wisniewski et al., 2014).

Through education, providers can improve the health status of their patients and avert unnecessary COPD-related readmissions and life-threatening exacerbations using techniques that allow quick recognition of the triggers and symptoms of exacerbations (Man et al., 2015). Education can improve the knowledge and attitudes of healthcare providers and enable them to impart self-management skills to their patients, which may further improve treatment adherence and reduce the number of COPD exacerbations (Liang, Abramson, & George, 2017).

For patients with COPD, poor adherence to treatment can result in poor outcomes and a decrease in quality of life, which can further increase health care costs. There is a need for staff education to empower staff to guide patients in the process of proper COPD

self-care, which includes (a) initiating the prescribed therapy; (b) implementing the therapy as prescribed, including inhalation techniques, frequency, and correct dose; and (c) subsequent patient devotion to taking the therapy prescribed, such as getting timely refills (Van Boven, 2016).

Healthcare professionals, including nurses, play a vital role in helping patients adhere to prescribed treatments. Nurses interact with patients throughout the entire healthcare delivery experience. In this way, nurses in particular have the responsibility of relaying vital information and interpreting health care information between providers, patients, and patients' families (Loghmani, Borhani, & Abbaszadeh, 2014).

This COPD staff educational project (Appendix A) created a positive change as it focused on evidence-based education for staff regarding giving instructions about COPD treatment courses to promote self-care management and improve the overall health of patients with COPD. Improvement of treatment adherence among patients through patient education and behavioral counseling can reduce rates of morbidity and mortality among patients with COPD (Wisniewski et al., 2014). Therefore, this COPD staff educational project was of utmost importance to patients with COPD, to the health care sector, to the families of patients, and to the community at large.

### **Problem Statement**

The setting for this COPD staff education doctoral project was a community clinic in the Eastern United States. The clinic sees a total of 200 patients who suffer from COPD. The clinic did not have a COPD discharge education plan with a teach-back tool for staff to teach patients with COPD on self-care management.

According to clinic tracking records in 2017, over 80% of the patients with COPD at this clinic had frequent COPD exacerbations, with a hospital readmission rate of 23.2% (E. Enohmbi, personal communication, April 4, 2016). The clinic's statistics were higher than the national benchmark of 21% (Centers for Medicare & Medicaid Services [CMS], 2018). The clinic therefore needed to follow the guidelines set forth by CMS as stiffer financial penalties for excessive readmissions are now in place (CMS, 2018). This COPD staff educational project has the potential to decrease COPD exacerbation and hospital readmissions in the future.

This COPD educational project emphasized the need for staff to educate patients. Staff education on COPD self-management is significant to nursing practice because it can be used by staff to assess and evaluate the effectiveness of patient education, which may further improve health care outcomes of patients with COPD.

### **Purpose**

The gap in nursing practice that was bridged by this COPD staff educational project was the lack of evidence-based teaching for staff and patients. The purpose of the project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational packet for patient self-management.

Self-management knowledge can support patients with COPD in managing their symptoms; preventing complications; and making adequate decisions on medication, exercise, breathing techniques, diet, and contacting health care providers (Wisniewski et al., 2014). The clinical question this COPD staff educational project answered was the

following: Does the literature support the implementation of staff education, using the teach-back method, for COPD self-management? The answer is yes, literature supports the use of staff education using the teach-back method for COPD self-management.

This COPD educational project contributed toward solving the issue of COPD self-management and increased exacerbations by providing staff with a teach-back educational tool for patient education to help foster patients' understanding of their treatment plan, thereby supporting positive patient outcomes. This educational project has the potential to change health behaviors and equip patients with skills to actively participate in the management of their disease.

### **Nature of the Doctoral Project**

Quality and relevant literature from prior studies whose findings demonstrated the need to educate staff and patients within the health care delivery process were searched to meet the purpose of this COPD staff educational project. To find this literature, I used key phrases and words such as *self-care*, *self-management*, *COPD exacerbation*, *COPD readmission*, *COPD education*, and *teach back*. I found journal articles and other literature from the following databases: CINAHL, ProQuest Nursing and Allied Health Source, MEDLINE, Google Scholar, Cochrane CENTRAL, GOLD strategy documents for COPD care, OVID Online, and PubMed. The National Heart, Lung, and Blood Institute (NHLBI), the World Health Organization, the Centers for Disease Control and Prevention, and CMS were also sources of data and information. The COPD articles selected on exacerbation, patient teaching, teach-back methods, and self-management were current, having been written within the last 5 to 7 years.

Following the Walden manual for staff education (2017), the goal of this COPD educational project was to inform and improve knowledge and skills of staff on the application of teach-back strategies in self-management to improve COPD patient outcomes. The steps used in developing this staff educational COPD project included planning, implementation, and evaluation of the project. The steps outlined for ethics approval in the Walden manual for staff education (2017) were followed for this project. After obtaining approval from Walden University's Institutional Review Board (IRB) and upon agreement of the community health clinic's leadership to have its staff participate in this COPD educational project, I explained the purpose of the project to all of the participants (i.e., the clinic's staff). They were not compensated for their participation, and they were taught how to use the teach-back method during their scheduled work time.

The approach used to organize the evidence for this COPD staff educational project was the level of evidence hierarchy by the U.S. Prevention Service Task Force (USPSTF), which is used to categorize the strengths and weaknesses of evidence. The hierarchy consists of five levels (with Level 1 being strongest and Level 5 being suggestive or weakest; USPSTF, 2016). A literature review matrix was used to support the project's relevance (Appendix B). The educational materials (Appendix A) that were developed were consistent with the COPD Foundation's guidelines (2018), which included materials on symptom management, exercise, diet, medication adherence, breathing techniques, and contacting health care providers. The COPD Foundation (2018) is a recognized authority as a repository of initiatives to improve the lives of people



suffering from COPD. It achieves this aim through education for health care staff and patients, caregivers, and family members.

The teach-back tool was used to help staff improve patients' ability to assimilate and internalize self-management information aimed at reducing COPD exacerbations (Centrella-Nigro & Alexander, 2017). The clinic's staff were taught the teach-back method which can be used to ensure that patients understand aspects of their medical care and treatment by asking them to explain, in their own words, their treatment instructions and by reteaching patients until they can fully grasp the instructions (Teachbacktraining.org, 2016).

By implementing the teach-back method for conveying self-management information, the clinic's staff engaged in an evidence-based educational method that provided information to, and required immediate feedback from, patients through return demonstration. This educational project involved bridging a gap in practice resulting from a lack of evidence-based educational initiatives for staff related to patients with COPD. This educational project has the potential to increase the skills of staff to effectively educate patients to self-manage COPD, thereby improving quality of life.

### **Significance**

This project had significant implications for the clinic's stakeholders, who were the nurse manager, medical director, clinic manager, and lead respiratory therapist. The project also has significant implications for patients with COPD and their families, nurses, providers, and administrative staff. The community clinic may benefit from the project through potential positive outcomes involving the reduction of COPD

exacerbation rates. The staff of the clinic may benefit from evidence-based educational interventions through improved communication with their patients through teaching, given that the project has the potential to facilitate better self-management of COPD; additionally, nursing staff may use the education packet as a foundation for self-management of other diseases. Patients may also benefit from the project in that it has the potential to assist patients in effectively managing their disease and gaining control of their health, thereby reducing related disabilities, improving health behaviors, and improving health status, which may further lead to a decrease in caregiver burden. The families of patients with COPD may also benefit through a reduction in caregiver burden.

This COPD staff educational project may contribute to nursing practice. Because most chronic conditions are linked to lifestyle, self-management is an approach that can be used in tertiary prevention. Self-management encompasses creating healthy lifestyles to prevent illness early in life (primary prevention) and providing strategies for mitigating illness and managing it in later life (secondary and tertiary prevention; Sivia, 2011). As trusted and educated health professionals, nurses have an important role to play in self-management across the three realms of prevention. Nurses are at the forefront of implementing self-management-based illness prevention and wellness programs daily in clinical settings; therefore, this COPD staff education project may also form a basis for nursing research on self-management interventions that will advance wellness and prevent illness through the provision of the evidence necessary to improve health outcomes.

This COPD staff education project on self-management may be transferable to other chronic illnesses because self-management can serve as a model for tertiary prevention by involving patients at the level of their functional status so that they may manage their own tertiary prevention efforts (Sivia, 2011). Such interventions teach problem solving and creativity in managing illness, are transportable to various settings, and ease the use of resources in the community.

This COPD educational project has significant implications for social change. COPD is one of the most common forms of lung disease in the world (Csikesz & Gartman, 2014); according to the Global Initiative for Obstructive Lung Disease (GOLD; 2018), COPD is a major source of chronic morbidity and mortality throughout the world. Approximately 3.17 million people died from COPD in 2016 alone. In the European Union, the direct costs of respiratory diseases constitute over 6% of the health care budget of the entire region; COPD alone accounts for 56% of the health care budget, which is estimated to be 38.6 billion Euros, while in the United States the cost is estimated to be \$50 billion (Guarascio, Ray, & Finch, 2013). COPD exacerbations account for the greatest burden on the health care system; health care costs rise with the progression of the disease. To mitigate these expenses, principles of self-management were developed in the early 1990s to maximize improvements in care and to reduce the utilization and costs of health care (Csikesz & Gartman, 2014). Aggressive self-management initiatives have been developed for chronic diseases that include diabetes and cardiovascular diseases, but there is a paucity of information on self-management for COPD (Sivia, 2011). The above statistics and arguments indicate how significantly

COPD has impacted individuals, communities, and nations. This educational project promoted self-care management of patients with COPD by improving treatment adherence, thereby decreasing COPD exacerbation and ultimately reducing the economic burden of COPD.

### **Summary**

COPD is a global disease that is now the third leading cause of death in the world. It is also a burden on the health care industry. In the United States, COPD affects approximately 30 million people, and 3.2 million people died from COPD in 2016 alone. The costs for COPD treatment are estimated to be \$50 billion, with \$20 billion being indirect costs and \$30 billion being direct costs. COPD exacerbations contribute enormously toward healthcare systems' financial burden. To reduce these expenses, principles of self-management were developed in the early 1990s. The self-management technique improves the quality of the life of the patient and reduces the utilization and costs of health care.

Self-management was also developed as a major approach for reducing the incidence of COPD exacerbations, but few patients are skilled enough to self-manage their health condition (Csikesz & Gartman, 2014). By incorporating patient education in routine care using the teach-back approach, the staff at the clinic encouraged their patients to practice self-management for better outcomes and reduction of exacerbations. This project was a staff education initiative that helped the staff gain the skills needed to teach their patients the techniques of self-management and adherence to treatment plans. In the next section, I discuss the background of this DNP project, the model and theory

that guided the project, my role in the project as a DNP student, and the project's relevance to nursing practice.

## Section 2: Background and Context

The practice problem addressed in this DNP project was that the community clinic for this COPD staff educational project did not have an education plan for the teach back tool for staff to use while educating patients nor was there an education plan to teach patients on self-care management of their COPD. The clinical question this COPD educational project answered was as follows: Does the literature support the implementation of staff education, using the teach-back method, for COPD self-management? The purpose of the project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational packet for patient self-management.

This section includes the concepts, models, and theories that guided the implementation of this COPD educational project. Furthermore, the project's relevance is addressed, a literature review is presented, and the project's local background and my role in the project as a DNP student are described.

### **Model and Theory**

Proper adherence to COPD treatment is key to self-management of the condition, leading to positive outcomes and reduced rates of death among people with COPD. Healthcare staff should accept patient teaching as a major part of their work and endeavor to improve communication with their patients. I used Orem's (1959) self-care theory to guide the principle of self-management, while Rosswurm and Larrabee's (1999) evidence-based practice model guided the practice change.

**Orem's Theory of Self-Care**

I adopted Orem's theory of self-care as a basis for this project because it focuses on how to maintain health for people suffering from chronic diseases, emphasizing the capability of each person to carry out self-care (Siminerio, 2010). Orem's theoretical assumptions included the ideas that patients should be actively involved in their treatment plan and that self-care is an important part of primary care for improving outcomes (Orem, 1959). Self-care theory entails the metaparadigm of nursing, which consists of person, environment, health, and nursing (Orem, 2001). When properly understood and applied, Orem's theory can be effectively used to design and implement various interventions addressing chronic illnesses, which could lead to positive outcomes.

**Rosswurm and Larrabee's Model**

Rosswurm and Larrabee's (1999) evidence-based practice model was chosen for this COPD educational project because it provides a systematic approach for evidence-based practice change. Rosswurm and Larrabee's model, which integrates the concepts of self-efficacy, self-care, and self-management (Facchiano, Synder, & Nunez, 2011), consists of six stages: (a) evaluate the need for change, (b) connect problem interventions and outcomes, (c) synthesize the best evidence, (d) design practice change, (e) execute and evaluate, and (f) incorporate and maintain a change in practice (see Table 1).

Table 1

*COPD Education Initiative Using Rosswurm and Larrabee's Model*

<i>Assess:</i> Is there a need for practice change?	<i>Connect:</i> Link the problem with intervention and outcomes	<i>Synthesis:</i> Grade the evidence	<i>Design:</i> Devise a plan	<i>Execute and evaluate:</i> Put the plan into action and assess	<i>Incorporate and sustain:</i> Integrate and hardwire the change
Interview key stakeholders	Reduce COPD exacerbation rates	Review current literature to include evidence-based clinical guidelines	Development of self-management packet using teach-back method	Present packet to stakeholders; educate staff using self-management packet	Make self-management packet readily available for staff to give to patients
Review clinic COPD exacerbation Rates	Standardize COPD education on treatment plan adherence; ensure positive patient outcomes	USPSTF hierarchy to grade the evidence			Initial and biannual education to staff

*Note.* The steps of Rosswurm and Larrabee's (1999) model were integrated into a table to display how the model was used guide the project.

### Synthesis of Writings

Orem's (1959) theory emphasizes self-care; according to this theory, all human beings have a desire to care for themselves. Simmons (2009) stressed the importance of engaging clients concerning care that they receive; patients should be encouraged to be responsible for their self-care in order to minimize diseases and healthcare costs. Patients who are given the necessary skills to care for themselves tend to recover more quickly than their counterparts who do not have such skills; the model also identifies guidelines for caring for patients with chronic illnesses. Isenberg (2006) indicated that the theory of self-care provides a nursing guide in multiple practice settings and engages clients throughout their lifespans. The self-care and self-management components of this model



include support from the health care provider community as the provider empowers patients through education to take care of themselves (Orem, 2001). If patients with chronic illnesses are empowered to think that they have the power to control COPD exacerbations by adhering to treatment plans and preventive measures, they will likely act upon that thought.

Rosswurm and Larrabee's (1999) evidence-based practice model is one of the models that have been shown to be very helpful in evidence-based practice. Rosswurm and Larrabee's model offered the best framework for this DNP project's design because the model was congruent with a continuous quality improvement approach, as such an approach involves ongoing assessment of each process related to patient outcomes (Long, Burkett, & McGee, 2009). This model was originally developed to focus on research utilization but has been updated and refined to fit the evidence-based practice (EBP) paradigm (Rosswurm & Larrabee, 1999). This model is practitioner oriented and emphasizes the critical thinking process. According to this model, individual characteristics of the EBP user and organizational practice influence the implementation of EBP along with external factors, which include organizational standards, protocol, and formal research. This model involves the staff nurse in the process of EBP but acknowledges the importance of patient values and the expertise available from stakeholders (White & Dudley-Brown, 2012). This model lays emphasis on individual nurses as critical thinkers but includes groups of clinicians as well (Rosswurm & Larrabee, 1999).

The staff at the clinic selected for this project needed education to meet their responsibilities of teaching their patients self-management skills based on Orem's theory. Educating patients using the teach-back approach can instill in them the ability to recognize the symptoms of exacerbations and to control them. To maximize the health of patients with COPD, significant changes in lifestyle must be accomplished (Hoffman, 2013). As healthcare professionals who deliver direct care, staff can contribute toward these changes through giving patients educational opportunities and strategies that increase self-care, thus making a positive impact on patients' quality of life.

### **Description of Terms**

*Chronic obstructive pulmonary disease (COPD):* An umbrella term for progressive lung diseases that include emphysema, chronic bronchitis, and refractory or nonreversible asthma, which are characterized by long-term obstruction of airflow that interferes with normal breathing and is not curable but is progressive in nature (COPD Foundation, 2018).

*Teach-back:* An approach that staff can use to assess whether patients understand information given to them regarding their medical care and treatment by asking patients to restate the information in their own words or through demonstration, and then re-educating patients until they are able to fully grasp concepts (Dantic, 2014).

*Self-management:* The behavior that patients suffering from chronic diseases engage in to actively identify the challenges and problems associated with their health condition and to resolve these challenges and problems (Grady & Gough, 2014).

*COPD exacerbation:* A sudden worsening of COPD symptoms that are accompanied with shortness of breath as well as an increase in quantity and change in the color of the sputum (American Thoracic Society, 2014). An exacerbation episode takes a long time to recover from and is usually triggered by an infection in the lungs.

### **Relevance to Nursing Practice**

COPD has been known to mankind for over 200 years. The disease was initially recognized with the use of the stethoscope and spirometer, and spirometry remains the most effective means of identification and assessment of the course of COPD and responses to therapy (Sivia, 2011).

It is estimated that 50% of patients suffering from chronic diseases do not obtain any benefits from their treatment plans because of poor adherence resulting from a poor understanding of treatment instructions (Costa et al., 2015). Estimates indicate that 90 million Americans suffer from one or more chronic diseases (Hoffman, 2013); because of the unprecedented increase in the prevalence of chronic diseases such as COPD (Sivia, 2011), there is a need for patient empowerment through education. Healthy behavior, such as effective symptom self-management, can prevent adverse events, including exacerbations, among people suffering from COPD. Patient education is a crucial constituent of self-management that causes changes in patient actions leading to improved patient outcomes, which further improve quality of life and health status (Payne, 2017).

In today's nursing practice, research has demonstrated a lack of staff-patient education on self-management; it further shows that staff rarely apply an evidence-based

educational model in teaching their patients (Sivia, 2011). Research has also shown that self-management serves to empower and prepare patients so that they can learn to manage their health, but a recent survey among patients showed a deficit in patients managing their diseases due to lack of provider education (Siminerio, 2010). Another research study showed an increased need for provider-patient education to promote self-care management of chronic diseases (Davaridolatabadi, Sadoughi, Meidani, & Shahi, 2013). Research has also indicated that to maximize the health of patients with COPD, significant changes in lifestyle must be accomplished (Hoffman, 2013). Therefore, there is a need to improve nursing practice with the use of the teach-back method in COPD patient education on self-management.

At the community clinic targeted in this project, no strategies or standard practices had been used previously to address this gap in practice of lack of evidence-based COPD patient education. In the past, staff randomly taught patients with COPD about self-management with no structure. Evidence-based or structured patient education ensures that patients are well informed about their own health (Siminerio, 2010).

This COPD practice improvement project contributed to solving the issue of lack of evidence-based staff-patient education on self-management by identifying and supporting how education improves patients' understanding of their medical care, which may lead to positive patient outcomes (Hoffman, 2013). This project may contribute to nursing science by promoting the implementation of best practices that foster self-management and patient-centered care in patients with COPD, in that it provides an understanding of the importance of education and its impact on patient self-management,

which is an indispensable component of the management of COPD. Using EBP, such as the teach-back method, facilitates educational approaches that encourage patient decision making and self-management. When practitioners used the teach-back method for patients' instructions, patients easily understood and remembered the information taught. Once patients understand the implications of self-management, they are more likely to change their behaviors and adhere to their treatment plan. Adequate patient education leads to effective self-management of the disease (Epstein & Street, 2011). Findings from a meta-analysis conducted by Payne (2017) to evaluate the effectiveness of the teach-back approach in reinforcing patient education indicated that the teach-back approach was associated with improved outcomes related to disease knowledge, adherence, self-efficacy, and inhaler use techniques. By incorporating the teach-back method in patient education routinely, health care providers can improve patient adherence to treatment and enhance positive outcomes (Bahri, Saljooghi, Noghabi, & Moshki, 2018). As healthcare professionals who deliver direct care, nurses can contribute toward practice changes by giving patients educational opportunities and strategies that increase self-care, thus making a positive impact on patient quality of life. Therefore, educational interventions by staff, such as this COPD staff educational project, play an important role in health care as indicated by these research findings.

### **Local Background and Context**

The community clinic where this COPD staff educational project was implemented has 100 staff who serve an estimated 200 patients suffering from COPD. Exacerbation of COPD is the leading cause of hospital admissions in older adults and is

the cause of 120,000 deaths per year in the United States (Schnell et al., 2012), and data from the clinic indicated that approximately 80% of the patients suffered from COPD exacerbation episodes that had required admission to a hospital at one time or another during their illness. The ages of patients in this population ranged from 18 to 85 years.

### **Institutional Context**

The community clinic where this COPD staff education doctoral project was carried out did not have an education plan for the teach back tool for staff to use while educating patients nor was there an education plan to teach patients on self-care management of their COPD.

Self-management requires patients to have educational and supportive interventions from staff that allow patients to increase and improve their skills in managing their illness (Costa et al., 2013). In October 2013, the CMS regulation for hospital inpatient admission was expanded to include COPD-related care (Thaker, 2015). In the same year, the COPD Foundation convened a National COPD Readmissions Summit in which it made recommendations to reduce recurrence of episodes of COPD exacerbations and hospital readmissions. The recommendations included promotion of self-management skills among patients with COPD. This COPD educational project was consistent with the COPD Foundation's recommendations.

### **Definition of Self-Management and the Teach-Back**

In self-management of chronic illness, the patient takes on the responsibility of doing what it takes to manage the illness efficiently (Epstein & Street, 2011). Patients suffering from chronic diseases are tasked with self-management decisions and they

therefore need to be properly informed by staff (Grady & Gough, 2014). When patients are equipped with skills for managing their diseases, improved health outcomes are likely to be achieved. With the increase in global prevalence of chronic diseases, the importance of providers' roles to equip their patients with skills for self-management cannot be overemphasized. Staff can help equip patients with necessary information so that patients make lifestyle changes that will improve self-management instead of relying solely on the providers to manage the diseases for them through medication adjustments.

Medical professionals have a responsibility to inform their patients on how to lead healthier lives; they need to explain diagnoses, medications, and treatment plans in simpler terms for better understanding (Dantic, 2014). Research findings support the efficaciousness of the teach-back method for both staff and patient education (Wisniewski et al., 2014). The teach-back method promotes the approach of engaging staff in the education process so that learners' gaps in understanding the educational materials can be highlighted and addressed. The educator repeats the material until it is properly understood by the students (i.e., patients). Evidence-based literature supports the teach-back method as being effective when applied in this manner. Using the teach-back approach, healthcare staff are engaged and asked to explain or demonstrate what patients have learned after receiving instructions (Dantic, 2014). If a patient is unable to demonstrate appropriate understanding, the patient is re-educated until mastery occurs so that both the patient and the nurse practitioner (NP) engage in a beneficial NP-patient relationship.

## **Federal Context**

The setting for this COPD staff education doctoral project was engaged in health improvement and care of the patients consistent with the recommendations from the Joint Commission (2017) which monitors health organizations' levels of performance in patient treatment and care. The Joint Commission is an independent, non-profit organization that works to accredit and certify health care organizations in the United States (Thaker, 2015). CMS (2018) introduced a value-based health care system in which providers are paid based on the outcomes of their patients, the clinic was at an increased risk of financial loss due to the high COPD exacerbation and hospital readmission rate.

## **Role of DNP Student**

As an expert clinician, my professional context and relationship to this EBP project was based on my unquenchable desire to see patients function at an optimal level regardless of their medical conditions; the setting of the COPD staff educational project was also where I gained my practicum experience as a DNP student. Given the clinic's troubling statistics on COPD exacerbation of over 80%, this COPD educational project was a personal achievement as patients will be better managed and have improved quality of life. This COPD staff educational project increased awareness of the key role staff play to improve the health outcomes of people suffering from COPD.

The main role I played in relation to this COPD staff educational project was to develop and facilitate the adoption of an evidence-based COPD patient and staff education packet into the practice using the teach-back method. I chose this COPD educational project because of my certainty and belief that better management of a



disease starts with better education. The burden COPD places on loved ones and patients led to my passion for carrying out this COPD Capstone project and helping patients with COPD. As a psychiatric and family nurse practitioner, seeing how COPD has led to psychological issues in caretakers and patients leading to depression and anxiety disorders also fueled this passion. It is no surprise on how much emphasis is being placed on reducing COPD hospital readmissions since COPD is the leading cause of hospital admissions and is the cause of 120, 000 deaths per year in the United States (Costa et al., 2012).

My motivation for this doctoral project was based on my passion in managing patients with COPD . Having my practicum experience at a clinic with 80% of patients with COPD exacerbations equipped and fueled my drive in carrying out the project. My project also has the potential to contribute positively towards reducing this percentage (80%) of patients with COPD exacerbation. Given my ultimate goal of pursuing research on COPD, this educational project also broadened my knowledge base on COPD as I reviewed the literature for the most current evidence-based practices and ascertained history and future visions of the organization.

The basic principle that guided this educational project was the delivering of holistic and individualized care. The COPD-specific education packet contributed towards the individualization of the target population's clinical pathway. This principle can be easily interpreted as a potential bias given there are still practitioners who hold the belief that care should exist in silos (Csikesz & Gartman, 2014), such practitioners

practice generalized care and not individualistic care. To curtail this, I ensured that evidence supported the interventions.

### **Summary**

The model and theory that were applied in the implementation of this COPD staff educational project are Orem's self-care theory and Rosswurm and Larrabee's model. Current literature indicates that patients with COPD have a lower adherence rate compared to adherence for other health conditions (Mahramus et al., 2014). Providing education in empowering patients, the review of current literature supporting the effectiveness of patient education in positive outcomes using the teach-back method, and the relevance of the project to treatment adherence and reduction of COPD exacerbations have been examined. The gap in literature that drove this project was lack of an evidence-based educational method for the staff and patients to assist in serving patients on self-care management. In section 3, the methods used to accomplish the project, the sources of evidence, and the analysis and synthesis of evidence are discussed.

### Section 3: Collection and Analysis of Evidence

#### **Introduction**

The clinic where this COPD education project was implemented had 200 patients suffering from COPD, with over 80% having COPD exacerbations according to the clinic's tracking records. However, this clinic did not have an education plan for the teach-back tool for staff to use while educating patients nor was there an education plan to teach patients on self-care management of their COPD. The purpose of the project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational packet for patient self-management.

The clinic for this COPD education project has 100 staff who provide direct patient care. This COPD educational project was consistent with COPD Foundation (2018) recommendations. When patients are equipped with skills for managing their diseases, improved health outcomes are likely to be achieved. Staff can help equip patients with necessary information so that patients make lifestyle changes that will improve self-management instead of relying solely on providers to manage their diseases for them through medication adjustments. The teach-back method promotes the approach of engaging staff in the education process so that learners (patients) repeat the material until it is properly understood. The clinic was at an increased risk of financial loss due to high COPD exacerbation and hospital readmission rates and was engaged in health improvement and care of patients consistent with recommendations from the Joint Commission (2017).

I used the guidelines provided by the COPD Foundation (2018) and Orem's model of care (2001) to develop a comprehensive staff educational packet on COPD self-management strategies. In this section, I discuss the practice-focused question; provide evidence from the current literature that supported the project; discuss ethical protections; and address the project's procedures, analysis, and synthesis of evidence.

### **Practice-Focused Question**

The clinic's statistics for COPD exacerbations were higher than the national benchmark of 21% (CMS, 2016a); therefore, the clinic was required to follow the guidelines set forth by CMS, as stiffer financial penalties for excessive readmissions are now in place (CMS, 2016b). The clinical question that this COPD educational project answered was the following: Does the literature support the implementation of staff education, using the teach-back method, for COPD self-management? The purpose of the project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational packet for patient self-management. This COPD staff educational project has the potential to decrease COPD exacerbation and hospital readmission rates at the clinic in the future. Another gap in nursing practice that was bridged by this COPD staff educational project was the lack of evidence-based teaching by staff. The literature review supported the need for a staff educational package on COPD self-management to prevent future COPD exacerbations.

Operational definitions specific to the COPD staff educational project were developed for the terms *teach back* and *self-management*.

*Teach back:* An approach that staff can use to assess whether patients understand the information given to them on their medical care and treatment by asking them to restate it in their own words or through demonstration, and then re-educating them until they are able to fully grasp concepts (Dantic, 2014).

*Self-management:* The behavior that patients suffering from chronic diseases engage in to actively identify the challenges and problems associated with their health condition and to resolve these challenges and problems (Grady & Gough, 2014).

### **Sources of Evidence**

To provide evidence from literature that supported the purpose of this project, key words and phrases that were used to search research databases, which included *self-management, exacerbations, chronic obstructive pulmonary disease (COPD), teach back, treatment adherence, COPD, and self-efficacy*. Using Walden University's library, I searched the following databases: CINAHL, ProQuest Nursing and Allied Health Source., MEDLINE, Google Scholar, Cochrane CENTRAL, GOLD strategy documents for COPD care, OVID Online, and PUBMED. The National Heart, Lung, and Blood Institute (NHLBI), the World Health Organization, the Centers for Disease Control and Prevention, CMS, and the COPD Foundation were also used to identify sources of information and data.

Current literature, COPD guidelines from the COPD Foundation (2018), and current evidence-based practices were reviewed to support and develop this COPD staff educational project, an evidence-based COPD educational packet for staff on self-management using the teach-back method. The literature used ensured that the education

provided was based on the most recent evidence-based practices. The purpose of this DNP project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational packet for patient self-management., which aligned with the clinical question, given that the literature reviewed supported the need for a staff educational package using teach-back method for COPD self-management.

This COPD staff educational project has the potential to decrease COPD exacerbations and hospital readmissions in the future, hence addressing the practice focus question and purpose of this COPD staff educational project.

### **Literature Review**

Research articles that were reviewed addressed the effectiveness of provider education, the effectiveness of the teach-back method, the gap in nursing practice, and the gap in the literature.

**Effectiveness of provider education.** Nieuwlaat et al. (2014) conducted a meta-analysis of research studies conducted between 2007 and 2013 on the role of interventions for educating providers to promote patient adherence to treatment. The authors selected randomized controlled trials (RCTs) that compared a group of providers receiving an educational intervention to improve medication adherence for their patients with a group whose members received no such intervention. Their findings revealed that educational interventions involving providers improved treatment adherence among patients with various chronic illnesses.

Lack of treatment adherence is one of the biggest problems in the misuse of medication among patients. Mahramus et al. (2014) conducted a controlled experimental study to assess the effectiveness of an educational intervention on antibiotic treatment adherence among 126 patients. Sixty-two of them were in the control group, and 64 were in an experimental group. The experimental group went through training sessions done by providers regarding treatment dosage, duration, and use of medication. The participants' knowledge of antibiotics was evaluated before the intervention, with the control group receiving routine care devoid of training. The results of the study indicated that the implementation of an educational intervention led by providers increases treatment adherence.

Treatment adherence is necessary for positive outcomes, and health care providers are in a unique position to deliver education that promotes adherence. Van Boven (2016) performed a meta-analysis of studies conducted between 1996 and 2012 to determine the effectiveness of health-care-provider-delivered education regarding patient adherence to treatment among young adults living with chronic diseases. The findings of these studies revealed that provider-delivered education for participants suffering from chronic diseases can be effective in improving treatment adherence. These results supported the need for my staff educational project.

**Effectiveness of the teach-back method.** Patient education can be conducted using printed, verbal, and demonstrated instruction by providers. Marcus (2014) conducted a systemic review of research studies conducted between 1990 and 2014 to assess the effect of verbal education by providers on the literacy of their patients. The

authors evaluated the teach-back method of educating patients to ensure that they had learned from the education session through repetition of the information given to them. The findings revealed that patients who were subjected by their providers to this type of education were able to effectively understand how they could manage their health.

In a qualitative study, Morony et al. (2017) sought to explore telenursing experiences using a teach-back approach to increase the knowledge of the patients in a maternal child health helpline. The authors trained the nurses on how to use the teach-back method to give appropriate health care information to their patients on the helpline service. Following the training, the authors interviewed both the nurses and the callers to the helpline service. The nurses reported that the teach-back approach was helpful in giving proper information to patients as well as clarification of misunderstood information. Additionally, the patients reported feeling empowered with more knowledge from the nurses.

A quantitative study was conducted at the University of California, San Francisco Medical Center by nurses who worked in a heart failure unit (Beena & Jimmy, 2014). The study was conducted because evidence from the facility showed that patients had a low understanding of the importance of taking their medication and the seriousness of their health conditions. These nurses developed an educational packet for heart failure patients on medication adherence using the teach-back method. They further taught other nurses and providers how to use the teach-back method in educating their heart failure patients on medication adherence upon discharge. The findings demonstrated that the teach-back approach was helpful in assisting the providers in gaining the skills they



needed to communicate with patients. Furthermore, the patients benefited by gaining a better understanding of the information they received from their providers throughout all the phases of care.

**Implications for nursing.** Staff working with patients suffering from COPD need to undergo training to equip themselves with skills to effectively teach their patients self-management strategies, such as early recognition of the symptoms of COPD exacerbation and proper treatment adherence to improve outcomes (Lung Institute, 2017). Educational training can substantially improve the knowledge of health care staff and patients. Education can help staff support their patients throughout the continuum of care; consequently, staff, particularly those in primary care facilities, should take advantage of staff education programs that improve positive patient outcomes (Ferguson, 2011). Incorporating staff education into nursing practice would be of great benefit for both staff and patients. Staff education based on the teach-back method can promote self-management strategies in patients with COPD, as it can improve their knowledge about prescribed treatment plans, lead to better adherence, and ultimately reduce COPD exacerbations.

**Gaps in literature.** I searched the various databases to support the benefits of staff education for increasing knowledge among patients with COPD and self-management to reduce the occurrence of exacerbations and improve adherence to care consistent with Orem's theory. Although the evidence from the literature review indicated that staff education augments positive outcomes among patients with COPD, most of the articles I reviewed proposed that further research be conducted to address the

lack of evidence-based benefits of educational initiatives for staff working with patients with COPD (Kemppainen, et al., 2013; Marcus, 2014; Qureshi, Sharafkhaneh, & Hanania, 2014).

### **Evidence Generated for the Doctoral Project**

Given that this COPD educational project was a practice change project, the participants were staff at the community clinic, which had approximately 100 staff who provide direct patient care. Following Walden's manual for staff education (2017) and Rosswurm and Larrabee's model for practice change (1999), the goal of this COPD educational project was to help inform and improve knowledge and skills of the staff on the application of teach-back strategies in self-management to improve outcomes for patients with COPD, and to develop an evidence-based COPD educational packet for patient self-management.

The steps for developing the staff educational COPD project were planning, implementation, and evaluation of the project. The steps outlined for ethics approval in the Walden University (2017) staff education manual were followed for this project; therefore, approval from the IRB from Walden University and an agreement of the community health clinic's leadership to have its staff participate in this COPD educational project were obtained. Ethical protection was ensured by generalizing the location of the clinic and changing the names of partnered organizations such that the clinic and organizations were not identifiable, and all data collected were not identifiable to any individual.

After obtaining approval from the Walden University IRB and upon agreement of the community health clinic's leadership to have its staff participate in this COPD educational project, the purpose of the project was explained to all of the participants (clinic's staff) of the project. At the end of the educational session, surveys were distributed, completed, and collected anonymously.

The first step of this project was planning. The main stakeholders (i.e., the clinic administrator and other frontline level personnel, including the respiratory director, pulmonologist, medical director, and director of nursing, as well as other departmental leaders) were contacted to seek a buy-in for conducting the project at the clinic. I interviewed the stakeholders to gain insight into their viewpoints and to review the current baseline data, which included the COPD hospital readmission rate of 23.2% and COPD exacerbation rate of 80% as recorded in the 2017 clinic tracking records. I discussed with the stakeholders the feasibility of the project, presenting the problem of increased COPD exacerbations that led to an increased hospital readmission rate, quoting the clinic's statistics mentioned above. The problem suggested the need for staff education on COPD self-management using the teach-back method, which had the potential to improve the quality of health care delivery in the clinic using best clinical practices.

The second step involved research, literature review, and grading of the evidence. This step also involved developing the teach-back educational material on COPD self-management for the staff who participated in the project. I consulted with the COPD Foundation guidelines (2018) about the educational materials I developed. The materials

for the educational packet (Appendix A) included self-management approaches for optimal care of COPD, recognizing warning signs of exacerbations, and promotion of healthy living with COPD. The packet also included self-management guidance on medications, diet, activity, monitoring of signs/symptoms of exacerbation, and what to do in case of emergency. The materials were compacted into a brochure for easy access by the patients.

The third step was to convene a meeting with the stakeholders in which I presented the educational package for evaluation for appropriateness. Anonymous surveys (Appendix F) were given to the stakeholders to evaluate the efficacy, adaptability, and usefulness of the educational package. All recommendations by the stakeholders (which included using sixth-grade reading level, large prints, and more pictures) for modification of the material were consistent with GOLD guidelines (2018) and the COPD Foundation (2018). These changes were made.

The fourth step of the project was the implementation of the staff educational sessions and implementation of the packet using the staff teaching plan (Appendix D). The participants, who were the clinic's staff, were not compensated for their participation, but they were taught how to use the teach-back method on self-management of patients with COPD during their scheduled work time. Each session lasted 30 minutes and focused on training staff to adequately and routinely educate patients using these materials. The staff then completed the same anonymous surveys which were completed by the stakeholders one week after the teaching sessions.

### **Analysis and Synthesis**

The surveys that evaluated the potential to increase patient knowledge of COPD, relevance to the population, ease of format, ease of integration into practice, and increase in quality of care were completed anonymously by the stakeholders prior to the teaching sessions and was also completed by staff one week after the teaching sessions. The surveys were quantified based on the Likert scale. Each evaluator rated the degree to which each element had the potential of affecting efficacy and ease of adaptability of the packet on a scale of 1-5, in which 1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5 = *strongly agree*. I administered and collected the surveys to assure the integrity of the evidence collected during working hours one week after the teaching sessions. The surveys were numbered with no identifiable staff information. A private room was used to accommodate the staff to ensure privacy and quietness for the implementation of the educational session and when administering the surveys. The information from the surveys remained protected from disclosure outside of the project setting or to unauthorized persons, as all of the surveys were kept in a locked cabinet where only my preceptor and I had access.

The data collected from the surveys were analyzed using percentages. The responses on the surveys illustrated that the self-management packet was easily adaptable and effective in practice.

### **Summary**

COPD is a significant public health concern and has become the third leading global cause of death. The clinical question this COPD educational project answered was

the following: Does the literature support the implementation of staff education, using the teach-back method, for COPD self-management ? A complete in-depth literature review was done to support the clinical question and to accomplish the purpose of this COPD staff educational project. Evidence gathered from the literature review implied that there is a need for more evidence-based projects to establish firm conclusions about the need for rigorous teach-back-based staff educational interventions.

The National Heart, Lung, and Blood Institute (NHLBI), the World Health Organization, the Centers for Disease Control and Prevention, CMS, and the COPD Foundation were sources of information and data.

For the COPD staff educational project, I developed a COPD self-management packet that was evaluated by the community clinic's stakeholders and staff using surveys. The data from the surveys were analyzed using percentages. The findings and recommendations of the project are addressed in Section 4.

## Section 4: Findings and Recommendations

### Introduction

The designated clinic for this COPD staff education doctoral project did not have an education plan for the teach back tool for staff to use while educating patients nor was there an education plan to teach patients on self-care management of their COPD.

The gap in nursing practice that was bridged by this project was the lack of evidence-based teaching by staff . The purpose of the project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational packet for patient self-management.

The clinical question that this COPD educational project answered was the following: Does the literature support the implementation of staff education, using the teach-back method, for COPD self-management? Quality and relevant literature from prior studies whose findings demonstrated the need to educate staff and patients with COPD in the health care delivery process was searched. To find this literature, I used key phrases and words such as *self-care*, *self-management*, *COPD exacerbation*, *COPD readmission*, *COPD education*, and *teach back*. Furthermore, I found journal articles and literature from various databases, including the National Heart, Lung, and Blood Institute (NHLBI); the World Health Organization; the Centers for Disease Control and Prevention; CMS; the American Lung Association (guidelines on self-management for COPD); the Joint Commission (30-day COPD readmission rates and all-cause readmission guidelines); the National Guideline Clearinghouse (VADOD) Clinical Practice; Guideline for the Management of COPD; and GOLD evidenced based strategy

documents for COPD management. The choices of COPD articles on exacerbation, patient teaching, teach-back methods, and self-management were current, written within the last 5 to 7 years. The USPSTF (2017) level of evidence hierarchy was used to organize and analyze the evidence for this COPD staff educational project categorizing the strengths and weaknesses of the evidence referenced for this COPD educational project. A literature review matrix (Appendix B) was also developed to support the project's relevance.

### **Findings and Implications**

National data currently show that available health information in health care is too difficult for average Americans to use to make health decisions (Wisniewski et al., 2014), so a low literacy level was considered to make the self-care management materials easier to read and understand; as much of the packet as was reasonable was written at a sixth-grade reading level as evaluated using Flesch-Kincaid grade level tool. The definitions, medication adherence, and Infogram are higher but these will be explained when the teach back method is used. Many of the more difficult terms are necessary to portray the message. Large print and pictures were also incorporated into the packet, along with materials on using the teach-back method for patient education. Research has also indicated that to maximize the health of patients with COPD, significant changes in lifestyle must be accomplished, which include medication adherence, nutrition, smoking cessation, exercise, and a COPD action plan (Hoffman, 2013). Consequently, topics that were included in the COPD self-management packet included all of these.



After I edited the COPD educational package on self-management, I presented the packet to the stakeholders before the teaching sessions. Surveys to evaluate the efficacy, adaptability, and usefulness of the educational package were distributed to the stakeholders and the same surveys were given to the staff one week after the educational sessions. The surveys were made up of five items (Appendix F). Analysis and synthesis of the surveys indicated that practice site employees agreed on the importance of the self-management packet on COPD. Altogether, 80 surveys were handed out to the stakeholders and staff at the clinic, with all 80 returned. The stakeholders and staff approved the packet, pointing out the importance of this educational packet for patients with COPD.

A Likert scale was used to quantify the surveys with a scale of 1-5, in which 1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5 = *strongly agree*. Each evaluator rated the degree to which each element had the potential of affecting efficacy and ease of adaptability of the packet. My goal was for the clinic's staff and stakeholders to rate the self-management packet as *agree* or *strongly agree* by more than 90%, which was accomplished as more than 90% strongly agreed or agreed to all of the factors evaluated; therefore, the self-management packet was highly recommended. The factors that I evaluated were the potential to increase patient knowledge of COPD, relevance to the population, ease of format, ease of integration into practice, and potential to increase quality of care for patients with COPD. Table 2 contains results from the surveys, reported as percentages of evaluators who indicated *strongly disagree*, *disagree*, *neutral*,

*agree*, and *strongly agree*. There were no negative responses from the staff and stakeholders.

Table 2

*Results From the Surveys*

Items	Strongly		Neutral	Agree	Strongly
	disagree	Disagree			
1. Potential to increase patient knowledge of COPD	--	--	6%	8%	86%
2. Relevance to the population	--	--	--	8%	92%
3. Ease of format	--	--	5%	5%	90%
4. Ease of integration into practice	--	--	5%	9%	86%
5. Potential to increase quality of care	--	--	--	12%	88%

There were unforeseen limitations that may have impacted the findings of this staff educational project negatively. The limited time available for collecting the surveys, which was one week after the staff teaching sessions, resulted in two surveys not being returned on time, although the two surveys were included in the analysis. There was 80% staff participation during the teaching sessions; therefore, the surveys represented 80% of the clinic's staff responses. The data analyses could have been affected by the missing responses from 20% of the staff. I also faced some time constraints, in that all of the material had to be taught within 30 minutes during the staff's 1-hour lunch break, and distribution and collection of the surveys were done only during the lunch break. These factors could have affected the ratings, given that I felt as though staff rushed through the surveys and the teaching modules (Appendix D).

## **Implications**

The implications of the findings of this staff educational COPD self-management project may be significant for patients, communities, institutions, and systems. The findings suggest that this COPD staff educational project has the potential to increase patient knowledge, is relevant to the population, and has the potential to increase quality of life for patients with COPD. Cloonan (2018) found that self-management in patients with COPD led to a decrease in hospitalizations and an increase in quality of life, as it is known to be key in effective management of chronic diseases. By teaching patients with COPD self-management behaviors at the clinic, the staff at the clinic may contribute toward effective management of the disease, thereby decreasing COPD mortality and related disabilities. Institutions and systems such as hospitals, clinics, and health insurance companies may also benefit from the positive results of self-management of COPD due to decreased hospital and clinic visits, thereby reducing health care costs.

The potential implications for positive social change from this staff educational COPD project include the possibility that it will permit the staff at the clinic to deliver efficient and effective COPD treatment, decrease COPD-related complications, and improve patients' health outcomes. Health care staff may be able to effectively recognize and control patients' COPD exacerbations in a timely manner. The COPD self-management education may also encourage patients to be proactive in seeking to meet their health care needs and may empower patients with skills needed to manage their disease, thereby further decreasing complications and increasing health-related quality of life.

## **Recommendations**

The rising prevalence of COPD and associated complications pose a significant threat to the population of this clinic's community. Patient education is an important factor of self-management, but unassisted education is insufficient to achieve the goal of behavioral modification (Zwerink, 2016). The following were therefore recommended to the facility stakeholders and leadership team:

- Offer an ongoing community class on COPD self-management strategies.
- Track and trend the number of self-management packets given to patients and emergency room visits or clinic visits due to COPD exacerbations to ascertain the effectiveness of self-management strategies and make amends as needed.
- With each patient visit, reassess the need for more education on COPD self-management and emphasize its importance.

The recommended implementation plan for staff involves the administrative staff offering biannual staff teachings on COPD self-management using the teach-back method. The recommended implementation plan for patients is for the administrative staff to also offer an ongoing quarterly community class on COPD self-management strategies for patients. Additionally, with each COPD patient initial visit, staff will educate the patient on self-management strategies, and self-management materials will be given to the patient. As recommended for the administrative staff to track and trend the number of self-management packets given to patients, a positive trend will be a decline in COPD exacerbation emergency room visits or clinic visits that correlates with the distribution of the COPD self-management packets.

## **Strengths and Limitations**

There were many strengths of this staff educational project. There were no conflicts of interest, given that there was no monetary gain toward or contributions from the clinic. The clinic staff who participated in the project received no financial compensation. As such, the clinic did not influence the project outcome. The materials used for the self-management packets were evidence-based materials from the COPD Foundation and the American Lung Association, which are both accredited organizations. Another strength of the project was the inclusion of stakeholders who may further promote and support the implementation of the project at the clinic. This staff education on COPD self-management also has the potential to promote collaboration between clinicians and patients for better management of COPD. Another strength of the project is the 100% return rate of the surveys. Finally, the self-management packet was written with a low literacy level (sixth-grade English) when possible, with large print and pictures, which made it easier to read and understand.

A limitation of the project was the fact that not all of the staff at the clinic participated in the teaching sessions; hence, not all of the staff completed the surveys. This may have affected the findings of the project. Another limitation was the limited time allowed for the teaching sessions, which was 30 minutes; therefore, the materials taught to staff were rushed due to limited time.

A recommendation for future projects using similar methods involves the incorporation of a project team. In carrying out this project, I acted as the project manager, which, at some points, became overwhelming, given that I was unable to

delegate tasks to the staff. With the incorporation of the project team, its members could contribute toward day-to-day leadership skills in the planning, implementation, evaluation, and closing of the project.

### **Summary**

The clinic for this DNP project needed an evidence-based COPD self-management educational packet for patients; therefore, the purpose of the project was to develop an evidence-based COPD educational packet for staff on self-management using the teach-back method and an evidence-based COPD educational packet for patient self-management.

The social implication of this evidence-based DNP project is the potential to reduce COPD complications, COPD mortality, and health care costs, as well as to teach patients COPD self-management skills, thereby empowering patients to take ownership of their health care needs. In the next section, I discuss the dissemination plan for this DNP project and self-analysis.

## Section 5: Dissemination Plan

The priority in any dissemination plan is returning the results to the participants and organizations (Melnyk & Fineout-Overholt, 2015). For this EBP project, the findings were disseminated to the clinic using a poster board (Appendix E) one week after the project's completion. The poster was placed in the staff breakroom for easier visibility by the staff. The poster included the background, significance, purpose, methodology, outcome, and conclusion of this evidence-based COPD self-management packet using the teach-back method. The packet for patients, which includes information on COPD self-management (Appendix A) in a trifold brochure, will be made available for patients at the clinical site and used to guide patient education using teach back. The packet for staff includes both teach-back method information (Appendix C) and COPD self-management information (Appendix A).

The dissemination of the capstone project results to improve the delivery and quality of care is compatible with DNP Essentials II regarding the role of the DNP as a leader within the organization (American Association of Colleges of Nursing, 2006); therefore, the project findings will be released through publications in journals such as the *Journal of Nurse Practitioners* and other health care journals, which will be beneficial to future nurse practitioners and other health care providers, hence targeting other audiences and venues beyond the project's facility.

### **Analysis of Self**

#### **Scholar**

A characteristic of clinical scholarship is the use of analytical methods to assess



a practice for successful management of patients, to determine the need to develop an evidence-based practice, to evaluate outcomes within a practice setting, and to disseminate findings from the project to improve health care outcomes (Blanchette, Gross, & Altman, 2016). Developing and implementing a self-management packet for patients with COPD and staff at the clinic improved my knowledge on chronic disease management. As specified by Chism (2009), DNP graduates can impact patient care through skills attained during the DNP program. During this capstone project, I was able to apply the skills and knowledge taught throughout the DNP program at Walden University. As a scholar, I identified the clinic's problem and closed the gap through the development of an evidence-based COPD self-management packet.

### **Practitioner**

The nursing profession is still evolving, thereby promoting innovative approaches to nursing practice (Crow, 2017). As a nurse practitioner, I have a responsibility to advance the nursing profession. I sought to meet this responsibility by closing the gap in nursing practice through developing this COPD self-management packet, as the clinic had no evidence-based teaching for patients with COPD . The skills learned and developed during this staff educational project on COPD self-management will impact my nursing profession positively; this experience can be applied toward a comprehensive assessment of health issues in a complex health care institution leading to the development of healthcare policies.

## **Project Manager**

A doctoral degree program develops leaders in the nursing profession who can develop and implement evidence-based practice, hence translating research into practice (Sewell & Thede, 2016). Acting as a project manager, I implemented an evidence-based project on COPD self-management while collaborating with the clinic's stakeholders and end users to bring a positive change in the nursing profession. With the completion of this educational capstone project, I demonstrated the application of knowledge and skills that I had learned, including communication, teamwork, ethics, problem solving, and most importantly, the ability to evaluate, translate, and use research and evidence to improve health and quality-of-care outcomes.

My long-term professional goal is to bring awareness of the positive impact patient education has on chronic disease management, thereby decreasing health care costs. This awareness will be achieved through lobbying, ideally bringing about debate in law houses across the country to put more emphasis on staff to educate patients on chronic disease self-management. I will further lobby through nursing organizations such as the American Nursing Association (ANA), state representatives, and other legislative bodies to ensure that the voices of the healthcare staff are heard regarding the need for funding toward developing educational programs geared toward improving chronic disease self-management.

## **Challenges, Solutions, and Insights**

One of the biggest challenges faced during the DNP project was the delay in carrying out and implementing my project due to the long time it took for my proposal to

be approved. I was constantly being asked at the clinic about the project's implementation. This made the clinic stakeholders lose some faith in me, although I reassured them. Another challenge was the new electronic health record (EHR) implementation, which was going on simultaneously with planning and implementation for this COPD project. This was distracting for the staff, who felt that they were involved in many changes at the same time; I overcame this by completing the staff education within a week and did not delegate tasks to the staff so that the staff could focus more on learning the new EHR and feel less overwhelmed. Another challenge was the reluctance of some staff to give up their lunch time to learn the teach-back method and COPD self-management. This was overcome by allowing staff to eat during educational sessions and limiting the sessions to 30 minutes such that staff could still have the remaining 30 minutes of their break uninterrupted by the COPD educational sessions.

Insights gained during this scholarly journey were enriching, the staff were dedicated and supportive throughout project planning and implementation. They were willing to learn the teach-back method and COPD self-management. They were also excited to roll out the self-management packet for COPD. They were ready for a practice change; hence, I am confident that this COPD staff educational project will bring positive change at the clinic once it is adopted. This staff educational project has aided me in the development of interpersonal working skills within an organization and skills in the development and implementation of a staff education module, and it has increased my confidence and faith in the nursing profession.

## Summary

This doctoral project was aimed at developing an evidence-based COPD educational packet for staff on self-management using the teach-back method. This COPD educational project contributed toward solving the issue of self-management and increased exacerbations by providing staff with a teach-back educational tool for patient education to help foster patients' understanding of their disease, thereby supporting positive patient outcomes. This educational project has the potential to change health behaviors and equip patients with skills to actively participate in the management of their disease. Dissemination of the DNP project's outcome is a vital part of the project. Without dissemination, the project's results might remain unknown, and the knowledge gained would not be shared. Despite the challenges encountered during this project, many insights were gained, which brought out the best in me as a proficient nurse leader willing to contribute significantly to the nursing profession. This development of evidence-based staff education on COPD self-management has the potential to improve patient outcomes and lower the cost of COPD care.

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## Appendix A: COPD Education Packet

**COPD** Learn More  
Breathe Better**COPD is.....?**

COPD is known as Chronic Obstructive Pulmonary Disease. There is no cure for COPD. You can help to improve your symptoms, while slowing the progression of your disease, with proper management and education.

**C= Chronic:** This means it will never go away or long term.

**O=Obstructive:** This means a part of your lung or multiple parts are blocked.

**P= Pulmonary:** This means the heart and lungs.

**D= Disease:** This means sickness.

**Risk Factors for COPD|**

Smoker

Exposure to particles

Work-related dusts and chemicals


Indoor air pollution from heating/cooking

Outdoor air pollution

COPD Foundation (2018).

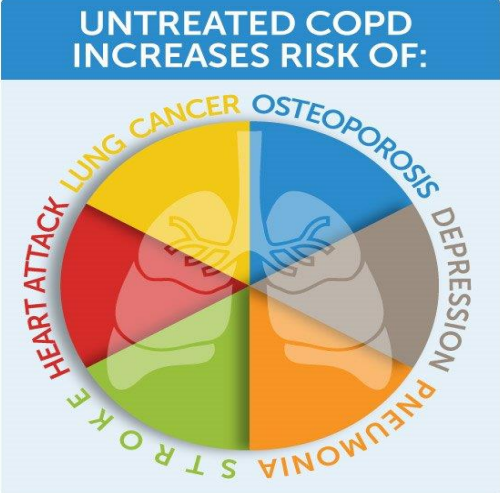
AN EVERYDAY HEALTH INFOGRAM

## HOW TO AVOID A COPD EXACERBATION



According to the most recent data, an estimated **721,000 hospital visits** a year are caused by COPD. Of these, about 65 percent occur among people 65 or older.<sup>1</sup>

**UNTREATED COPD INCREASES RISK OF:**



**5 WAYS TO MINIMIZE YOUR RISK OF A COPD EXACERBATION**

**GET AN ANNUAL FLU SHOT.** The flu can lead to serious illness, such as pneumonia, in people with COPD.

**STAY ACTIVE.** Try to exercise four or five times a week, for at least 20 to 30 minutes at a time, or as recommended by your doctor.

**WASH YOUR HANDS OFTEN.** Keeping your hands clean and away from your face is one of the simplest, most effective ways to avoid getting sick.

**STAY AWAY FROM SMOKE.** It's important to stop smoking, but secondhand smoke can also irritate your lungs. Ask others not to smoke anywhere near you.

**CONNECT WITH OTHERS.** Your emotional health affects your physical health. Get support from your family and friends, and from others who have COPD.

1. National Center for Health Statistics, National Hospital Discharge Survey, 2005

### Symptoms of COPD

Long lasting cough  
Mucus that come up when you cough  
Occasional shortness of breath/breathlessness, especially after exercise  
Wheezing  
Fatigue  
Frequent respiratory infections  
Blueness of the lips or fingernail beds

### Exacerbations

COPD flare-ups commonly cause by respiratory infections  
3 major symptoms include:  
Change in color of mucus  
Increase in the amount of mucus  
Worsening shortness of breath

### Self-Management Strategies

Smoking cessation/Exercise  
Pneumonia and flu vaccines  
Hand washing  
Deep breathing/stress control  
Save energy/Oxygen if ordered  
Lifestyle changes/Nutrition  
Follow up with your doctor

COPD Foundation (2018).

COPD Foundation (2018).

## Medication Management

- **Compliance with medications is very important!**
- Take your pills at the same time every day **and** do not skip a dose.
- Ask your pharmacist or doctor about **the** possible side effects of your medication, **and if** they need to be taken with food.
- These may include:



Inhalers


Exacerbation medications:

Antibiotic and/or prednisone



## No Smoking



- Don't smoke, and don't allow anyone to smoke near you or in your home
- Ask for smoke-free hotels and rental cars, sit in the non-smoking section.
- Wear a mask  outside if you are in an area where they are burning fields or if there are fireworks going off in your area.



## Activity

**Talk to your healthcare provider first before starting any exercise program**

- Start each morning with some simple stretches before you get out of bed.
- While watching TV, stretch your arms and legs
- Keep a log of the exercises you do.
- Balance your activity and rest.



If you have any of the following symptoms **STOP** and **REST**:

- Trouble catching your breath
- Feel weak or faint
- Dizziness or lightheaded
- Experience any other problem that may cause concern

## EAT HEALTHY

1. **Eat small frequent meals** to avoid feeling overfull and making it harder to breathe. For this reason, also avoid gas-producing foods such as onions or any other food that you know cause gas for you. 🍌

2. **Limit sodium intake.** Eating foods high in sodium can cause your body to hold water. This will force your lungs and heart to work much harder.

- Use seasoning alternatives such as Mrs. Dash®, and fresh herbs/spices. 🚫
- Choose unseasoned fresh or frozen meats and



- Fast food and sit-down restaurants use a lot of salt to season their foods.

3. **Limit simple sugars.** Try getting your carbohydrates from high fiber foods such as fruits and vegetables.



4. **Drink plenty of fluids (6-8 cups/day), unless your**



**doctor recommends a fluid restriction.** Drink fluids between meals. Weigh yourself at least once a week, especially if you are taking a water pill or steroids (i.e. prednisone).



## Reduce Stress and Control Breathing

### Pursed lips breathing

1. Take a deep breath through your nose
2. Exhale strongly through your mouth making your lips purse shaped



[www.justforhearts.org](http://www.justforhearts.org)

Helpline: +91 9266802992

Just for Hearts™

COPD Foundation (2018).

### Call 911 and Seek Medical Attention if

You cannot catch your breath

Chest pain

Fever/shakes/chills

Coughing up blood

Confused/drowsy

Swollen ankles

Bloody and smelly mucus

While help is on the way, do the following:

Take your rescue inhaler

Sit down and practice pursed lip breathing

COPD Foundation (2018).



## MY COPD ACTION PLAN

**Actions to take if my symptoms get worse**  
Bring this plan with you every time you visit your doctor

General Information			
<b>Name:</b>		Date of Birth:	
<b>Emergency Contact:</b>		Phone Number:	
<b>Physician/Healthcare Provider Name:</b>		Phone Number:	
<b>Physician Signature:</b>		<b>Date:</b>	
Inhaled Daily Medicines			
	Name of Medicine	How Much to Take	When to Take It
<b>Quick Relief</b>			
<b>Long-Acting</b>			
<b>Inhaled Steroid</b>			
<b>Combination</b>			
<b>Nebulizer</b>			
Green Zone: I am doing well today		Actions	
<ul style="list-style-type: none"> <li>Usual activity and exercise level</li> <li>Usual amounts of cough and phlegm/mucus</li> <li>Sleep well at night</li> <li>Appetite is good</li> </ul>		<ul style="list-style-type: none"> <li>Take daily medicines</li> <li>Use oxygen as prescribed</li> <li>Continue regular exercise/diet plan</li> <li>At all times avoid cigarette smoke, inhaled irritants</li> </ul>	
Yellow Zone: I am having a bad day or a COPD flare		Actions	
<ul style="list-style-type: none"> <li>More breathless than usual</li> <li>I have less energy for my daily activities</li> <li>Increased or thicker phlegm/mucus</li> <li>Change in color of phlegm/mucus</li> <li>Using quick relief inhaler/nebulizer more often</li> <li>Swelling of ankles more than usual</li> <li>More coughing than usual</li> <li>I feel like I have a "chest cold"</li> <li>Poor sleep and my symptoms woke me up</li> <li>My appetite is not good</li> <li>My medicine is not helping</li> </ul>		<ul style="list-style-type: none"> <li>Continue daily medications</li> <li>Use quick relief inhaler every ____ hours</li> <li>Start Prednisone: _____</li> <li>Start Antibiotic: _____</li> <li>Use oxygen as prescribed</li> <li>Get plenty of rest</li> <li>Use pursed lip breathing</li> <li>At all times avoid cigarette smoke, inhaled irritants</li> <li>Call provider if symptoms don't improve</li> </ul>	
Red Zone: I need urgent medical care		Actions	
<ul style="list-style-type: none"> <li>Severe shortness of breath even at rest</li> <li>Not able to do any activity because of breathing</li> <li>Not able to sleep because of breathing</li> <li>Fever or shaking chills</li> <li>Feeling confused or very drowsy</li> <li>Chest pains</li> <li>Coughing up blood</li> </ul>		<ul style="list-style-type: none"> <li><b>Call 911 or have someone take you to emergency room</b></li> <li><b>Increase oxygen to:</b> _____</li> <li><b>Take Prednisone:</b> _____</li> </ul>	

For more information visit [www.lungusa.org](http://www.lungusa.org) or call 1-800-LUNGUSA (586-4872)

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## Appendix B: Literature Matrix

Author/date	Theoretical/ conceptual framework	Research questions/ Hypothesis	Methodology	Analysis/ Results	Conclusion	Implication for further research	Implication for practice
Nieuwlaat, R., Wilczynski, N., Navarro, T., Hobson, N., Jeffrey, R., Keepanasseril, A., & Haynes, R. B. (2014).	Intervention for enhancing medication adherence.	What is the role of intervention for educating providers to promote patient adherence to treatment?	Randomized controlled trials (RCTs) that compared a group of providers receiving educational intervention to improve medication adherence for their patients with a group who received no such intervention.	Their findings revealed that educational intervention involving providers improved treatment adherence among the patients with various chronic illnesses.	Educational intervention involving providers improved treatment adherence.	Education improves treatment adherence.	Improves medication adherence through provider education.
Mahramus, T., Penover, D., Frewin, S., Chamberlain, L., Wilson, D., & Sole, M. (2014).	Assessment of an educational intervention on nurses' knowledge and retention of heart failure self-care principles and the Teach-Back Method. Heart and Lung.	Does an educational intervention affect treatment adherence?	Controlled experimental study to assess the effectiveness of an educational intervention on antibiotics treatment adherence among 126 patients. Sixty-two of them were in the control group and 64 were in the experimental group. The experimental group went through training session done by providers regarding treatment dosage, duration, and use of medication.	The results of the study indicated that the implementation of an educational intervention led by providers increases treatment adherence.	Implementation of an educational intervention increases treatment adherence.	Teach back improves patient and staff knowledge.	Improving treatment adherence through educational intervention.

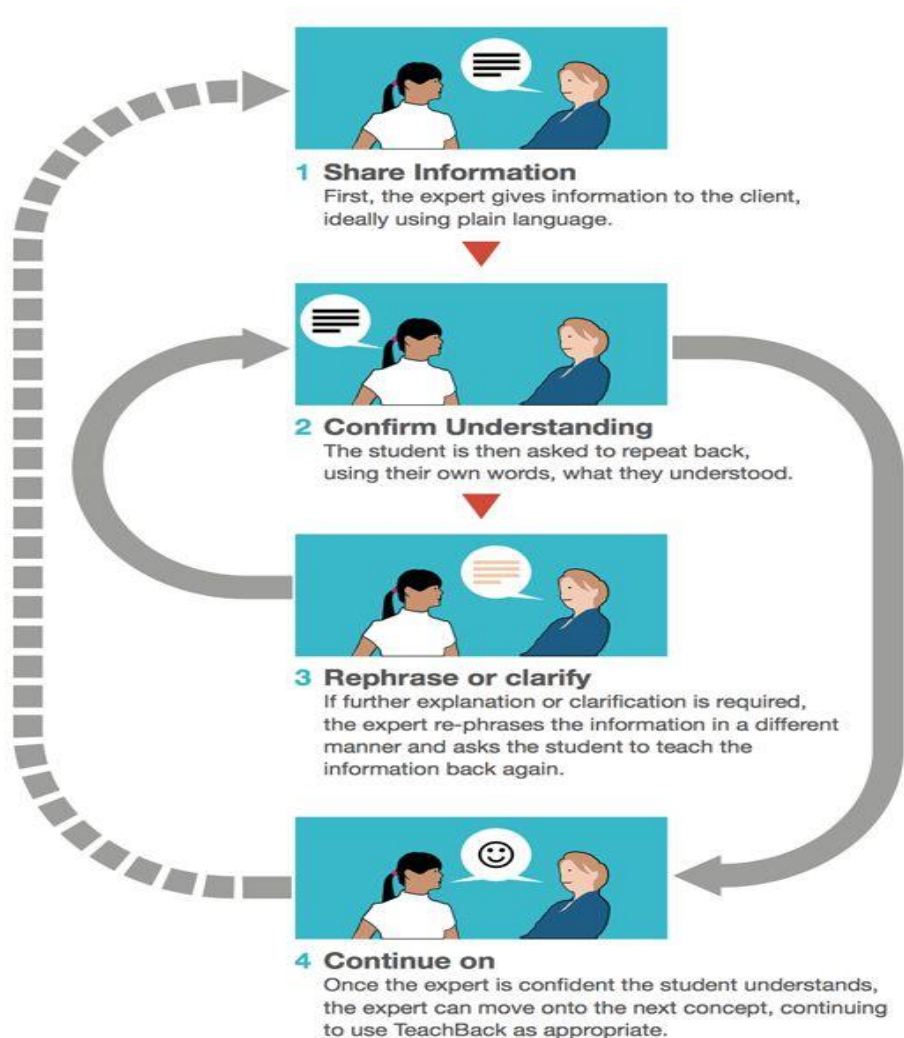
(continued)

Author/date	Theoretical/ conceptual framework	Research questions/ Hypothesis	Methodology	Analysis/ Results	Conclusion	Implication for further research	Implication for practice
Van Boven, J. F. (2016).	Enhancing respiratory medication adherence: the role of health care professionals and cost-effectiveness considerations	Does education given by healthcare providers improve medication adherence?	Meta-analysis of studies conducted between 1996 and 2012 to determine the effectiveness of health care provider-delivered education regarding patient adherence to treatment among young adults living with chronic diseases.	Provider-delivered education for participants suffering from chronic diseases can be effective in improving treatment adherence.	These results supported the need for my staff educational project.	Treatment adherence is necessary for positive outcomes.	Decrease disease exacerbation
Marcus (2014).	Strategies for improving the quality of verbal patient and family education: A review of the literature and creation of the EDUCATE model.	What does research states on strategies to improve patient and family education?	Systemic review of research studies conducted between 1990 and 2014 to assess the effectiveness of verbal education by providers on the literacy of patients.	Patients who were subjected to their providers to teach-back method of education were able to effectively understand how they could manage their health.	Teach-back influences patient understanding of materials taught.	Patient education can be conducted using printed, verbal, and demonstrated instruction by the providers.	Improve patient knowledge through education to improve patient outcome.
Morony, S., Weir, K., Duncan, G., Biggs, J., Nutbeam, D., & McCaffery, K. (2017).	Experiences of teach-back in a telephone health service.	Does teach back improve patient knowledge?	Qualitative study which sought to explore telenursing experiences using a teach back approach to increase the knowledge of the patients in a maternal and child health helpline.	The nurses reported that the teach back approach was helpful in giving proper information to the patients as well as in clarifying information not understood. Patients reported feeling empowered with more knowledge from nurses.	Patients reported feeling empowered with more knowledge.	Teach back effects on patient disease outcome.	Using teach back to improve staff and patient knowledge.

(continued)

Author/date	Theoretical/ conceptual framework	Research questions/ Hypothesis	Methodology	Analysis/ Results	Conclusion	Implication for further research	Implication for practice
Beena & Jimmy, 2014	Patient medication adherence: Measures in daily practice	Does teach back improve provider's skills in patient education?	A quantitative study, where nurses developed an educational packet for heart failure patients on medication adherence using the teach back method., They further taught other nurses and providers how to use the teach back method in educating their heart failure patients on medication adherence upon discharge.	The findings demonstrated that the teach back approach was helpful in assisting the providers to gain the skills they needed to communicate with the patients.	Patients benefited by gaining a better understanding of the information they received from their providers throughout all the phases of care.	Teach back effects on provider's knowledge.	Increase use of teach back in patient education by providers.
Ferguson, 2011	Patients self-management strategies to improve outcomes.	Does patient education on self-management strategies improve patient outcome?	Incorporating staff education into nursing practice would be of great benefit for both the nurses and the patients.	Educational training can substantially improve the knowledge of health care providers, nurses, and patients.	Education can help providers support their patients throughout the continuum of care.	Improving patient outcome through self-management strategies.	Improving Self-management strategies to improve patient outcomes.
Qureshi, Sharafkhaneh & Hanania, 2014	Chronic obstructive pulmonary disease exacerbation Latest evidence and clinical implications.	How does provider education affect knowledge in COPD patients?	The article provided a concise overview of COPD exacerbations and their impact, outlining the population at risk, etiology and current management and preventive strategies.	Findings supported the benefits of provider education for increasing knowledge among COPD patients and self-management to reduce the occurrence of exacerbations and to improve adherence.	Provider education increases knowledge among COPD patients and self-management strategies.	further research be conducted to address the lack of evidence-based benefits of educational initiatives for providers of COPD patients.	Measures to reduce the occurrence of COPD exacerbations and to improve adherence.

## Appendix C: Teach-Back Method

**The teachback process in healthcare**

Teachbacktraining.org. (2016).

## Appendix D: Staff Teaching Plan

Staff Teaching Plan-COPD Self-Management			
Modules	Components	Time	Materials
Module 1	<ul style="list-style-type: none"> <li>Teach back method</li> <li>Introduction, description, and demonstration of ideal use of teach-back.</li> </ul> <p>What Is Teach-back?</p> <ul style="list-style-type: none"> <li>A way to make sure that the health care provider explained information clearly; it is not a test or quiz of patients.</li> <li>Asking a patient (or family member) to explain in their own words what they need to know or do, in a caring way.</li> <li>A way to check for understanding and, if needed, re-explain and check again.</li> <li>A research-based health literacy intervention that promotes adherence, quality, and patient safety.</li> </ul>	6 minutes	Appendix C
Module 2	<ul style="list-style-type: none"> <li>What is COPD? COPD is known as Chronic Obstructive Pulmonary Disease. It has no cure. A group of progressive lung disorders characterized by increasing breathlessness.</li> <li>Risk factors of COPD Smoking Exposure to particles Work related dust and chemicals Indoor air pollution from heating and cooking Outdoor air pollution</li> <li>The symptoms of COPD A long-lasting cough Mucus that comes up when you cough Shortness of breath especially with exercise Wheezing Fatigue Frequent respiratory infection Blueness of the lips and fingernail beds</li> <li>COPD Exacerbation COPD flareups commonly caused by respiratory infection 3 major symptoms include, change in color of the mucus increased amount of mucus worsening shortness of breath</li> </ul>	6 minutes	Appendix A
Module 3	<ul style="list-style-type: none"> <li>Self-management strategies Smoking cessation Exercise- balance activity with rest Pneumonia and annual flu vaccines Hand cleanliness Deep breathing, stress control Oxygen if ordered Save energy Life style changes Nutrition-healthy eating Follow up with your doctor</li> </ul>	6 minutes	Appendix A
Module 4	<ul style="list-style-type: none"> <li>Medication management Take pills at the same time every day Do not skip a dose Ask pharmacist or Doctor about side effects and if medication should be taken with food</li> </ul>	3 minutes	Appendix A

Module 5	<ul style="list-style-type: none"> <li>• COPD Action plan Action to take if symptoms get worse Green zone- I am doing well today continue using your prescription COPD medication paired with breathing exercises, relaxation, and body position techniques as advised by your healthcare team. Yellow zone- I am having a bad day or a COPD flare Continue daily medications Use quick relief inhaler Start antibiotics Start prednisone Use oxygen as prescribe Get plenty of rest Use pursed lip breathing Always avoid cigarette smoke and inhaled irritants Call provider if symptoms do not improve Red zone- I need urgent medical care Increase oxygen Take prednisone Call 911 or have someone take you to the ER</li> </ul>	5minutes	Appendix A
	<ul style="list-style-type: none"> <li>• Questions/Answers</li> </ul>	4 minutes	



## Appendix E: Poster Board

## Staff Education on COPD Self-Management Using the Teach Back Method

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**Abstract**

The setting for this COPD staff education doctoral project was a community clinic in Eastern United States. COPD is the third leading global cause of death, while self-management interventions in patients with COPD are associated with decreased COPD exacerbations which lead to improved health-related quality of life and decreased mortality. Over 80% of the COPD patients at this clinic had frequent COPD exacerbations with a hospital readmission rate of 23.2%, which was significantly higher than the national benchmark of 21%. The clinic had no documented evidence-based educational method for the nursing staff and providers to assist in teaching and empowering patients on self-care management. This COPD practice improvement project contributed to improving self-management by identifying and supporting how education improves patients' understanding of their medical care which led to positive patient outcomes. The clinical question of this DNP project was: Does literature support the implementation of staff education on COPD self-management using the teach-back to prevent COPD exacerbation? The purpose of this DNP project was to develop a standardized COPD educational packet for staff on self-management using the teach-back method. The model and theory used this DNP project were Orem's theory and Rossum and Larabee's model. Sources of evidence were gathered from an in-depth literature review and surveys were administered to the clinic's stakeholders and end users. Data from the surveys were analyzed with IBM SPSS Version 24 (2017) software. More than 90% of the clinic's stakeholders and end users strongly agreed or agreed to all the factors evaluated, therefore the self-management packet came highly recommended.

**Background**

The setting for this COPD staff education doctoral project was a community clinic in Eastern United States. The clinic sees a total of 200 patients who suffer from COPD. The clinic had no documented evidence-based educational method for the nursing staff and providers to assist in teaching and empowering COPD patients on self-care management. According to clinic tracking records in 2017, over 80% of the COPD patients at this clinic had frequent COPD exacerbations with a hospital readmission rate of 23.2%. The clinic's statistics were significantly higher than the national benchmark of 21% (Centers for Medicare & Medicaid Services, 2018). The clinic therefore must follow the guidelines set forth by CMS as stiffer financial penalties for excessive readmissions are now mandated (Centers for Medicare & Medicaid Services, 2018). This COPD staff educational project has the potential to decrease COPD exacerbation and hospital readmissions in the future. This COPD educational project emphasized the need for provider education. The staff education on COPD self-management is significant to nursing practice because it can be used as an assessment tool for nurse practitioners and nurses to evaluate the effectiveness of patient education which will further improve health care outcomes of COPD patients.

**Significance**

The project also has significant implications on COPD patients and their families, nurses, providers, and administrative staff. The community clinic can benefit from the project through potential positive outcomes in the reduction of COPD exacerbation rates. The staff of the clinic can benefit from the evidence-based educational interventions through improved communication with their patients through teaching, given the project has the potential of facilitating better self-management of COPD, also nursing staff may use the education packet as a foundation for self-management of other diseases. The patients can also benefit from the project given the project has the potential to assist patients in effectively managing their disease and gaining control of their health thereby reducing related disabilities, improving health behaviors, and improving health status which can further lead to a decrease in caregiver burden. The families of COPD patients can also benefit through a reduction in caregiver burden. Self-management encompasses creating healthy lifestyles to prevent illness early in life (primary prevention) and providing strategies for mitigating illness and managing it in later life (secondary and tertiary prevention; Sivia, 2011). As trusted and educated health professionals, nurses have an important role to play in self-management across the three realms of prevention. This COPD educational project had significant implications for social change. COPD exacerbations account for the greatest burden of the health care system. The health care costs rise with the progression of the disease. To mitigate these expenses, including those of COPD, the principles of self-management were developed in the early 1990s to maximize improvements in care and to reduce the utilization and costs of health care (Coleck & Gattman, 2014). Aggressive self-management initiatives have been developed for chronic diseases that include diabetes and cardiovascular diseases, but there is a paucity of information on self-management for COPD (Sivia, 2011). This educational project promoted self-care management of COPD patients through improving treatment adherence thereby decreasing COPD exacerbation which eventually reduces the economic burden.

**Purpose**

The gap in nursing practice that was bridged by this COPD staff educational project was the lack of evidence-based teaching by nursing staff and providers. The purpose of this DNP project was to develop a standardized COPD educational packet for staff on self-management using the teach-back method. Self-management can support COPD patients to manage their symptoms, prevent complications, and make adequate decisions on medication, exercise, breathing techniques, diet, and contacting health care providers (Wisniewski, et al., 2014).

The clinical question this COPD staff educational project answered was: Does literature support the implementation of staff education on COPD self-management using the teach-back to prevent COPD exacerbation?

**Method**

I used the guidelines provided by the COPD Foundation (2018) and Orem's model of care (2001) to develop a comprehensive staff educational packet on COPD self-management strategies. After obtaining the approval from IRB from Walden University and upon agreement of the community health clinic's leadership to have its staff participate in this COPD educational project, the purpose of the project was explained to all the participants (clinic's nurses and providers) of the project. At the end of the educational session, questionnaires were distributed and collected anonymously. The first step of this project was planning. The main stakeholders who were the clinic administrator and other frontline level personnel, to include the respiratory director, the pulmonologist, the medical director, and the director of nursing, and other departmental leaders were contacted to seek a buy-in for conducting the project at the clinic. The second step involved research, literature review, and grading of the evidence. This step also involved developing the teach back educational material on COPD self-management for the staff who participated in the project. I obtained the input of the stakeholders and consulted with the COPD Foundation guidelines (2018) about the educational materials I developed. The materials for the educational packet included self-management approaches for optimal care of COPD, recognizing warning signs of exacerbations, and promotion of healthy living with COPD. The packet also included self-management guidance on medications, diet, activity, monitoring of signs/symptoms of exacerbation, and what to do in case of emergency. The third step was to convene a meeting with the stakeholders and end users (nurses and providers) in which I presented the edited educational package for further evaluation for appropriateness. Anonymous questionnaires were given to the stakeholders and end users to evaluate the efficacy, adaptability, and usefulness of the educational package. The nurses and providers were also taught the teach back method. The fourth step was the implementation of the staff educational sessions and implementation of the packet. The participants, who were the clinic's nursing staff and providers, were not compensated for their participation, and they were taught how to use the teach-back method on self-management of COPD patients during their scheduled work time with each session lasting 30 minutes and focusing on training health care providers and nurses to adequately and routinely educate patients using these materials.

**Outcome**

A Likert scale was used to quantify the questionnaires with a scale of 1-5, in which 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Each evaluator rated the degree to which each element had the potential of affecting efficacy and ease of adaptability of the packet. My goal was for the staff and clinic's stakeholders to rate the self-management packet more than 90% as strongly agree or agree which was accomplished as more than 90% strongly agreed or agreed to all the factors evaluated, therefore the self-management packet came highly recommended. The factors I evaluated were the potential to increase patient knowledge of COPD, relevancy to the population, ease of format, ease of integration into practice, and the potential to increase in quality of care in COPD patients.

**Conclusion**

This doctoral project was aimed at developing a standardized COPD educational packet for staff on self-management using the teach-back. This COPD educational project contributed toward solving the issue of self-management and increased exacerbations by providing nursing staff and providers with a teach-back educational tool for patient education to help foster patients' understanding of their pharmacotherapy, thereby improving positive patient outcomes. This educational project has the potential to change health behaviors and equip patients with skills to actively participate in the management of their disease. Dissemination of the DNP project's outcome is a vital part of the project. Without dissemination, the project's results may remain unknown and the knowledge gained will not be shared. Despite the challenges encountered during this project, lots of insights were gained which brought out the best in me as a proficient nurse leader willing to contribute significantly to the nursing profession. This development of an evidence-based staff education on COPD self-management has the potential to improve patient outcomes and lower the cost of COPD care.

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## Appendix F: Self-Management Packet Survey

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Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1. Rate if the self-management packet has the potential to increase patient knowledge of COPD					
2. Rate if the self-management packet is relevant to the population					
3. Rate the ease of format of the self-management packet					
4. Rate the ease of integration into practice the self-management packet					
5. Rate if the self-management packet has the potential to increase quality of care					

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