

2021

Staff Education and Depression Screening in Pulmonology and Sleep Medicine

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Walden University

College of Nursing

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Christina Boyle

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Walden University

2021

Abstract

Staff Education and Depression Screening in Pulmonology and Sleep Medicine

by

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MSN, South University, 2017

BSN, Nova Southeastern University, 2012

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2021

Abstract

Despite recommendations that all adults be screened for depression, providers at the project site struggled to consistently assess for depression. Identification of depression is an essential step in depression management, which is a concern for patients with sleep disorders and other pulmonary disease served at the site. The purpose of this project was to develop an education training program for clinicians regarding depression screening. The theory of cognitive development using the Iowa model of evidence-based practice (EBP) guided the project, which sought to determine if an EBP education program regarding depression screening would be an effective means for staff education, according to a panel of local experts. The project team consisted of 3 industry subject matter experts who provided feedback on the development of the education program, selection of the PHQ-9 depression screening tool and evaluation of learning. The project team completed an anonymous, 9-question, Likert-type survey as a summative evaluation of the project and the education program. All participants scored each question with a (5) strongly agree or (4) agree that the project objectives were met. A descriptive analysis of the data positively supported the education on depression screening. The education program deliverables consisted of the PHQ-9 depression screening tool, education on how to utilize this tool, a plan for education implementation, and a test for administration before and after education to evaluate learning. Data regarding screening and referrals may be used as outcome measures after education delivery by the clinic staff. Consistent screening, appropriate referral and follow up management of depression may create positive social change by improving the quality of life for the patients served by this site.

Staff Education of Mental Health Screening in Pulmonary and Sleep Medicine

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Dedication

For Superman “*See the able and not the label*” .”

This project is dedicated to my beautiful and gifted children Sarah and Lucas. Sarah (Beauty) is a fearless, young, and extremely gifted nurse with a passion for life and world travel. Lucas (Superman) is in advanced classes in middle school and has a truly gifted mind. Without them, I would not be the parent, nurse, scholar, professional, mentor, and friend that I am today. They have taught me that there are no limits to the importance of betterment. I would also like to thank my mother, Priscilla who has taught me that it does not matter where you come from, it is where you are going, that counts. She has taught me strength, dedication, and the importance of following my dreams. Remember when Plan A does not work, there is always Plan B! Thank you!

Acknowledgments

With prayers and perseverance, God has guided me through the completion of this project. I am extremely grateful to my committee chair Dr. Cassandra Taylor, of Walden University, for not giving up on me with each submission that I presented. I would like to thank my preceptor, Dr. Jorge Hernandez, for all his support, suggestions, input, and guidance. I could not have chosen a more knowledgeable and experienced preceptor, as well as the expert advice from the subject matter expert team. I want to thank my family for pushing me hard and being my inspirational cheerleaders. My children have supported me with kind words of “you can do it momma, and I am proud of you.” I hope when they read this, they know how they fill my heart with joy and love.

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Section 1: Nature of the Project

Introduction

Staff education plays a vital role in achieving an organization's goals. Through education, the workforce's and the organization's interests combine. Staff training is a crucial factor leading to increased efficiency of the organization. Education and training, serve as an investment toward productivity and employee retention through job satisfaction and career development. In a healthcare setting, there is always a need to enhance healthcare providers' effectiveness through continuing educational programs. These programs play an indispensable role in quality improvement and improving healthcare outcomes. New education models are of paramount importance to improve educational output and expand capacities. As much as theoretical knowledge is essential in healthcare, vocational training should not be ignored since technical capacity and quality of services leading to innovations are required.

The need for continuous healthcare education is especially valuable in the realm of mental health. Healthcare providers need to be engaged in continuous training to effectively use depression screening tools. In pulmonology and sleep study centers, depression screening is a process that should be given a top priority. According to Economou et al. (2018), patients with chronic obstructive pulmonary disease (COPD) often report poor sleep quality, daytime sleepiness, and fatigue as well as anxiety and depression. The United States Preventive Service Taskforce (USPSTF) recommends that all adults in the United States are screened for depression regardless of the risk factors involved. Despite the guidelines provided, there is a provider struggle to implement

depression screening. Advanced Practice Registered Nurses (APRNs) continue to provide quality care to promote significant patient outcomes at the pulmonary and sleep medicine, yet they also struggle with implementing the screen guidelines. Such responsibilities make the nurse training program an essential tool in ensuring competent and safe delivery of services. The provider's ability to use screening tools helps communicate awareness for their comfortable treatment. Adequate training of providers in a pulmonology/sleep center is necessary to ensure an effective screening process to allow advanced practitioners to treat patients who screen positive.

With this project, I aim to develop a training program for healthcare providers in a pulmonology and sleep study center to help them attain proficiency in depression screening to improve patient outcomes. As a result of this project, positive social change may occur when the staff has increased knowledge of depression screening. Subsequently, the site's patients may be identified as having depression and be referred for appropriate treatment, creating positive social change.

Problem Statement

According to World Health Organization (n.d), more than 260 million people of all ages suffer from depression. The USPSTF (2016) recommended screening everyone for depression. Depression is undertreated and are unidentified in different health care settings, which can cause an increased risk of suicide in the patient population. Lack of an assessment tool and/or screening in patients with newly diagnosed chronic and end-stage respiratory disease processes may contribute to absent or inadequate treatment in

this specialty settings. The project is needed in this setting to help clinicians identify depression with the use of a depression screening tool.

The links between sleep disorders caused by respiratory disease processes and depression are strong. Asthma is linked with anxiety and depressive disorders (Josia et al., 2021). Sleep disturbances specific to respiratory disease processes, such as COPD, obstructive sleep apnea (OSA), and emphysema correlate with depression (Khatri & Ioachimescu, 2016). Dyspnea and sleep apnea associated with respiratory disease creates fatigue, which then further contribute to depression (Khatri & Ioachimescu, 2016). When insomnia occurs, there is a correlation of major depressive disorders secondary to insomnia (Oh et al., 2019). Due to impaired gas exchange, there are increased rates of morbidity and death which can further depression in this patient population (Khatri & Ioachimescu, 2016). Symptoms can cause distress, which further impacts quality of life and psychological welfare thereby increasing risk factors of suicide (Chaudhary et al., 2020).

Based on the information received from the project site, a comprehensive assessment did not include a consistent assessment for depression. The clinic's data is below the USPSTF standard requirement of 100% assessment for all patients (USPSTF, 2016). The PHQ-9 screening is one tool that may be used for depression screening. Screening for depression at this project site is important to be completed properly and effectively using screening tools. The goal is to provide education on this tool so that it may be implemented at the project site. Assessments at the outpatient pulmonary and sleep medicine, serving as this project clinical site, identified a lack of a comprehensive

assessment which includes a depression screening tool such as the PHQ-9. The inconsistent depression screening represents a gap in practice, making care, less efficient and of lower quality. The care providers at the project site did not have education on the use of the PHQ-9 depression screening tool. The providers' lack of understanding about how to accurately assess for depression led to inadequate referrals for treatment and follow-up. This project addressed the insufficient knowledge about the use of the PHQ-9 depression screening to improve provider understanding of the guidelines for using the screening tool. This educational project was designed to increase providers' knowledge of PHQ-9 and enhance the ability to screen for depression, thereby improving the patients' overall health. Significantly, there is a movement to consider mental health as a legitimate part of primary care that should not be overlooked in specialty settings. According to the USPSTF (2016), properly screening for depression could improve patient treatment outcomes. The importance of educating providers to attain competency in using depression screening tools cannot be overstated. Despite the prevalence of depression in the United States and clear-cut guidelines regarding the use of the PHQ-9, providers continue to struggle to implement this depression screening tool in their practice.

A practice gap was analyzed through a review of clinic procedures and comprehensive assessment. Chart review and audits were used to collect evidence and the alignment with chosen project content. The patient comprehensive assessment was not inclusive of a mental health screening to identify depression. Through further discussion with site leaders and stakeholders, the project premise was developed to create education

for use of the PQH-9 depression screening tool. Gaps in the facility's current strategies in addressing depression were identified and used to develop the educational training. The clinical team collected comprehensive assessments and provided the results from their patient chart audits, indicating a gap in practice at this clinic. The involved stakeholders reviewed the current process for comprehensive assessments and agreed that a thorough assessment was needed to include a mental health screening. Patient privacy was safeguarded as PHI was not shared with me. Current policies and procedures were shared. Upon additional discussion with the preceptor and clinical site team, education was identified as a need for enhancing the quality of patient care at this site.

Purpose Statement

The purpose of this project was to develop a training program for healthcare providers in a pulmonology and sleep study center. The training is to help clinicians increase their knowledge and proficiency through the development of an education program. The education was then evaluated by subject matter experts (SME). The development of the education guided the following practice-focused question: Will an evidence-based practice education program regarding depression screening be an effective means for staff education, according to a panel of local experts?

Nature of the Doctoral Project

For this project, evidence was collected from various sources that include scholarly databases. These sources provided information on nursing, evidence-based practice of respiratory diseases processes and side effects as well as the correlation of sleep disorders and increased depression. Google Scholar, PubMed, Medline, CINAHL,

EBSCO host, and Ovid Plus were used. Specific information from Substance Abuse and Mental Health Services (SAMHSA), Anxiety and Depression Association of America (ADAA), and Agency for Healthcare Research and Quality (AHRQ) were included. The data were analyzed and applied for utilization in answering the practice-focused question. The focus was on articles published within 5 years of my expected graduation date.

The subject matter expert (SME) team also played an important role in the development of the project. The expert team evaluated the project before it was shared with the project site. The SME provided feedback regarding the developed education, pre/posttest materials, and plan for education delivery which was incorporated into the final product. The SME provided a summative evaluation of the materials, which included the education, a plan for delivery, and a plan for evaluation of learning. Evaluative data was obtained through an Expert Panel Evaluation of Staff Education (See Appendix A). The final education program, plan for delivery, and plan for evaluation of learning will be handed over to the site for delivery after project completion. The practice-focused question of: Will an evidence-based practice education program regarding depression screening be an effective means for staff education, according to a panel of local experts? was evaluated by the SME on an Expert Panel Evaluation of Staff Education (See Appendix A). This form evaluated the educational project deliverables.

Significance

Stakeholders who are impacted by the project are staff, providers, patients and their families, and the community. They benefit from this project by receiving proper referrals and treatment if they have a positive screening resulting from the assessment.

The patients benefit from the diagnosis and treatment plan when the screening process is implemented. The clinic site benefits from the educational program developed to increase their knowledge using the depression screening tool.

The gap in practice at this project site is that depression screening guidelines are not being followed. This project is being designed to create education regarding the use of the PHQ-9 depression screening to address the gap in practice. The goal of the project is to provide the project site an education program that, if adopted, increase providers' knowledge regarding PHQ-9 screening, increasing the number of clinic patients assessed for depression, and appropriately manage, follow up care

Since educational programs are critical for providers to attain competency in the screening process of depression using the country's appropriate tools (Lopez et al., 2018), This project may potentially increase clinical knowledge and opportunities for nurses to practice in an autonomous system and successfully identify potential patient issues. The project also is significant in creating positive social change by influencing the potential rate of undiagnosed cases of depression in the long run (Isotalo, 2020). Education and implementation of the PHQ-9 at the project site could identify patients with depression to allow for treatment, which is beneficial for patients with depression since it improves their quality of health.

Summary

The project is significant in addressing the need to improve depression screening tools. The first section of the research illustrated the DNP practice problem. The paper also highlighted the purpose of the study, its nature, and its significance in general. The

next part of the project develops the foundations established from this section by evaluating the background and the project's relevant context. This covers the literature review, development of theoretical frameworks, and developing an educational program for providers to encourage depression assessment using the PHQ-9 depression screening tool for all patients.

Section 2: Background and Context

Introduction

The purpose of the DNP project was to develop staff education for a local pulmonology and sleep study center. The practice-focused question is: Will an evidence-based practice education program regarding depression screening be an effective means for staff education, according to a panel of local experts? The staff is not following practice guidelines regarding depression screening as part of their comprehensive assessments. The purpose of the PHQ-9 depression screening is to identify depression in patients with chronic and end-stage disease processes. The project aims to address the assessment gap by developing education on the use of this screening tool. The project supports the USPSTF recommendations of screening all patients for depression. Section 2 presents information on concepts, models, and theories that helped provide guidance and relevance for this project as well as current practices in nursing. Background and local context, along with the roles of the DNP student and project team is addressed.

Concepts, Models, and Theories

Piaget's cognitive theory was used as the basis and foundation for this project. Communication can transform thinking, and education can provide learners with cognitive and affective characteristics of the teaching process. The application of concepts, models, and theories provides an in-depth understanding of clinical practices. They also provide an understanding of the importance of using evidence-based practice (EBP) systems to guide nursing practice and adopt measures that keep providers abreast of clinical updates. The patient outcome is the driver to develop such practices since it

can be significantly improved when the care is based on the best existing evidence (Oppong, 2014).

Piaget's cognitive theory involves understanding the cognitive goals that the learner is expected to achieve. It is the balancing and rebalancing between structures of the learner and that people construct their knowledge resulting from environmental interactions and active engagement (Waite-Stupiansky, 2017). Theories can support the development of nursing practice in the health care system and individuals attain goals when exposed to the right training program (Lee, 2018). People are generally motivated and often do better when they have been prepared with the skills needed to perform the tasks. Therefore, it is essential to promote education to enhance proficiency and increase clinical staff knowledge as they provide patient services (Lee, 2018). An increase in knowledge in any given job is deemed to promote inherent interest in participating, especially in clinical services. Increased knowledge about the utilization of the screening tool should help clinicians of this site increase their use of the tool.

The use of Piaget's Cognitive Theory helps guide this project. Through the three components of cognitive theory, there are Schemas; which are building blocks of knowledge, adaptation processes; that enable the transition from one stage to the next, and cognitive development; which allows for abstract thought and concepts (McLeod, 2018). The component of cognitive theory helps me apply the components of schemas to help with the process of cognitive development. This allows us to make sense of what is happening in our environment, thereby allowing the use of education, teaching, and learning to be absorbed. In creating the educational program with the application of EBP,

the organization of thoughts and knowledge that one has about processes and concepts provides a basis for learning and is delivered through the education program.

The goal of schema is to develop and deliver networks of knowledge of this depression screening tool and comprising education and knowledge from a multitude of sources and resources as well as personal experience. Schema and reading comprehension have been proven to be more reliable than listening comprehension alone (Bormaniki & Khoshhal, 2017). Adaptation processes tend to help adjust to the new environment. This helps to make a clearer sense of what was read or learned to help reach a cognitive adaptation process of the information provided (Bormaniki & Khoshhal, 2017). By developing the education program, the education provides involvement with changes in thinking not only a matter of learning new things (McLeod, 2018), thereby increasing the knowledge of the user of the tool.

Relevance to Nursing Practice

Based on the existing state of nursing practice, unidentified depression may be a danger to patients. Without appropriate screening, diagnosis, and treatment, one might develop a generalized anxiety disorder, insomnia, and acute stress (Marroquin et al., 2020). Depression is a relevant mood disorder that is underdiagnosed and at times undertreated. Depression can result in serious consequences due to emotional and physical reflections of low self-worth. This mood disorder can result in self-injury, despondency, and decreased activity. Because the symptoms are so disruptive, the adverse effects sometimes result in attempted suicide, and/or suicide (Chaudhary et al., 2020). Depression is a progressive mental health disorder that can lead to severe disability and

frequent emergency room visits, suicide, increase in expenses, and low quality of rating for the clinic (Picardi et al., 2016). Depression also has both direct and indirect effects on mortality and morbidity. The standard recommendation released by The United States Preventive Service Taskforce (USPSTF) encourages providers to do regular depression screenings (Porter, 2017). The outcome of this educational training program is thereby meant to cause an increase in providers' knowledge and relevant skills that are related to the best clinical practice outcomes. The education enhances the understanding of the tool's use and promotes consistent assessment amongst clinicians. Providing an educational program for implementation at the project site related to the PHQ-9 screening tool may result in improved knowledge and screening frequency if implemented, which could reduce the incidence rate of a missed depression screening among the affected patients visiting the clinic.

The sources of evidence used for the project were Walden University library, Google Scholar, Medline, CINAHL, EBSCO host, Ovid Plus, SAMHSA, ADAA, AHRQ, and Pub Med. The keywords used were depression, depression screening in clinical sites, types of depression screenings, guidelines, and recommendations, evidence-based clinical practice for depression, theories, staff education training, depression modules, and validity and reliability of the PHQ-9 depression screening tool. The initial search yielded a total of 750 articles. Narrowing the search to a range of articles published from the year 2010 to 2018 helped to significantly reduce the number of articles to 60. Ten articles relevant to the project question and the clinical setting were selected and used for the project. These ten chosen articles provided appropriate evidence

to address the practice-focused question. The collected evidence-based information was used to design the education to improve providers' knowledge and proficiency in using the PHQ-9 screening tool to bridge the gap in practice and meet providers' needs at the clinic.

Literature Review

Depression, Pulmonary, and Sleep Disorders

Depression and pulmonary and sleep disorders correlate and intersect with one another. They share similar side effects with end-stage disease processes such as Chronic COPD, OSA, and Emphysema. Some contributing factors are fatigue and insomnia. The fatigue may cause symptoms like dyspnea, depression, sleep apnea, and sleep impairments. Those less likely to have a knowledgeable perception of their health status are often less likely to be assessed for depression (Kato et al., 2018). For this project, it was important to include a review of the literature investigating the influence of routine depression screening during the care of patients with pulmonary and sleep disorders. To remain proactive at this practice site, EBP of utilizing a depression screening tool helps with the identification of a positive depression screening.

Sleep disturbances may result in symptoms of depression and anxiety. When insomnia occurs, there is a correlation of major depressive disorders secondary to insomnia (Oh et al. 2019). These symptoms result in distress and cause impacts on quality of life thereby causing strong suicidal risks. Factors contributing to depression include dyspnea and depression. It has been suggested that COPD patients have difficulty with insomnia, and sleep disruptions (Khatri & Ioachimescu, 2016) The diseases process

of COPD is often symptomatic of sleep-related issues. This often presents itself with nocturnal respiratory symptoms manifestations. Patients with COPD and OSA suffer from these intersecting symptoms (Hogan et al., 2020). Therefore, the incidence of mortality is higher. Quality of sleep can negatively impact the disease process and cause anxiety and depression. COPD patients are at risk for depressive disorders. Evidence has shown in depressive patients, sleep complaints such as insomnia, narcolepsy, sleep disorders, breathing and restless legs syndrome (RLS) occur in approximately 90% of patients (Fang et al., 2019). It can also be considered a secondary symptom of depression. The PHQ-9 assessment tool identifies symptoms of depression.

Evidence of Efficacy Screening Using the PHQ-9

Literature search and review indicate that depression is often a comorbidity of COPD (Schuler et al., 2018). Screening utilizes a systematic approach to identify patients who were experiencing symptoms of depression. Depression screening can help facilitate proper healthcare management and treatment planning for many patients whose symptoms may have gone otherwise untreated. Failure to recognize depression can cause danger to the patient and the community according to USPSTF guidelines, suggesting that patients should be appropriately screened, diagnosed, and treated for depression by providers (Gay et al., 2016). USPSTF (2016) indicated evidence suggesting that screening for depression plays a crucial role in early identification and better treatment outcomes. They also found enough evidence to support that there is no harm in screening for depression.

The PHQ-9 is a valid 9 question tool for assessing depression and has been identified as a reliable and valid tool for screening for depression (Seo & Park, 2015). A cross-sectional study was provided with patients of a headache clinic who were consecutive with their visits. Of 185 patients chosen only 132 were eligible for the study. The results showed that the tools were easy to comprehend and were completed quickly by the patients. The validity of the tool was determined by the close correlation of scores to the Beck Depression Inventory-II (BDI-II). Together the results suggested that the PHQ-9 tool is a useful instrument for the screening and identification of major depressive disorder (MDD) in the migraine participants (Seo & Park, 2015). The PHQ-9 has also been validated in many countries, is one of the most used tools for diagnosis and severity assessment of depression and is widely used for depression screening in the primary care setting (Urtasun et al., 2019). Their study was through the use of a cross-sectional method on an intended sample of adult patients of an ambulatory care center. The degrees of depression varied as well as the participation of individuals that had no symptoms of depression. The PHQ-9 results were to differentiate the depression severity categories according to the Beck Depression Inventory-II (BDI-II). Mild cases were from 6-8 points, moderate cases were from 9-14 points, and 15 or more points were severe depression symptoms. The data collection was through PHQ-9 self-administered with the presence of a trained clinician and application of the BDI-II to see possible correlations with the tools. The clinicians were then blinded to the results of the PHQ-9 to avoid bias between the administration and use of the tools/instrument. The results showed that the PHQ-9 score was highly correlated with the BDI-II score, indicating that the strong association

of utilization of either tool can support the validity of the PHQ-9 measures for the sample group. According to Urtasun et al., (2019), this is the first validation and calibration study of the PHQ-9 in Argentina.

PHQ-9 was designed as a case-finding instrument for depression in primary care and has been tested in a range of populations (Horton & Perry, 2018). The PHQ-9 is widely used for screening depression in primary care and community settings (Urtasun et al., 2019). I chose this screening tool because of its simplicity and ease to manage self-screening. The questions are not too complex for the user of the tool or the one receiving the screening questions. NIMH (2019) noted that frequent use of the PHQ-9 tool by providers could identify symptoms of depression early, enhance early treatment interventions to avoid potentially fatal side effects of depression including suicide.

Education for Addressing Undiagnosed Depression

The objective of this DNP project was to ensure that the facility's providers obtained evidence-based education to utilize the PHQ-9 tool more consistently and increase the proficiency of tool utilization. USPSTF (2016) reported a negative impact of the lack of education on using PHQ-9 screening tools to diagnose and manage depression. Studies have indicated that using the PHQ- 9 depression screening tool after provider education promotes early diagnosis and prompt management of depression (Seo & Park, 2015). Educating providers on the use of PHQ-9 is essential as it improves patient outcomes and overall quality of care (DeCapua, 2018). The literature and EBP resources indicated that effective development of education training programs for nursing staff is essential to improve the knowledge and proficiency in depression screening in

pulmonary and sleep medicine. Clinicians, who are in direct patient care, need to be provided with explicit guidelines to screen patients and refer them for appropriate treatment. The literature review supports the importance and impact of an educational training program designed to improve depression screening by giving clinicians the pertinent skills to incorporate depression screening into their daily use. The literature also supports defining concepts, skills, and training for an individual to perform their job correctly and adequately (Garzonis et al., 2015). Additionally, training skills should include collaborative communication and be successful when given in groups to avoid inconsistencies in practices.

In this specialty location of pulmonology/sleep study education focuses on the quality of patient care and not just the common disease processes seen at this practice location. The education program is intended for the staff to identify depression through the use of a depression screening tool. The literature review has guided the development of this education program

Addressing the Gap in Practice

The current strategy is to address the existing gap of inconsistent depression screening at the project site. The development of an educational project regarding the PHQ-9 provides the project site a mechanism to increase the knowledge and proficiency of clinical staff in depression screening. Upon adoption by the project site, delivery of the education should support increased providers' knowledge of proper screening for depression, which has been associated with improvements in patients' overall health outcomes (Funderburk et al., 2016). Studies suggest that utilizing the PHQ-9 depression

screening tool after educating clinicians, can promote early diagnosis and prompt knowledge to achieve public health tasks to ensure early detection of the affected individuals' condition (Funderburk et al., 2016). Through screening results, the provider and patient overcome barriers of treatment as the patient may not realize that there is a problem that needs managing (Broffman et al., (2017). By identifying depression, the patient may be inspired to seek the necessary treatment plan to manage their health, accept help and assistance, which is suggested by their providers.

Local Background and Context

The specialty site staff consists of providers, office managers, and medical assistants. The staff education was developed for a pulmonology and sleep study center located in the Southeastern region of the United States, where a gap in practice has been noted of inconsistent depression screening. According to the USPSTF (2016), properly screening for depression could improve patient treatment outcomes, and all adults in the United States be screened for depression regardless of the risk factors involved Education for providers at the project site is needed to ensure that the PHQ-9 tool is used in compliance during the comprehensive patient assessment as part of mental health screening. The project's proposed education addresses depression screening to address the gap in practice and thus contribute to the exemplary quality of patient care at this specialty site. Patients at this site are diagnosed with end-stage disease processes such as Chronic Obstructive Pulmonary Disease (COPD), Emphysema, and lung cancer. At times, the patients are referred to hospice care because of the terminal diagnosis. End-stage processes are often treated as a collaborative approach from the primary care

physician, specialty physician, and attending physician if on hospice care. Patient care is combined with the entire care of the patient, not just the one factor that brought them in treatment, and identification of possible depression indicates the need for a follow-up process with the patient to review resources and conduct additional assessments. The target audience for this project is the providers of this specialty site. The developed education was delivered to the project site for consideration of future implementation. Staff may then use the education to train additional staff in methods that adhere to the guidelines of this location.

Role of the DNP Student

I have no professional relationship with the proposed project site and worked closely with the physician and his team to develop the evidence-based educational program. The subject matter has motivated me to explore in-depth correlations of end-stage disease processes, terminal diagnosis, sleep disorders, and depression due to experiences that I have had in both personal and professional life. I have had experience with family members, friends, relatives, and patients who have not had a comprehensive assessment by clinicians and physicians thereby neglecting to encompass total patient care and necessary care plans. In prior professional experience, clinicians did not conduct a comprehensive assessment to include mental health screening. Patients that were newly diagnosed with terminal prognosis were not properly assessed for depression. Signs of suicidal ideation were missed. There are no foreseen personal biases with the subject matter. As a patient advocate, I would like to bring awareness of depression and provide an increased quality of care for the patient. Additionally, a patient advocate helps the

patient to achieve optimal goals with care planning and succession in their treatment by providing them with a mental health screening.

My role in this project is to develop education on the use of the PHQ-9 depression screening tool in the sleep study center setting to increase the nursing staff's knowledge and proficiency of depression assessment and identification. As a DNP student, I interacted with the SME team to receive their feedback and incorporate their suggestion. After the project, I received an evaluation of my program management efforts from the SME team and deliver the education program to the project site.

Role of the Project Team

The project team consists of a physician, a licensed clinical social worker, and a clinical field training specialist. The role of the project team was to provide feedback on the education of the use of the PHQ-9 depression screening tool and how the specialty site considered implementing it. The members of the team reviewed the assessment tool, the patient population, and how it relates to their needs as well as the educational level of comfort that the site currently has. The team reviewed the final product and provided feedback for revision as needed. The team was also available to provide thoughts when questions arose before the meetings. The team also provided a summative evaluation of the final education program.

Summary

Several research studies have indicated the need to utilize the PHQ-9 depression screening tool after training to promote an early diagnosis and establish referral and management of depression. The establishment of a timely diagnosis of depression

promotes immediate treatment and management to improve patient outcomes by identifying symptoms of depression that may impact the affected individuals. The literature review is sustainable evidence suggesting the need to provide educational training to improve depression among the affected individuals. The focus was to determine and refer patients to the appropriate resources where care can be provided. The review has also suggested a lack of staff training interventions causally linked to an improper patient assessment of overall health including a depression screening. This section has provided an appraisal of the background of the project implementation sleep study center. The discussion has also identified and defined the role of various stakeholders involved in the project, including this DNP learner's role. Their involvement enhanced the success within the educational project set up as they would provide necessary feedback and add value to the project.

Section 3: Collection and Analysis of Evidence

Introduction

According to the USPSTF, screening for depression improves early detection accuracy (Siu, 2016) and improves overall health outcomes (Culpepper et al., 2015). Despite the prevalence of depression in the United States and definite guidelines regarding the use of the PHQ-9, providers continue to struggle to implement this depression screening tool in their practice (NIMH, 2019). The problem identified is the lack of knowledge and proficiency level in using the PHQ-9 screening tool to assess and screen for depression at this project site. The DNP project's purpose was to develop staff education for the PHQ-9 depression screening tool. The screening tool is to identify patients with a positive screening for depression. Routine screening for depression using the PHQ-9 tool provides an increased opportunity to diagnose and better manage depression (Williams et al. 2017). According to the USPSTF (2016), approximately 16.2 million people in the United States suffer from depression, with another 35 million having experienced depression at some point in their lives. The DNP project's objective is to develop evidence-based education on the use of the PHQ-9 depression screening to enhance providers' knowledge and proficiency levels in managing depression at the project site. Subject matter experts provided the DNP student with expert opinions and recommendations in determining the practicality, applicability, and relevance of the staff education module in addressing the gap in practice at the clinic. The Iowa EBP model is a guide to assist with project objectives (see Figure 1). It contributed to the planning and implementation of education. Additionally, the Iowa evidence-based practice model is

guided to support the education program and project design. The seven steps of this model provide a guide for identifying a problem through the application of EBP to support the evaluation of the problem. In Section 3, it is essential to examine evidence sources to support the project and analysis and synthesis the data.

Practice-Focused Question(s)

The local problem is a lack of knowledge and proficiency in using the PHQ-9 depression screening tool in a pulmonology and sleep study office. The inconsistent depression screening represents a gap in practice, making care, less efficient and of lower quality. The project's focus was to develop a training program to increase their knowledge and attain proficiency in depression screening using this depression screening tool. The project elements include EBP education to assess and identify depression in the patient population. In managing the treatment of depression by care providers, would evidence-based practice regarding depression screening be an effective means for staff education, according to a panel of local experts? The evidence-based practice education project was delivered to the practice site for implementation later. The finalized deliverables are the actual work products, to be presented to the project site, and were evaluated by the SME. The deliverables are the educational materials, pre/posttest, and plan for implementation.

Sources of Evidence

Literature reviews from clinical studies provided evidence to guide the development of education during this project. An initial literature search was used to establish the PHQ-9 tool as the best practice for depression screening. The literature

review guided the development of an education program that impacts provider knowledge, proficiency level, and patient outcomes. Review and analysis of the literature helped identify the areas that need education. The purpose of the project was to develop education and have the education evaluated by subject matter experts (SME). The project team consists of a physician, licensed clinical social worker, and a clinical field training specialist with combined clinical experience of greater than 25 years. SME team reviewed the education for clarity, appropriateness of the content, format, and style. They provided feedback and recommendations in determining the practicality, applicability, and relevance of the staff education to increase providers' knowledge and address the clinic's practice gaps. The expert team completed a survey instrument (See appendix A) to provide an evaluation of the education program after this project.

Procedures

The educational program developed during this project included a history of the PHQ-9 tool, an overview of its creation and development, and literature support for its validity and reliability (APA, 2016). Based on the literature review, I developed an initial draft of the education program, including the pre/posttest. I presented the initial program draft to the SME team during our first meeting. The team discussed and provided feedback. The process of working with the team of SMEs to evaluate the education program consists of meeting in person and/or virtually. Feedback was provided individually as the education program is developed. I revised the education materials in response to the SME teams' feedback and present the revision for further team input. The SME team reviewed the final work products before presentation to the project site. The

deliverables are the educational materials, pre/posttest, and plan for implementation. The tool used for the evaluation of educational materials is an Expert Panel Evaluation of Staff Education (See Appendix A).

Protections

Once the project was presented and approved by the Walden University Institutional Review Board (IRB), the educational program began at this project site. Since the project was on staff education, no patient information was included, therefore maintaining the confidentiality of patient and project site

Analysis and Synthesis

The tool used for the evaluation of educational materials is an Expert Panel Evaluation of Staff Education (See Appendix A). The SME responses to this form were analyzed with descriptive statistics.

Summary

Providers have a vital role to play with regards to managing the patient's care and are responsible for diagnosis at this practice site. This section of the project discussed the doctoral proposal plan for collecting and analyzing the evidence with a well-defined source of the evidence, describing how the data was collected and measured. In the next section, there are inclusive findings from the discussions of any unforeseen limitations or outcomes and their potential impact on the findings were evaluated during the project.

Section 4: Findings and Recommendations

Introduction

The staff at this local pulmonary and sleep medicine office care for a variety of patients who have acute, chronic, and end-stage disease processes. The problem of focus for the duration of this project resulted from a gap in depression screening at a local pulmonary and sleep medicine practice. A routine comprehensive assessment, to include a mental health screening for depression, was not in place. The purpose of the doctoral project was to develop an education program for depression assessment using the PHQ-9 depression screening tool for the providers of the pulmonary and sleep medicine practice. As depression continues to be the leading cause of disability worldwide (World Health Organization, 2017) it also accounts for nearly half of disability-adjusted life years. Adults with depression have twice the incurred healthcare costs in comparison to those who are not depressed (LeMoult & Gotlib, 2019). If depression is left undiagnosed, the depression may worsen thereby diminishing quality of life and productivity within the workplace (Williams, et al., 2017). For some, this can lead to deterioration and debilitating disease processes.

The program intends to help providers increase their knowledge and proficiency with depression assessment by developing and delivering a PHQ-9 depression screening tool education program for future project site use. Through its use, significant progress, continuity of interdisciplinary approach, and increased quality of care may be provided to the patient population (LeMoult & Gotlib, 2019). Additionally, The DNP project also addresses a gap in practices by the providers at this site as well as providing education,

resources, and tools to ensure success with this screening tool. The International Review Board (IRB) determined that this project complies with the Doctoral Educational Staff Manual of Walden University. Thereby granting me approval for this education program. Receiving approval was a huge milestone. It allowed for me to move forward with this project having all the guidelines in place for project completion.

The United States Preventive Service Taskforce (USPSTF) (2016) recommends that all adults in the United States are screened for depression regardless of the risk factors involved. Despite the guidelines provided, there is a provider struggle to implement depression screening. The education deliverables, resources, and evidence-based practice findings were evaluated by subject matter experts (SME) and revised accordingly with their input. The practice-focused question addresses the aspects related to depression and the educational training program as it relates to the following:

Would evidence-based practice regarding depression screening be an effective means for staff education, according to a panel of local experts? The evidence from the literature supports the need to implement the use of this tool for the management of depression in pulmonary and sleep medicine. The team of SMEs reviewed the evidence that was presented and determined if the content was applicable and valid as it pertains to the practice gap.

Findings

The project site collected data from their comprehensive assessments indicating a gap in practice at this site. The practice site gap was the lack of a mental health screening in the patient population. Once approval from the International Review Board (IRB) was

approved, immediate planning went underway. Initially, there were four meetings per week, for the first two weeks. One consisted of a team of three subject matter experts, the other meetings were held with individual subject matter experts. Since the team of SMEs has diverse backgrounds, it was important to me to do both group meetings and individual meetings to allow for individual input. The meetings were then moved to weekly for team collaboration. The SMEs were available for input and feedback via in-person, virtual, call, and/or email.

SME Team Meetings

The literature review meetings were to discuss and select research articles and justification of how this literature supported the project. It offered research that was up to date and concise. Through team discussions and review of literature, the education program was developed. The meetings were useful in discussions of scholarly activities and resourceful information provided SME from other researchers and industry leaders. It allowed for discussions on recent research and literature. The publishing of the scholarly articles provided useful resources and supporting information for depression screening in this patient population. One article provided industry trends related to specific disease management and diagnoses (Boehm et al., 2019), whereas another provided support for industry changes (Broese et al., 2021). Scholarly articles and organizations provided reliable quality of research and not just generalized hearsay. Reviewing the materials allowed evidence-based practice resources to be applied and included in the education program and revised with the input of the SME. Many of the articles were removed after SME group discussions judged them to not contribute relevant information for the

education. It was a cumbersome effort due to how time-consuming it was to find articles to fit the needs of the project. However, it also allowed for great debates on perceptions and viewpoints from each of us. Their input kept me focused and determined to find the evidence-based practice that contributed to the project. The SME provided feedback on ideas, organization, and executions of the aspects of the writing and project management, allowing input on the best selection of resources.

The content review was a helpful stage in the process of project development. Reviewing the pieces of information for approval before continuing to the next steps of the project helped with the streamlining of information for the intended education program. It allowed for real-time editing and for improvements that were immediately corrected upon provided feedback from SME. We agreed on the content and what needed to be compiled for the education project.

The SMEs provided ongoing feedback during the discussions, including feedback on plans for implementation and evaluation of the education. Additional meetings were held as focused groups for collaborative input and further project feedback. The face-to-face and virtual meetings helped to identify the analysis of project management and education deliverables and identified areas of miscommunication and misperception that may have been extended to stakeholders if not revised. One SME disagreed with a pre/posttest completely. Thoughts provided were to use this education program for a teaching experience and/or in-service versus testing what they retained. It was shared that the knowledge will be instilled through the use of a continued application. The other

SME agreed that a pre/posttest demonstrated program evaluation and not the individual's evaluation. The program should have proven effectiveness through testing results.

Meeting of Critical Thinking in Application and Dissemination

Critical thinking encompasses strategic thinking and not just task orientation. It is the ability to pull all the information together and present the content in a well written, thought out and logical approach in conjunction with the evidence-based practice addresses the steps to critically appraise the literature for its usefulness to include in the development of the education and plans for delivery and evaluation. In the application and dissemination process, critical thinking is important as you must have the resources to support your ideas. Additionally, presenting logical reasoning and application. The SME challenged the education program and components with the 5 why's of root cause analysis tool (Jones, 2021). According to Jones, 2021 there are times when you are uncertain of why something happened or lack thereof and can't be determined that by brainstorming. Many times, one is left guessing, and opinions and biases may influence judgment. The 5 why's approach helps test the knowledge threshold through data and focusing on facts of information and not just opinions. It helps get closer to identifying the true root cause of the problem. Thereby forcing this student to search for the answers with supporting evidence (See Appendix E).

Staff Education Deliverables

The education program includes the PHQ-9 depression screening tool, education on how to utilize this tool, and a pre/posttest to measure their knowledge of the tool. The education program deliverables include a PHQ-9 questionnaire (See appendix B, PHQ-9 questionnaire scoring (See appendix C), PHQ-9 pre/posttest questionnaire (See appendix D), the teaching method is a PowerPoint presentation, a pre/posttest questionnaire (See appendix D). The education is to be delivered by a staff member of the pulmonary and sleep medicine office. The teaching method of delivery may be in person and/or virtually allowing for approximately 45 minutes for delivery.

The informational topics included in the education program are as follows.

- Background information
- Nature of the project
- Problem statement of depression
- Evidence-based practice on depression screening
- Piaget's cognitive theory
- Sources of evidence
- PHQ-9 depression screening (See Appendix B)
- A guide to summarize results of the PHQ-9 (See Appendix C)
- Pre/Posttest (See Appendix D)

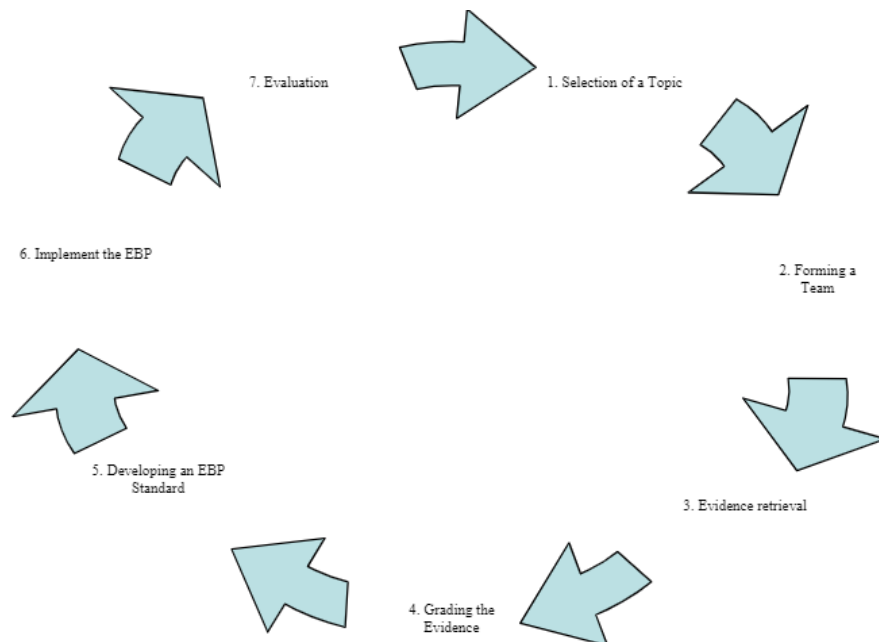
Expert Panel Evaluation of Staff Education

The SME and Expert Panel Evaluation of Staff Education form was an intricate part of the program development and project management. The Expert Panel Evaluation

of Staff Education form (See Appendix A) was used to evaluate and assess the team member's project management and education deliverables. Before creating the education plan, this pulmonary and sleep medicine office did not have a consistent routine in place to ensure depression screening practices were in place. Findings from the evaluations of the team of SMEs showed that they strongly agreed that the project objectives were met, and the leadership process was exemplary in the doctoral student's education program. The development of the education program demonstrated that the deliverables were knowledgeable and organized well. There were three subject matter experts involved in evaluating the staff education program. There were nine questions in the evaluation. Two out of three SMEs chose 4 (agree) as scoring on all 9 questions. One SME chose scoring 4 (agree) as scoring on 6/9 questions and a 5 (strongly agree) on 3/9 questions (See figure 2 results). The evaluation form provided feedback upon this scholarly student's performance and objectives.

Figure 1

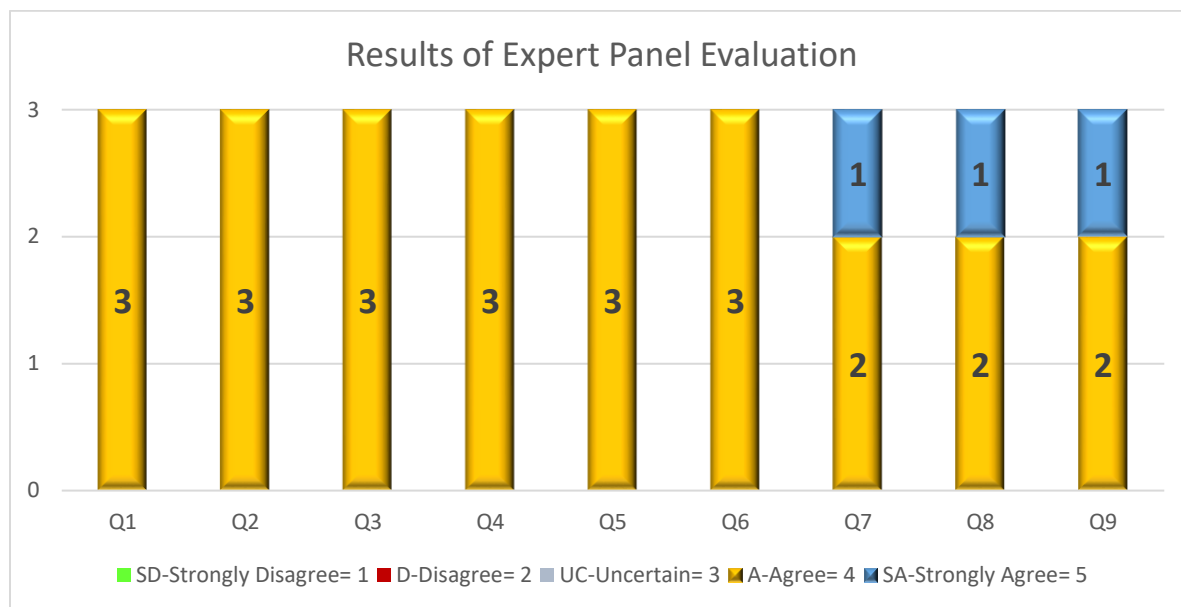
Seven Steps of the Iowa Model of Evidence-Based Practice



Note. From “Introducing Evidence into Nursing Practice: Using the Iowa Model,” by C. Doody & O. Doody, 2011, *British Journal of Nursing*, 20, p. 661-4. Retrieved from: https://www.researchgate.net/publication/51466031_Introducing_evidence_into_nursing_practice_Using_the_IOWA_model

Figure 2

Results of Expert Panel Evaluation of Staff Education

**Implications**

The SME evaluated the education as useful and should be beneficial to the organization and its providers. The education may be an effective way for the clinic providers to help manage depression. The patient population at this clinic may also have future opportunities for their mental health needs to be addressed and provide them opportunities to seek treatments for their depression. By using evidence to define practices, the clinic may also promote positivity in social change and the current culture of practices given by other providers.

Recommendations

Research literature was used to develop an evidence-based project. Continued depression that prolongs without diagnosis and treatment may lead to consequences such

as death. Evidence-based practice shows that there are benefits to early detection through screening. Having invested time to establish, create the education plan and tools, allows for efficient and professional delivery. It is also required to execute and complete the education plan project. The plan for providing deliverables of the PowerPoint and pre/posttest PHQ-9 questionnaire (See Appendix D) will be handed over to the site during a stakeholder meeting, to form a basis for deliverables review, and the pre/post-testing. Thereby allowing for an explanation of the materials and their intended use as well as the risks and benefits of implementation. The pre/posttest is a nine-question test consisting of multiple-choice answers for questions 1-7 and column matching for questions 8-9. Questions 1-7 will be graded at 10 points each. Questions 8-9 will be graded at 15 points each. Three points per correct matching choice because each has five items of column matching per question. Long-term recommendations may perhaps be that the project site may consider gathering data on screening completions and referrals to see if the education and continued reinforcement efforts are making a real-time impact on practice in this patient population.

Contribution of the Doctoral Project Team

The project team consisted of clinical team members who are experts in the subject matter. The team displayed professionalism and was welcoming with guidance and needs during the involvement and development of the education project. They contributed feedback by bridging the gaps in practice and processes. They also reviewed and evaluated the content and provided feedback as needed. As feedback was provided and professional experiences were shared, revisions to the content were made. There was

support and availability throughout the developments of the education program which in turn helped to reach the goals of the project.

The recommendations and inputs provided by the SME helped develop and guide the deliverable product to the site. They provided their expertise and insight on how to strengthen the project and the evidence-based practice by helping to eliminate resources that did not pose a strong objective and/or help support the project goals.

Strengths and Limitations of the Project

The strengths gathered from this project was the wealth of knowledge, resources, and information that are available by industry leaders. The project helped to bridge the gap in practices for this site. The SME team collaboration was unparalleled to what I have been previously experienced while working on other professional project implementations and change management projects. This team was willing and wanting to help with my success.

The team of SMEs consisted of three industry leaders. Demographically, the participants were local and are familiar with the site. The team consisted of a mix of both males and females. Their length of educational experience was average. There was a mix of experiences, which strengthened the expertise with the advantages of mature years versus youth. Due to the education project being developed and turned over to the project site, the SMEs that were on the team were engaging and knowledgeable with the subject matter of the project.

At times there may be limitations and barriers to change management projects. Some of the barriers that were experienced with this team of SMEs were the derivatives

of time constraints, work, and family life commitments. One SME was traveling overseas during a scheduled call with a significant time zone difference. The barrier to this was poor connectivity. Another SME was traveling out of state for work also in a different time zone. I assured them that I would alter my time as early or late as needed to get the project completed. One out of the three SMEs utilized a holistic thought process, while the others utilized a scientific approach to depression assessment. This caused a few debates when deciding on resources and use. In section five, I will focus on plans for disseminating the education deliverables package to the project site.

Section 5: Dissemination Plan

The dissemination plan and results of the evaluation by SME show that the material meets the requirement of a DNP scholar as well as meeting the needs of patient population needs and site needs. The dissemination for this project is a planned process that involves targeted audiences, settings in which research findings are to be received, interacting, and communicating with audiences in ways that will facilitate understanding and uptake of the research (Ross-Hellauer et al., 2020). Dissemination is often thought of as a means of sharing information and spreading knowledge. Research and evidence-based practice can lead to improved health outcomes. By engaging the SME experts with special specific skills in the use and/or development of appropriate communication tools, it has helped with the use of the right language and focal points of the intended audience. Translating research into improved patient care exists across diseases (Bonnet et al., 2017). At the center of the dissemination of research findings is knowledge translation.

With the translation of knowledge, the research evidence can bring behavioral, cultural, and practice change thereby reducing the researcher's practice gap. Through the translation of evidence, patient safety and quality of patient care can be increased to optimize outcomes for the patient population and staff serving them (Curtis et al., 2017). Plans to disseminate this research, are to hand over an education program packet of deliverables to include a PowerPoint and pre/posttest for implementation by the practice site.

In my professional role, I have had inquiries about utilizing the materials that have been gathered and the education that I propose at different levels of patient needs. I hope to share the content with additional audiences and venues which include skilled and non-skilled nursing, assisted living, home health, hospice, continuous care retirement communities, and national organizations in which I have future opportunities to teach and present research materials nationally.

Analysis of Self

This DNP project has forced me to think creatively and utilize the application of findings from evidence-based practice. It has in turn provided education and growth as a DNP scholar, clinician, and professional. As an industry leader, I have found that many people are suffering in silence with mental health issues that go undetected. Assisting with education and guidance for other industry leaders, by providing resources and best practices to enhance and mitigate their risks, while taking pride in teaching with my scholarly education. I continue to seek knowledge and enjoy providing it to others. Trending issues can sometimes be the greatest mitigator of safety and risk initiatives.

Being an industry leader, and role model for best practices has guided me to learn the most about my abilities as a scholar. With each degree that was accomplished, I continued to have a greater thirst for knowledge and professional growth. Each steppingstone and degree have been accomplished while being a full-time parent and full-time nurse. I have taken pride in serving as a role model for my children, family, friends, and colleagues. As a nurse, I also want to be the family at the bedside taking care of my relatives and not a nurse at that moment. Providing and receiving the quality of patient care is of utmost necessity when caring for the patient population. This new role as a scholar will help continue the path of excellence in quality initiatives. Without this journey into evidence-based practices and application of such, it would be a difficult challenge to assure the well-deserved quality of patient care. In nursing, we are always learning and evolving. If one thing is for certain is that change is inevitable. Embracing it instead of fighting it leads to a smoother transition.

With the help of seasoned healthcare professionals and subject matter experts, I have learned that I am an effective leader with a passion for healthcare and nursing. I have served in various healthcare leadership roles ranging from acute care, long-term care, quality, and risk management. Applying all these passions, experiences, and leadership opportunities have provided me with abilities to further educate and expand upon my knowledge with other industry leaders.

Summary

By providing deliverables of an education program of the PHQ-9 assessment tool in the pulmonary and sleep medicine site will help provide exemplary quality of care to

the patient population being served in that area. Proper screening identifies and manages depression. Although the research shows there are millions of people who have symptoms of depression, the percentage of those obtaining the necessary treatment needed is a small percentage. The research and evidence-based practice led to managing symptoms of pulmonary and sleep disorders and assessing and identifying depression in the population. The PHQ-9 assessment tool helps providers be better prepared to identify and treat depression. When implemented and utilized correctly, this tool is an effective means of patient care planning and management for depression. Additionally, usage of this tool identifies detection, treatment need, and necessary care plan follow-up, which may result in increased quality of life for the involved patient population.

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Appendix A: Expert Panel Evaluation of Staff Education

Please review the education program and answer the following questions to the best of your ability. This survey intends to provide data regarding the effectiveness of education to adult nurses on the topic.

Scale:

SD=Strongly Disagree D=Disagree U=Uncertain A=Agree SA=Strongly Agree

	1=SD	2=D	3=UC	4=A	SA=5
1. The education is clear and easy to follow.					
2. The education is relevant to clinical nursing practice.					
3. The education content is consistent and appropriate to current nursing practice standards.					
4. Nurses will be able to complete the education.					
5. The education will increase nurses' knowledge.					
6. The education will help to identify areas where nurses have gaps in knowledge and need remediation.					
7. The length of time to complete the education is appropriate.					
8. The education module is an appropriate teaching method for the topic.					
9. Overall, I am satisfied with the content and quality of the education.					

Comments:

Thank you for your participation.

Appendix B: Patient Health Questionnaire (PHQ-9)

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems?
(Use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + + +
=Total Score:

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix C: PHQ-9 Questionnaire Scoring

PHQ-9* Questionnaire for Depression Scoring and Interpretation Guide**For physician use only****Scoring:**

Count the number (#) of boxes checked in a column. Multiply that number by the value indicated below, then add the subtotal to produce a total score. The possible range is 0-27. Use the table below to interpret the PHQ-9 score.

Not at all (#) _____ x 0 = _____
 Several days (#) _____ x 1 = _____
 More than half the days (#) _____ x 2 = _____
 Nearly every day (#) _____ x 3 = _____

Total score: _____

Interpreting PHQ-9 Scores

Diagnosis	Total Score	For Score	Action
Minimal depression	0-4	≤ 4	The score suggests the patient may not need depression treatment
Mild depression	5-9	5 - 14	Physician uses clinical judgment about treatment, based on patient's duration of symptoms and functional impairment
Moderate depression	10-14		
Moderately severe depression	15-19	> 14	Warrants treatment for depression, using antidepressant, psychotherapy and/or a combination of treatment.
Severe depression	20-27		

* The PHQ-9 is described in more detail at the Pfizer website: <http://www.phqscreeners.com/>

Appendix D: PHQ-9 Pre/Posttest Questionnaire

1. To which population should the PHQ-9 screening tool be administered?
 - a. Elderly patients
 - b. Middle-aged patients
 - c. Adolescents
 - d. All the above
2. Does the PHQ-9 tool score according to different levels of severity of depression
 - a. Agree
 - b. Disagree
3. Who can administer a PHQ-9 assessment to patients?
 - a. Administrative staff
 - b. Medical assistance
 - c. Any staff member
 - d. All the above
 - e. None of the above
4. Who should complete the PHQ-9 screening tool?
 - a. The doctor
 - b. Nurse
 - c. A Clinical officer
 - d. Patient
 - e. All the above.
 - f. None of the above
5. How does PHQ-9 ask patients to rate the frequency of experienced depression?
 - a. Not at all
 - b. Several days
 - c. More than half of the days
 - d. Nearly every day
 - e. All the above
 - f. None of the above

6. Which of the following are different depression severity levels?
- Minimal depression
 - Mild depression
 - Moderate depression
 - Moderately severe depression
 - Severe depression
 - All the above
 - None of the above
7. Which of the following shows the ranges of the total score when using PHQ-9 depression screening?
- 1 – 4
 - 5 – 9
 - 10 – 14
 - 14 – 19
 - 20 – 27
 - All the above
8. Match the total score with corresponding levels of depression?

Total Score	Depression Severity
a. 1 – 4	Minimal depression
b. 5 – 9	Moderately severe depression
c. 10 – 14	Moderate depression
d. 14 – 19	Severe depression
e. 20 – 27	Mild depression

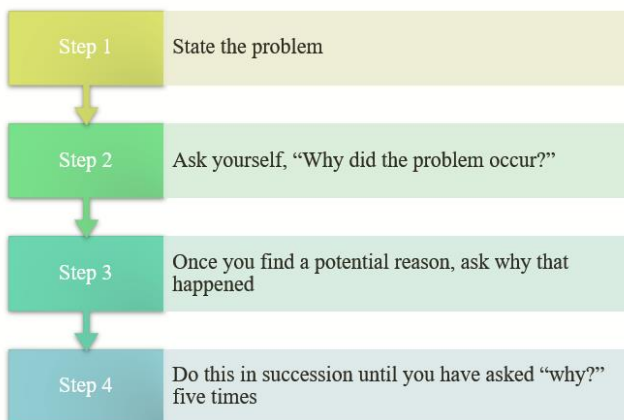
9. Which of the following correctly match proposed treatment actions for screening severity?

Depression Severity	Proposed treatment
a. Minimal depression	A treatment plan, consider counseling, follow up and/or pharmacotherapy

b. Mild depression	None
c. Moderate depression	Watchful waiting, a repeat of PHQ-9 follow-up
d. Moderately severe depression	Immediate initiation of pharmacotherapy
e. Severe depression	Active treatment with pharmacotherapy and/or psychotherapy

Appendix E: The Five Why's of Root Cause Analysis

THE 5 WHY'S : STEP BY STEP GUIDE



THE 5 WHY'S OF RCA

