

2018

Tobacco Cessation Education for Primary Care Nurses and Advanced Practice Providers

Stephanie Scammell
Walden University

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Walden University

College of Health Sciences

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Stephanie Scammell

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Walden University
2018

Abstract

Tobacco Cessation Education for Primary Care Nurses and Advanced Practice Providers

by

Stephanie Scammell

MSN, Texas A&M University, Corpus Christi, 2009

BSN, University of Mary Hardin Baylor, 2005

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2018

Abstract

Tobacco use is the leading cause of premature and preventable death in the United States, yet millions of Americans continue to use tobacco. Nursing professionals comprise the largest health care provider group and can help improve tobacco cessation among their patients. The purpose of this doctoral project was to increase nursing staff and advanced practice providers knowledge, skills, and confidence related to tobacco cessation interventions. The project took place in a family medicine clinic in Central Texas. The nursing staff (which included 1 registered nurse and 3 licensed vocational nurses) and advanced practice providers (which included 3 nurse practitioners and one physician assistant) were asked to participate in the project. Knowles' theory of adult learning and Prochaska's transtheoretical model served as the conceptual frameworks for the project. The United States Public Health Service Rx for Change program was used to create 2 posters on tobacco cessation interventions that were presented to staff as an educational intervention. A 10-question knowledge survey and a 15-question skills and confidence survey were administered before and after the education program; 8 nurses completed the survey before the education and 7 nurses completed the survey after the education. For the presurvey, 29% of responses were correct; while for the postsurvey 83% of responses were correct. Results also showed an increase on the 4-point Likert-scale survey measuring the participants' skills and confidence regarding tobacco cessation interventions. The finds of this project will help nurses and advanced practice providers use evidence-based practices to promote smoking cessation, leading to positive social change for patients, families, and communities.

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Dedication

This project is dedicated to anyone who is working towards tobacco cessation and to those individuals who are campaigning for clearer air to reduce the adverse health effects caused by tobacco use.

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A big thank you to John Scammell. You always let me reach for the stars.

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Section 1: Nature of the Project

Introduction

According to the U.S. Department of Health and Human Services (USDHHS; 2014), tobacco use is a global epidemic. In the United States, tobacco use is the leading cause of preventable and premature death. In spite of the compelling evidence that tobacco use decreases the health of smokers and can cause diseases such as stroke, heart disease, and lung cancer, thousands of U.S. adults continue to smoke due to their addiction to nicotine (Centers for Disease Control and Prevention [CDC], 2017; Syamlal, King, & Mazurek, 2017; USDHHS, 2017). An estimated 42.1 million Americans (one in five adults) currently smoke cigarettes (USDHHS, 2017). Approximately 500,000 Americans die each year prematurely due to tobacco-related illnesses (CDC, 2015b, 2017; Surgeon General's Report [SGR], 2014; USDHHS, 2017). The economic burden due to medical costs and productivity losses are \$300 billion a year (CDC, 2015b, 2017; SGR, 2014; USDHHS, 2017). The Healthy People (HP) 2010 objective regarding smokers was to decrease the percentage of smokers to less than 12% (USDHHS, 2014). However, that objective was not met. In 2015, 36.5 million people, representing 15.1% of the U.S. population, smoked cigarettes (CDC, 2017). USDHHS leaders subsequently extended the objective as part of the HP 2020 goal.

According to the CDC (2015b), two thirds of smokers attempt to quit annually. Of smokers who try to quit, 3% to 5% are successful (Whitehead, Zucker, & Stone, 2014; World Health Organization [WHO], 2016). The success rate can double, however, with medical assistance (Whitehead et al., 2014; WHO, 2016). The USDHHS (2017) advised

health care providers to expand nicotine cessation treatments in clinical settings, as well as identify and document tobacco cessation during each patient encounter, with the goal of improving the quality of life and health of the patient. Efficient frameworks for action such as nicotine cessation treatments and smoke-free policies are outlined in Healthy People 2020 (USDHHS, 2014).

The single, most-effective prevention intervention is tobacco cessation (Sarna, Bialous, Chan, Hollen, & O'Connell, 2013; Whitehead et al., 2014; WHO, 2016). Necessary steps for action are warranted for addressing the national health issue of tobacco use, and interventions need to be made to decrease the prevalence of this health problem and meet the Healthy People 2020 goal. The purpose of this Doctor of Nursing Practice (DNP) project was to educate advanced practice providers (APPs, who include nurse practitioners and physician assistants) and nurses on tobacco cessation strategies to increase their knowledge, skills, and confidence in providing tobacco cessation education to their patients. The specific goal of this project was to develop and implement an educational project on tobacco cessation interventions targeted to APPs and nurses to increase tobacco cessation interventions in the clinical setting.

Problem Statement

In the United States, the nursing profession comprises the largest and most trusted health care provider group, and as such, nurses can play an integral role in improving public awareness on the risks of tobacco (American Nurses Association [ANA], 2018; Curran, 2014; Price, Hall, Angus, & Peter, 2013; Sarna et al., 2013). Experts also agree that nurses can be a useful tool in improving tobacco cessation (Sarna et al., 2016;

Schwindt & Sharp, 2013; Whitehead et al., 2014). However, there is evidence showing that nurses are not educated on evidence-based tobacco cessation strategies, which indicates a gap in practice (Sarna et al., 2016; Schwindt & Sharp, 2013; Whitehead et al., 2014). The local problem at the DNP project site illustrated health care providers' lack of education on evidence-based tobacco cessation strategies. According to several 2018 conversations I had with nurses at a Texas family medicine clinic, nurses are not aware of evidence-based practice (EBP) tobacco cessation strategies.

Since the *Future of Nursing Report* in 2011, nurses have sought to transform health care by incorporating evidence-based knowledge into nursing clinical decision making (Institute of Medicine, 2011). The Pathway to Excellence Program is associated with following EBP, and it is an expectation for all nurses (Hanrahan et al., 2015; Steelman, 2016; White, Dudley-Brown, Terhaar, 2016; White & Spruce, 2015). An educational project on tobacco cessation strategies targeted towards APPs and nurses can be implemented at little to no cost and has the possibility of saving billions of dollars by decreasing tobacco-related morbidity and mortality and reducing the \$170 billion annual expenditure on medical care, as well as improving the health and quality of life of the population (CDC, 2017; USDHHS, 2014). Furthermore, failing to incorporate evidence-based knowledge in practice is costly to organizations and harmful for patients (White et al., 2016).

An educational intervention for nurses can improve advance practice providers' (APPs) and nurses' knowledge, skills, and confidence regarding tobacco cessation strategies and help increase tobacco cessation interventions in the clinical setting (Health

et al., 2017). Increasing tobacco cessation interventions in the clinical setting increases tobacco cessation, resulting in a decrease in morbidity and mortality related to tobacco use, according to the SGR (2014). Furthermore, this type of intervention helps improve the tobacco control efforts required by HP 2020 aimed at reducing tobacco use to less than 12% of the U.S. population (Heath et al., 2017). According to government experts, tobacco cessation interventions also assist in reducing the economic burden related to medical expenditures and lost productivity (Office of Disease Prevention and Health Promotion, 2017). Fostering this implementation will also meet current USDHHS guidelines regarding advising tobacco cessation in every patient encounter (USDHHS, 2017).

Purpose

The purpose of this EBP project was to educate APPs and clinic nurses on tobacco cessation strategies using the Rx for Change: Clinician-Assisted Tobacco Cessation Program (United States Public Health Service [USPHS], 2018), which was designed to increase health care providers' knowledge, skills, and confidence in providing smoking cessation education to their patients. The goal was to use the Knowledge survey and the Skills and Confidence for Smoking Cessation Tool before an educational intervention and again upon completion of the educational intervention. The expected outcomes after completion of the educational intervention on tobacco cessation were the following:

- Primary care APPs and nurses will indicate an increase in knowledge and skills related to tobacco cessation education.

- Primary care APPs and nurses will indicate an increase in confidence in providing tobacco cessation education to patients.

Nature of the Doctoral Project

The setting for the doctoral project was a primary care clinic. The doctoral project question was: Will an education program on tobacco cessation increase APPs' and nurses' perceived knowledge, skills, and confidence in promoting tobacco cessation to their patients? Studies have shown that an educational program is an essential tool in the clinical setting for implementing change to improve patients' health (Gallagher-Ford, Fineout-Overholt, Melnyk, & Stillwell, 2011; Heflin, DeMeo, Nagler, & Hockenberry, 2016; Schaffer, Sandau, & Diedrick, 2013). Descriptive analysis was utilized to evaluate the effectiveness of the tobacco cessation educational program (Grove, Burns, & Gray, 2013). The pretest and posttest survey consisted of a Tobacco Cessation Knowledge survey, which I developed (see Appendix B), and Matten's Skills and Confidence for Smoking Cessation tool (see Appendix A for permission to use the tool and Appendix C for the survey tool). The comparison of the results of the pretest and posttest survey scores provided me with information on the effectiveness of the EBP project. The educational program was based on the Rx for Change: Clinician-Assisted Tobacco Cessation program, which the USPHS created to train health care practitioners in providing smoking cessation interventions (USPHS, 2018). The goal of the program was to decrease tobacco use, increase the accessibility of tobacco cessation interventions, and provide modules on tobacco use, resources and cessation therapy (Heath et al., 2017; Hebb, 2014; Porter, 2013; Sarna et al., 2016; USPHS, 2018). The program includes the 5

A's module (Regents University of California [RUC], 2018; USPHS, 2018), which is described in Table 1.

Table 1

The 5 A's Module Used in This Project

A	Action step
1. Ask	Discussed the importance of asking patients whether they use tobacco at every patient visit.
2. Advise	Discussed how APPs and nurses should advise all smokers to quit.
3. Assess	Discussed how APPs and nurses should evaluate patients' willingness to quit and assessed barriers and facilitators.
4. Assist	Discussed how APPs and nurses should assist all patients interested in quitting with referrals to support groups, telephone quit-lines, and behavioral management, as well as encourage social support and prescribe evidence-based pharmaceutical aids.
5. Arrange	Discussed with the APPs and nurses the importance of arranging a follow-up call or visit.

Note. I adapted the 5 A's model developed by the Agency for Healthcare Research and Quality (n.d.) and incorporated by USPHS (2018) in its Rx for Change program.

The expected outcomes of this intervention were an increase in APPs' and nurses' knowledge and skills related to tobacco cessation education and an increase in APPs' and nurses' confidence in providing tobacco cessation education to patients (Heath et al., 2017; Lawrence, 2016; Petersen et al., 2017; Schwindt & Sharp, 2013; Whitehead et al., 2014). I surmised that the project would assist nursing staff with applying smoking cessation strategies in the clinical setting in a more aggressive manner, which has been

found to further improve tobacco cessation (Heath et al., 2017; Heflin et al., 2016; Schaffer et al., 2013). The educational program timeline is described in Table 2.

Table 2

Timeline for Educational Program on Evidence-Based Smoking Cessation Strategies

Action step	Description
1. Introduction	APPs and nurses were introduced to the smoking cessations initiatives at the facility. They were invited to participate in the smoking cessation education program.
2. Presurvey	APPs and nurses completed a pre-survey knowledge-based questionnaire in addition to the Matten's Skills and Confidence for Smoking Cessation tool.
3. Educational program	APPs and nurses were educated on the Rx for Change program.
4. Postsurvey	APPs and nurses completed a postsurvey knowledge-based questionnaire, Matten's Skills and Confidence for Smoking Cessation tool, and an evaluation form.

Researchers have found that nurses who receive tobacco cessation education and training are more likely to implement cessation counseling combined with pharmacotherapy to assist their patients with tobacco cessation (Gordon, Mahabe-Gittens, Andrews, Christiansen, & Byron, 2013; Schwindt, McNelis, & Agley, 2016). APPs and nurses are an excellent source for providing evidence-based cessation interventions in a clinical setting, and they can assume a leading role in tobacco control efforts, according to Schwindt et al. (2016). This project can become an essential tool for implementing change to improve patients' health (Gallagher-Ford et al., 2011; Heflin et al., 2016; Sarna et al., 2016; Schaffer et al., 2013). Increasing APPs' and nurses' knowledge on smoking cessation strategies can reduce barriers by helping these providers to offer smoking

cessation interventions to the patients. This will assist with applying smoking cessation strategies in the clinical setting more aggressively which can decrease smoking cessation.

Significance

The main stakeholders for the project consisted of four APPs (three nurse practitioners and one physician assistant) and four nurses (one registered nurse and three licensed vocational nurses) at a family medicine clinic in Texas. Additional stakeholders consisted of the organization's research council, information technology, and library support. All stakeholders had the potential of being impacted by the local health problem of tobacco use. This project has the potential to contribute to nursing practice by increasing APPs' and nurses' knowledge and skills regarding tobacco cessation counseling strategies. As researchers have noted, improving APPs' and nurses' confidence in providing such counseling can significantly increase their engagement and encourage the development of comprehensive treatment plans for their patients (Gordon et al., 2013; Schwindt & Sharp, 2013; Whitehead et al., 2014). In addition, exposing stakeholders to the lack of clinicians' knowledge on evidence-based tobacco cessation strategies can reinforce the necessity of such project (Courtney et al., 2017; Metse et al., 2016; Pedersen & Von Soest, 2017). Studies have shown that the availability of smoking cessation programs and smoke-free workplace policies can positively influence a smoker to quit (Metse et al., 2016).

The Rx for Change educational program has been found to be effective when used in ambulatory primary care settings (USPHS, 2018). The Rx for Change program has been used to train over 100,000 supporting staff and health care providers on tobacco

cessation interventions (USPHS, 2018). The potential implication of this project for social change is that the educational program becomes an essential tool in integrating tobacco cessation interventions in primary practice (Heflin et al., 2016).

Summary

In this project, I focused on educating primary care APPs and nurses on tobacco cessation techniques and information. The goal was to increase APPs' and nurses' knowledge, skills, and confidence in tobacco cessation methods (Lawrence, 2016; Whitehead et al., 2014). Researchers have found that offering such education helps to decrease barriers faced by nurses in providing tobacco cessation interventions (Heath et al., 2017). Ultimately, tobacco cessation education can improve health outcomes in tobacco-dependent populations (Heath et al., 2017).

Section 2: Background and Context

Introduction

Tobacco use is the leading cause of preventable morbidity and mortality in the United States (CDC, 2017). It has become an epidemic in the country (USDHHS, 2017), where one in five adults over the age of 18 years currently smokes (CDC, 2017; Syamlal et al., 2017; USDHHS, 2017). A recent investigation demonstrated that because of tobacco use, an estimated 1,300 Americans die prematurely every day, which is over 500,000 premature deaths annually, with a total of over 20 million people over the past 50 years (CDC, 2015a, 2017; SGR, 2014; USDHHS, 2017). Globally, tobacco kills 6 million people each year (Action on Smoking and Health [ASH], n.d.). The annual global death rate could rise to over 8 million by 2030 if urgent action is not taken (ASH, n.d.). The purpose of this project was to introduce the readers to the harmfulness of tobacco use, introduce the nursing knowledge deficit on tobacco cessation strategies, and introduce the project, in this section, the theoretical background, relevance to nursing practice, and the role of the DNP candidate will be examined.

There is mounting evidence that tobacco use has pervasive and lasting effects on an individual's health throughout the lifespan. The current recommendation from the USDHHS is for health care clinicians to advise tobacco cessation with each patient encounter (USDHHS, 2017). Given the demand to increase tobacco cessation treatments in the clinical setting, as well as the expected shortage of primary care physicians (USDHHS, 2017), APPs and nurses play an increasingly essential role in primary care. Analogously, research studies have shown that tobacco cessation strategies can increase

the success rate in assisting with tobacco cessation efforts by patients who are wanting to quit (CDC, 2015b; Heath et al., 2017; Hebb, 2014; Schwindt, McNelis, & Agley, 2016; Whitehead et al., 2014; WHO, 2016).

However, even though evidence-based tobacco cessation interventions are available, they have not been widely adopted in practice (CDC, 2015b; WHO, 2016; USDHHS, 2017). It is reported that less than 50% of smokers are advised on tobacco cessation by their clinician ((Blackwell, Lucas, & Clarke, 2014; Schwindt & Sharp, 2013). This low percentage is partly due to nurses' lack of knowledge and confidence in providing tobacco cessation counseling (Heath et al., 2017; Petersen, Meyer, Sachs, Bialous, & Cataldo, 2017; Schwindt & Sharp, 2013; Whitehead et al., 2014).

The nursing profession is the largest and most trusted group of health care providers and, as such, are well equipped to improve the success rate of tobacco cessation among their patients (ANA, 2018; Price, Hall, Angus, & Peter, 2013). However, lack of confidence in providing tobacco cessation and lack of education in tobacco cessation interventions places nurses at a disadvantage in providing adequate tobacco cessation counseling to their patients (Schwindt & Sharp, 2013; Whitehead et al., 2014). An educational program focused on tobacco cessation can be a tool for implementing improvement (Heflin et al., 2016) by increasing nurses' knowledge, skills, and confidence in using tobacco cessation strategies. The PHS (2017) advises the implementation of efficient frameworks for action such as the expansion of nicotine cessation treatments and implementations of smoke-free policies in the clinical setting. Properly improving APPs' and nurses' knowledge, skills, and confidence in using

tobacco cessation strategies is, thus, likely to assist in the expansion of nicotine cessation treatments in the clinical setting.

Concepts, Models, and Theories

For this project, I identified two models as appropriate for increasing APPs' and nurses' skills and knowledge in implementing tobacco cessation strategies with their patients. One was DiClemente and Prochaska's (1977) transtheoretical model (TTM), and the other was Malcolm Knowles' (1984) adult learning theory (ALT).

Transtheoretical Model

Promoting behavioral change is necessary for the APP and the nurse as well as the patient. A model that has been found to be beneficial for the APP and nurse to use when talking to patients about smoking cessation is DiClemente and Prochaska's (1977) TTM. DiClemente and Prochaska developed the TTM in 1977 to identify an individual's state of readiness for behavioral change (Prochaska & DiClemente, 1983; Prochaska & Prochaska, 2016). Behavior change is difficult because many people do not know how to make change possible (Prochaska & Prochaska, 2016). However, with expert guidance, individuals can be successfully guided through the stages of change (Prochaska & Prochaska, 2016). For this project, I educate the APPs and nurses on the TTM in order for them to be able to identify in which stage of change the individual is and to direct advice that is specific to the patient's needs (Lawrence, 2016). The goal of the TTM is to avoid regression and failure by setting realistic, specific, and attainable goals and validating the individual's experience (Lawrence, 2016). The TTM includes five stages of intentional behavioral change: (a) precontemplation, (b) contemplation, (c)

preparation, (d) action, and (e) maintenance (Gokbayrak, Paiva, Blissmer, & Prochaska, 2015; Prochaska & DiClemente, 1983; Prochaska & Prochaska, 2016; see Table 3).

Table 3

Transtheoretical Model of Change for This Project

Stage	Description
1. Precontemplation Stage	Patient has no intention to quit tobacco use in near future
2. Contemplation Stage	Patient is contemplating quitting tobacco use.
3. Preparation Stage	Patient intends to quit tobacco use soon.
4. Action Stage	Patient has quit tobacco use.
5. Maintenance Stage	Patient has been tobacco-free for at least six months; the goal is to prevent relapse.

Note. I drew from the work of Gokbayrak et al. (2015), Prochaska and DiClemente (1983), and Prochaska and Prochaska (2016) in revising the TTM for use in this project.

Knowing the five stages of TTM will assist APPs and nurses to better understand the health behaviors of individuals as the basis for behavioral counseling to promote a healthier lifestyle (Prochaska & DiClemente, 1983; Prochaska & Prochaska, 2016). The TTM provides individuals with steps to take to give up smoking, understand the reasons for changing their behavior, and realize the pros and cons of nicotine use versus nicotine cessation (Tas, Sevig, & Gungormus, 2016). With the TTM, the APP and nurse can offer the patient a series of determinants for behavior change, including psychological constructs such as behavioral processes of change, stages of change, self-efficacy, and the pros and cons of decisional balance (Huang, Wu, Huang, Chien, & Guo, 2013).

Adult Learning Theory

The purpose of an educational program targeted towards nurses is to provide the APPs and nurses with information that empowers them to become self-sufficient (Sanchez & Cooknell, 2017). Amid the tobacco epidemic and current recommendations to increase tobacco cessation programs in the clinical setting (USDHHS, 2017; WHO, 2016), APPs and nurses are expected to provide tobacco cessation interventions (Sarna et al., 2016; Schwindt & Sharp, 2013; USDHHS, 2017; WHO, 2016). The problem that many face is the inconsistency of tobacco cessation education. Therefore, it is recommended to use a learning theory such as Malcolm Knowles' adult learning theory while empowering staff and promoting knowledge transfer on tobacco cessation strategies (Lee & Daugherty, 2016). Knowles' theory has great usability in nursing education since it fosters support and facilitates learning (Aliakbari, Parvin, Heidari, & Haghani, 2015; Lee & Daugherty, 2016). The supports that individuals have prior experiences and knowledge and it promotes engaging the learner to promote knowledge transfer (Curran, 2014; Lee & Daugherty, 2016) which is especially important since information on tobacco cessation strategies are meaningful and applicable to the nursing practice. In addition to the Adult Learning Theory helping with understanding and learning new things, it can also affect behavior development (Aliakbari et al., 2015; Curran, 2014) which is important for the APPs and nurses to change their behavior and promote tobacco cessation to their patients (Wijnen, Kei Long, de Vries, & Cheung, 2017).

Learning theories can be utilized for educational training whether it is in the classroom or clinical setting (Aliakbari, Parvin, Heidari, & Haghani, 2015). Via the use of learning theories, the framework is built on providing an environment of learning, as well as increasing the efficacy, efficiency, and harmonization of the education system (Aliakbari et al., 2015). In completing this educational project targeted towards APPs and nurses, the educator hoped to improve the learning process and assist with the learners' organization of the new information and knowledge by choosing a theory of learning as a framework for structure and as a guide for the teaching-learning process (Aliakbari et al., 2015).

Relevance to Nursing Practice

There are several sources of evidence that were utilized to address the practice-focused questions. The first source of evidence was gathered from professional agencies and organizations such as the CDC, Healthy People 2020, SGR, Texas Department of State Health Services, USDHHS, and the WHO. State and national statistics were obtained from the CDC and the Texas Department of State Health Services. Those reports provided valuable morbidity and mortality rates as well as the prevalence of smoking regarding descriptive and environmental epidemiology (CDC, 2015b; CDC, 2017; Courtney et al., 2017; Metse et al., 2016; Pedersen & Von Soest, 2017; Texas Department of State Health Services, 2014).

An in-depth search using Walden University academic library was completed with the focus on primary, peer-reviewed sources of evidence. Electronic databases that were included were: CINAHL Plus with Full Text, CINAHL & MEDLINE Simultaneous

Search, Cochrane Database of Systematic Reviews, EBSCO, Medline, PubMed, and the World Health Organizations. Articles for inclusion criteria met the following requirements: english language, full-text availability, peer-reviewed, scholarly in nature, ranging from 2013 to 2018. Keywords in the search mode were tobacco, smoking, cigarettes, tobacco use, tobacco cessation, tobacco dependence, quit tobacco, smoking cessation.

The search strategy yielded a total of 225 articles published between 2013 and 2018. One hundred and ninety-seven were deleted for lacking research designs, being duplicated in the search, not addressing tobacco cessation education, or because they were not published in English. After a final review, 28 articles were included in the literature review. The literature was graded according to the levels of evidence recommended by Fineout-Overholt, Melnyk, Stillwell, and Williamson (2010, p. 47). Table 4 summarizes the levels of evidence in the literature review.

Table 4
Levels of Evidence

Levels of Evidence	Number of Articles
1. Level I: Systematic review or meta-analysis	8
2. Level II: Randomized control trial	5
3. Level III: Controlled trial without randomization	0
4. Level IV: Case-control or cohort study	4
5. Level V: Systematic review of qualitative or descriptive studies	1
6. Level VI: Qualitative or descriptive study	9
7. Level VII: Expert opinion or consensus	1

Adapted from Fineout-Overholt et al., 2010.

Brief History of Knowledge Deficit

The USDHHS (2017) recommends for health care professionals to identify patients that use tobacco and document cessation advice at every patient encounter. However, less than half of the smokers seen in primary care are given that advice (Blackwell et al., 2014; Schwindt & Sharp, 2013). This presents a gap between the practice guidelines and current practice. The utilization of EBP guidelines in the clinical setting can ensure that tobacco cessation strategies are appropriately utilized to ensure the next American generation is tobacco-free (CDC, 2015b; Schwindt et al., 2016). Furthermore, tobacco cessation will improve the health and quality of life of the patients (Schwindt et al., 2016; Schwindt & Sharp, 2013; USDHHS, 2017). APPs and nurses have frequent access to smokers (Curran, 2014; Sarna, Bialous, Chan, Hollen, & O'Connell, 2013). It is important for APPs and nurses to understand that nicotine is an addiction and treat it more aggressively. Thus, there is an urgent need to provide evidence-based treatment for this addiction.

There is a gap in the current practice and practice guidelines though since only 48.3% of the smokers that are seen in primary care report being advised to quit tobacco use during their visits (Blackwell et al., 2014; Schwindt & Sharp, 2013). With the impending primary care physician shortage, the APPs and nurses are expected to decrease the gap in care (Bodenheimer & Bauer, 2016; Volpintesta, 2014). Health care professionals need to possess the necessary skills, knowledge, and confidence to treat patient smoking behavior (Eby, Laschober, & Muilenburg, 2014; Prokhorov, Calabro, & Tami-Maury, 2016; Schwindt et al., 2016; Schwindt & Sharp, 2013; Whitehead et al.,

2014; WHO, 2016). The goal of this project was to assist with breaching the gap between in current practice and practice guidelines.

Recommendations to Improve Practice

When health care professionals do not know evidence-based tobacco cessation strategies, they fail to deliver tobacco cessation interventions (Sarna et al., 2016; Schwindt & Sharp, 2013; Whitehead et al., 2014). Similarly, APPs and nurses with above-average knowledge and comfort on the Rx for Change program are four times more likely to assist their patients with smoking cessation (Sarna et al., 2016). Research has shown that improving APPs and nurses' knowledge on smoking cessation strategies prepares nurses to engage in assisting smokers who want to quit, prevent relapses, and reduce health risks associated with smoking exposure (Heath et al., 2017; Petersen et al., 2017; Sarna et al., 2016). Nurses are trained to be educators; thus, they can assist patients with smoking cessation, guide them through withdrawals, encourage them regarding improvements to their health, and empower them to become smoke-free (Porter, 2013; Schwindt & Sharp, 2013). It is imperative that educational opportunities on evidence-based strategies on smoking cessation are readily available for APPs and nurses since they are positioned to assist in efforts to decrease smoking cessation (Heath et al., 2017; Petersen et al., 2017; Sarna et al., 2016; Whitehead et al., 2014).

Strategies to Address Gap in Practice

Currently, less than half of the smokers seen in health care are advised to stop smoking (Blackwell et al., 2014; Schwindt & Sharp, 2013). Increasing APPs and nurses' education on smoking cessation strategies can assist with the needed expansion of

smoking cessation treatments in the clinical settings. Increasing smoking cessation strategies at the clinic setting can enhance the patient success on smoking cessation, which will improve the patients' health and quality of life (Heath et al., 2017; Petersen et al., 2017; Schwindt & Sharp, 2013; Whitehead et al., 2014). By applying tobacco cessation strategies more aggressively, the goal of making the next American generation tobacco-free is possible (CDC, 2015a; Schwindt et al., 2016; Schwindt & Sharp, 2013). Active interventions provided by nurses can undoubtedly enhance the patient success on tobacco cessation (Heath et al., 2017; Petersen et al., 2017; Schwindt & Sharp, 2013; Whitehead et al., 2014).

Local Background and Context

The Texas Department of State Health Services (TDSHD; 2014) vision is to improve the health and well-being of Texans. The TDSHS (2014) reported that modifiable health risk factors such as tobacco use could lead to diseases such as stroke, heart disease, chronic obstructive lung disease, and cancer, and premature death. In Texas, tobacco use is the leading cause of disability and death, and it kills on average of 24,500 people annually (TDSHS, 2014). The recommendation is to increase the patients' knowledge, attitudes, and skills on tobacco cessation, to increase quit attempts and utilization of cessation services, which ultimately will lead to an increase in tobacco cessation and reduction of tobacco-related morbidity and mortality (TDSHD, 2014). This project will be a pilot for one of the family medicine clinics within the community health care system. The project followed the DNP Manual for Staff Education.

Role of the DNP Student

The project is the focus of this DNP project. I had the privilege of developing the project design, choosing the PICO, target population, as well as the project entity. I have been involved in all components of the program planning, and with my DNP preceptor, we implemented the project in the family medicine clinic where I am employed.

My primary motivation for this project was to increase my coworkers' and my knowledge and thereby increase tobacco cessation in the clinic setting. Health care professionals share a common belief that they need to assist patients with their tobacco cessation efforts (Schwindt & Sharp, 2013). However, many health care professionals are not comfortable implementing strategies to assist their patients with tobacco cessation, partly due to inexperience with tobacco cessation interventions (McNamara et al., 2015; Schwindt & Sharp, 2013; Syamlal et al., 2017; Whitehead et al., 2014). Furthermore, many are often hesitant with approaching the topic with their patients due to lack of confidence in providing cessation advice or fear they might alienate their patients if they address tobacco use (Gordon et al., 2013; Schwindt & Sharp, 2013). Tobacco presents a significant risk for the American people and counseling is a vital component of the professional role of the DNP student (Schwindt & Sharp, 2013). My role was to assume a leading role as a tobacco cessation advocate by become educated on evidence-based tobacco cessation interventions and educating patients on tobacco cessation strategies (Schwindt et al., 2016; Whitehead et al., 2014).

At the beginning of the DNP project, I was biased that when the patient wants to quit nicotine use, then they can manage that on their own. However, as I expanded my

knowledge on tobacco cessation, reviewed and objectively graded the literature, I came to realize that tobacco is an addiction, and even though patients might strongly desire to quit, it is often difficult without the help of health care providers using evidence-based tobacco cessation interventions.

Summary

Section two describes the background of tobacco cessation and theoretical models that were utilized towards the evidence-based educational program on tobacco cessation strategies targeted towards APPs and nurses. The problem of tobacco cessation in relevance to the nursing practice as well as recommendations to improve nursing practice was reviewed. Furthermore, the role of the DNP student was stated. Upcoming will be the collection and analysis of the evidence.

Section 3: Collection and Analysis of Evidence

Introduction

The use of evidence-based tobacco cessation interventions in the clinical settings can ensure that interventions are applied aggressively with the goal of making U.S. generation tobacco-free (CDC, 2015b; Schwindt et al., 2016). With the use of EBP, clinicians utilize the best evidence for clinical decisions to improve the health outcomes of patients (Schaffer et al., 2013). An educational program is an essential tool for implementing such change (Gallagher-Ford et al., 2011; Heflin et al., 2016). Therefore, an evidence-based educational program on tobacco cessation strategies targeted towards APPs and nurses can improve APPs' and nurses' knowledge, skills, and confidence related to tobacco cessation intervention (Sarna et al., 2016). Active interventions provided by APPs and nurses can enhance patient success with tobacco cessation (Heath et al., 2017; Petersen et al., 2017; Schwindt & Sharp, 2013; Whitehead et al., 2014). The purpose of this section is to introduce the reader to the research methodology I used to address this significant health issue.

Practice-Focused Questions

The purpose of this evidence-based tobacco cessation educational program was to educate APPs and nurses employed at an urban family medicine clinic in Central Texas on tobacco cessation strategies as recommended by the USPHS's (2018) Rx for Change: Clinician-Assisted Tobacco Cessation Program. The practice-focused questions were

1. Upon completion of a tobacco cessation educational program will APPs and nurses demonstrate a perceived increase in knowledge and skills related to tobacco cessation strategies?
2. Upon completion of a tobacco cessation education program will APPs and nurses demonstrate a perceived increase in confidence in providing tobacco cessation education to patients?

The goal of the evidence-based tobacco cessation educational program was to increase APPs' and nurses' knowledge, skills, and confidence in providing tobacco cessation strategies to their patients. The purpose of the DNP project was directly aligned with the practice focused questions. The goal of increasing the knowledge, skills, and confidence of nurses related to tobacco cessation strategies is to assist smokers with tobacco cessation and ultimately decrease tobacco use in the clinic.

Sources of Evidence

I derived evidence for this project from the pre and postsurveys I administered to the APPs and nurses before and after the tobacco cessation education program (see Appendices B and C). An evaluation of the program was completed by the participants (see Appendix E).

Participants

The participants in this project included four APPs (three nurse practitioners and one physician assistant) and four nurses (one registered nurse and three licensed vocational nurses) from a family medicine clinic in Central Texas. Study participation was voluntary.

Procedures

The intervention was an educational program on tobacco cessation targeted towards APPs and nurses. The education training consisted of the USPHS's (2018) Rx for Change: Clinician-Assisted Tobacco Cessation Program. The surveys were completed by the APPs and the nurses before the educational program and immediately after it. The surveys consisted of two questionnaires: (a) a 10-question knowledge-related on tobacco use and cessation (see Appendix B) and (b) a 15-question on Skills and Confidence for Smoking Cessation Counseling tool (see Appendix C). I created the 10-question knowledge-related survey on tobacco use and cessation. The 15-question questionnaire on Skills and Confidence for Smoking Cessation Counseling was initially developed and used by Matten et al. (2011) and has a reliability coefficient of 0.81. I received approval to use this tool via e-mail on July 11, 2017 (see Appendix A). The outcomes of this educational intervention were the following: (a) to increase APPs' and nurses' knowledge and skills related to tobacco cessation education and (b) to increase APPs and nurses' confidence to providing tobacco cessation education to patients. Participants were invited to attend the education session via a flyer (see Appendix D). The tobacco cessation program was introduced via two posters that were available to the staff for 3 business days.

Protections

I completed the Collaborative Institutional Training Initiative online training prior to implementation of the project. Approval for the project was received from the Central Region Evidence-Based Practice Nursing Research Council. A letter of cooperation from

the DNP Manual for Staff Education was obtained from the clinic administrator. Approval from the Institution's and Walden University Institutional Review Boards (IRB) were obtained prior to implementation of the project.

Participation in the project was voluntary. I informed the APPs and nursing staff of the project in writing. Those who were interested then completed the consent to participate in the DNP staff education project. Participants submitted the presurvey, postsurvey, and evaluation form anonymously in a box. There were no physical, social, legal, or economic risks associated with this project. The psychological risk that I identified is the prevalence rate of smoking for the nursing staff. APPs and nurses who smoke might have felt threatened or biased during this educational project; however it is important for clinicians to promote health and strengthen the APPs' and nurses' abilities in providing holistic care (Aldiabat & Clinton, 2013).

Analysis and Synthesis

The educational program targeted towards APPs and nurses constituted the intervention for this DNP project. Surveys were completed prior to, and immediately after, administration of the educational project. I evaluated the intervention by comparing the results of the APPs' and nurses' knowledge according to those results. I completed descriptive statistics by comparing the presurvey with the postsurvey results. I identified no risks in implementing this evidence-based project. The benefits of implementing this project were many. The benefits range from improving APPs and nurses' education on tobacco cessation strategies and eliminating gaps in knowledge to improving implementation of tobacco cessation interventions in the clinical setting. These benefits

may help health care providers to increase tobacco cessation strategies in the clinical setting, improving tobacco control efforts as required by Healthy People 2020, reducing the economic burden related to medical expenditures and lost productivity, and decreasing tobacco-related morbidity and mortality.

Summary

In Section 3, I described the methodology I used to implement the evidence-based educational program on tobacco cessation strategies targeted towards APPs and nurses. I also reviewed the relevance of the practice-focused questions in relation to the gap between the practice guidelines and current practice. During this section I stated the goals of implementing the educational program. I discussed the sources of evidence including operational definitions of key aspects, inclusion criteria, and adherence to ethical protection. In addition, I summarized the intended route of measuring the outcomes. In Section 4, I will present the findings and offer recommendations based on the analysis and synthesis of the data.

Section 4: Findings and Recommendations

Introduction

Tobacco use presents significant health risks to the U.S. population (USDHHS, 2014). As such, patients greatly benefit from tobacco cessation (Sarna et al., 2013). Health care professionals can provide interventions to enhance the success rate of tobacco cessation among communities. However, only a few health care professionals are exposed to that knowledge in their professional education (Sarna et al., 2016; Schwindt & Sharp, 2013). The purpose of this project was to provide an educational project on tobacco cessation strategies based on the Rx for Change program (USPHS, 2018) to train APPs and nurses on counseling patients on tobacco cessation. The practice-focused questions concerned whether such a program would increase APPs' and nurses' knowledge, skills, and confidence in providing tobacco cessation interventions to their patients.

Design

The Rx for Change: Clinician-Assisted Tobacco Cessation Program is a seven- to eight-hour curriculum (RUC, 2018). For this project, I modified the original curriculum into two posters that I made available to the staff for 3 days. The reasoning behind this change was due to the time constraint health care professionals have (Phillips, 2016). For the project framework, I drew from Knowles' (1984) ALT. Clinicians can use the ALT to recognize that the staff have prior experiences and engage the staff to promote knowledge transfer (Curran, 2014; Lee & Daugherty, 2016). I conducted this project to measure the effectiveness of tobacco cessation education on APPs and nurses education, skills, and

confidence on tobacco cessation. Therefore, I evaluated the knowledge, skills, and confidence of tobacco cessation counseling before the project implementation and again immediately after it. The educational research project was approved by the participating clinic and Walden University IRBs. Before the implementation of the project, all APPs and nurses at the clinic site consented to participate in the research project. Following receipt of consent, I administered a preassessment survey to assess the staffs' skills, confidence, and knowledge of tobacco epidemiology, pharmacology, and tobacco cessation strategies.

Intervention

I created the two posters based on the Rx for Change: Clinician-Assisted Tobacco Cessation Program (RUC, 2018; USPHS, 2018). This program was designed in 1999 and has been used to train over 100,000 health care providers and supporting staff on tobacco cessation interventions (RUC, 2018; USPHS, 2018). The posters (see Appendix F) covered tobacco epidemiology, the five A's (ask, advise, assess, assist, and arrange) that can be used for patients who are ready to quit using tobacco (RUC, 2018; USPHS, 2018), the transtheoretical model (RUC, 2018; USPHS, 2018), the five R's (relevance, risks, rewards, roadblocks, repetition) that can be used when patients are not ready to quit (RUC, 2018; USPHS, 2018), motivational interviewing, and pharmacotherapy. The project's framework was based on Knowles' adult learning theory. I aimed to change behaviors of APPs and nurses by promoting knowledge transfer and empowering them by providing them with new information they can use for patient care (see Aliakbari et al., 2015; Curran, 2014; Lee & Daugherty, 2016; Wijnen et al., 2017).

Measures

The APPs and nurses completed the same survey prior to and immediately after training. The 10-item knowledge test I developed had four multiple choice answers. Content validity was established through review by the facility nursing research scientist and the facility director of pulmonary services who works on an initiative on tobacco cessation. Matten et al. (2011) created the Skills and Confidence for Smoking Cessation Counseling tool, which they used in their study. The tool has a 0.81 reliability coefficient (Matten et al., 2011). It has Likert-type responses ranging from 0 (none) to 4 (excellent). There are five self-rated questions evaluating the health care professionals' skills in tobacco cessation counseling and nine self-rated questions evaluating the confidence for counseling patients on tobacco cessation strategies.

Procedures

Participation in the project was open to all the APPs and nurses at the primary care clinic. Prior to implementation of the project, I explained the project and answered all questions participants had. I then gave a consent form to all participants. The consent form contained information on the project, including the benefits and risks related to the project. (No risks were identified). The facility IRB approval number, the Walden University IRB approval number, and my contact information were also provided in the consent form. The staff had 2 days to complete the presurvey and place it anonymously in a file basket. There was a 100% completion rate on the skills and confidence survey and an 88% completion rate on the knowledge survey. The two posters were available to the staff for 3 days. After the 3 days, the surveys and project evaluation forms were

administered with an 86% return rate. Participants also returned the post surveys and evaluation forms anonymously by placing them in a file basket.

Findings and Implications

Results

All of the eight applicable staff at the clinic volunteered to participate in the project. Eight turned in their presurveys, and seven turned in their postsurveys and evaluation forms. Due to the small sample size, I computed only descriptive statistics for data analysis. Table 5 includes the mean and standard deviation for both pre and post survey questions. Participants demonstrated an increase in all questions measuring knowledge and confidence related to educating patients on tobacco cessation.

Table 5

Descriptive Data Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Quest	8	1.00	3.00	1.6250	.74402
Quespost	7	1.00	4.00	2.4286	1.39728
Counsel	8	1.00	2.00	1.3750	.51755
Counpost	7	1.00	4.00	2.7143	1.11270
Motivate	8	1.00	3.00	2.1250	.83452
Motpost	7	2.00	4.00	3.1429	.89974
Product	8	1.00	3.00	2.3750	.74402
Ptofbody	7	2.00	4.00	3.2857	.95119
Refer	8	1.00	3.00	1.8750	.64087
Referpost	7	2.00	4.00	3.1429	.89974
Sensitive	8	1.00	3.00	2.1250	.64087
Senpost	7	2.00	4.00	3.0000	.81650
Provide	8	1.00	3.00	1.7500	.70711
Provpost	6	1.00	4.00	2.5000	1.04881
Cope	8	1.00	2.00	1.6250	.51755
Copepost	7	2.00	4.00	2.7143	.95119
Quit	8	1.00	2.00	1.5000	.53452
Quitpost	7	1.00	4.00	2.8571	1.06904
Use	8	2.00	4.00	3.5000	.75593
Usepost	7	2.00	4.00	3.4286	.78680
Advise	8	1.00	3.00	2.1250	.83452
Adivspost	7	2.00	4.00	3.0000	.81650
Ready	8	1.00	3.00	2.0000	.75593
Readypost	7	1.00	4.00	2.8571	1.06904
Assist	8	1.00	3.00	1.6250	.74402
Assistpost	7	1.00	4.00	2.8571	1.06904
counsel2	8	1.00	2.00	1.6250	.51755
cou2post	7	1.00	4.00	2.8571	1.06904
Resources	8	1.00	2.00	1.2500	.46291
Resourpost	7	2.00	4.00	3.0000	.81650

Change in short-term knowledge. Eight out of the eight staff completed the pre-survey, and seven out of the eight staff completed the post-survey, immediately following the poster review. For the presurvey, 29% of the responses were correct. For the postsurvey 83% of the responses were correct. Detailed information on the questions answered correctly from the presurvey to the postsurvey are shown in Table 6.

Table 6

Presurvey and Postsurvey Knowledge Results

Questions:	Correct response (%)	
	Presurvey (N = 8)	Postsurvey (N = 7)
Important Statistics related to tobacco use include	2/7(29)	5/6(83)
The 5 A's recommended through the U.S. Public Health Practice Guidelines include:	1/7(14)	4/6(67)
It is important to assess a patient's readiness to quit. The difference between precontemplation and preparation is:	1/7(14)	4/6(67)
The different between contemplation and preparation is	5/7(71)	6/6(100)
Chantix can be started ___ before quit date and goal of quitting by week ___ or sooner:	2/7(29)	5/6(83)
Most common side effect of Chantix includes all listed below,	1/7(14)	4/6(67)
except:		
Facts about Chantix include all listed below, except:	4/7(57)	3/6(50)
Even though the USDHHS recommends for clinicians to document cessation advice at every patient encounter, on average less than ___% of the patients are given that advise:	2/7(29)	4/6(67)
In 2015, ___ of Americans 18 years old and older smoked:	3/7(43)	4/6(67)
In 2015, more than ___ of adult smokers attempted to quit:	2/7(29)	4/6(67)

Change in counseling skills. Eight out of the eight staff completed the pre-survey (100% participation), and seven out of the eight staff completed the post-survey (88% participation). The post-surveys were completed immediately following the poster review. There are five self-rated questions evaluating the health care professionals' skills in tobacco cessation counseling. There are Likert-type responses where 0 is none, 1 is poor, 2 is good, 3 is very good, and 4 is excellent. For the pre-survey, 65% of staff responded that they have good to excellent counseling skills in their ability to help

patients quit tobacco. The pre-survey answers showed that 38-75% of the staff considered that they could advise, assess, assist, or arrange counseling (see table 8). The post-survey answers showed that 86-100% of the staff considered that they could advise, assess, assist, or arrange counseling (see table 8). There was a decrease in staff asking patients about tobacco use from 100% in the pre-survey to 88% in the post-survey. Detailed information on the pre- and post-survey responses can be seen in Table 7.

Table 7

Staff Reporting Good to Excellent Counseling Skills

Questions:	Pre-survey		Post-survey	
	n	%	n	%
Number of participants who completed surveys	8	100%	7	88%
Level of skills for:				
Asking patients whether they use tobacco:	8	100%	7	100%
Advising patients to quit:	6	75%	7	100%
Assessing patients' readiness to quit:	6	75%	7	100%
Providing tobacco cessation assistance:	4	50%	6	86%
Providing patient counseling:	5	63%	6	86%
Knowledgeable about available resources for patients:	2	38%	7	100%

Change in confidence in cessation counseling. Eight out of the eight staff completed the pre-survey (100% participation), and seven out of the eight staff completed the post-survey (88% participation). The post-surveys were completed immediately following the poster review. There were nine self-rated questions evaluating the health care professionals' confidence for counseling patients on tobacco cessation strategies. The Likert-type responses indicated 0 = none, 1 = poor, 2 = good, 3 = very good, and 4 = excellent. The post-survey scores demonstrated an increase in knowledge scores from baseline. For the pre-survey, 65% of the staff reported that they are confident in

providing tobacco cessation counseling to their patients. In the post-survey, 94% of the staff reported that they are confident in providing tobacco cessation counseling to their patients. Increases were seen in scores on counseling for addiction, ability to help recent quitters learn coping methods, and ability to counsel those not interested in quitting.

Detailed information on the pre- and post-survey responses can be seen in Table 8.

Table 8

Staff Reporting Good to Excellent Confidence in Providing Tobacco Cessation Counseling

Questions:	Pre-survey		Post-survey	
	n	%	n	%
Number of participants who completed surveys	8	100%	7	88%
Level of confidence in your:				
Knowledge of appropriate questions to ask:	4	50%	6	86%
Skills to counsel for addiction:	3	38%	6	86%
Ability to provide motivations for those trying to quit:	6	75%	7	100%
Knowledge of pharmaceutical products:	7	88%	7	100%
Ability to know when to refer patients to physicians:	6	75%	7	100%
Ability to sensitively suggest tobacco cessation:	7	88%	7	100%
Ability to provide adequate counseling:	5	63%	6	86%
Ability to help recent quitters learn coping:	5	63%	7	100%
Ability to counsel those not interested in quitting:	4	50%	6	86%

Participants' evaluation for project. Of the seven staff that completed the project evaluation form, 14% reported that the content, setting, researcher's effectiveness in presenting information, and instructional methods were neither helpful or not helpful. Eight-six percent of the participants reported that the content, setting, researcher's effectiveness in presenting information, and instructional methods were either helpful or

very helpful. No participants wrote any comments on what could be done differently. No participants made any recommendations on how to improve the project.

Unanticipated Limitations

Not all available staff participated in the postsurvey, and no one made any suggestions on improving the project. This could be due to the short timing of implementing the project and time restraints of the individuals. Although the content on tobacco cessation was informative and useful, the short time that the project was implemented (five business days) might have been too short of a time for the participants to become comfortable with the material. Also, staff's time restraints with competing with other priorities and motivation could have had an impact on their interest in learning tobacco cessation strategies.

Implications of Findings

The findings of this project reflect previous knowledge related to enhancing health care professional's preparation to counsel clients on tobacco cessation efforts. The two posters on tobacco cessation strategies based on the Rx for Change program (see Appendix F) demonstrated improvement in the staff's knowledge, skills, and confidence in providing tobacco cessation interventions. The staff who participated in the project gained skills, and self-confidence in tobacco cessation counseling beyond merely asking clients whether they want to quit tobacco use. Specifically, they became proficient in advising patients to quit, assessing patients' readiness to quit, and became knowledgeable about available resources for patients. In addition, they gained skills in providing tobacco cessation assistance and providing patient counseling. Similarly, the staff become

proficient in their confidence to provide motivations for those trying to quit, gained knowledge of pharmaceutical products, understanding when to refer patients and when to sensitively suggest tobacco cessation, as well as teach clients coping mechanisms. In addition, they improved their confidence in knowing how to ask appropriate questions, counsel for addiction, provide counseling, and counsel those not interested in quitting.

Potential Implications for Positive Social Change

There was a significant difference in the pre- and post-survey scores on the participants' knowledge of tobacco-related information, skills and confidence in providing tobacco cessation interventions. According to the findings, the project implies to positively influence nursing practice and social change as it assists with integrating tobacco cessation interventions in primary care (González, de Tantillo, Snowden, Gattamorta, & Ortega, 2018; Heflin et al., 2016). These results reflect the findings of previous research that expanding tobacco cessation interventions can increase patients' tobacco cessation efforts and reduce tobacco use (CDC, 2015; Matten, Chung, Rutledge, & Wong, 2007; SGR, 2014; USDHHS, 2017; WHO, 2017). The availability of tobacco cessation programs can significantly influence a tobacco user's attempts to quit (Metse et al., 2016).

Recommendations

This project provides evidence of the importance of implementing tobacco cessation education to health care professionals and how such education can improve individuals' knowledge, skills, and confidence. Concerning the latter, this is necessary to combat the tobacco control movement and increase tobacco cessation initiatives in the

clinical setting. The RX for Change: Clinician-Assisted Tobacco Cessation program is a comprehensive program that was created in 1999 in the principles of U.S. Public Health Service Clinical Practice Guideline for Treating Tobacco Use and Dependence (RUC, 2018). It has been used for training health care professionals on quality tobacco cessation counseling and is proven to assist clinicians with educating them on tobacco cessation interventions, inform them on tobacco statistics and epidemiology, as well as educate them on available resources and cessation therapies (González et al., 2018; Heath et al., 2017; Hebb, 2014; Porter, 2013; RUC, 2018; Sarna et al., 2016; USPHS, 2018). Tobacco cessation education should be a mandatory requirement for all health care professionals in the clinical setting.

Contribution of the Doctoral Project Team

The research council has expressed interest in replicating the DNP project beyond the current facility. This will assist with health promotion, disease prevention, decreased morbidity and mortality related to tobacco use, and decrease in the cost of health care and medical expenditures (Office of Disease Prevention and Health Promotion, 2017; SGR, 2014). After reviewing the project's findings and reflecting on the findings of previous research, health care professionals are not properly trained on evidence-based tobacco cessation strategies (González et al., 2018; Sarna et al., 2016; Schwindt & Sharp, 2013; Whitehead et al., 2014). Programs that integrate tobacco cessation education are imperative in assisting with providing staff with effective foundation on practicing interventions in the clinical setting (Whitehead et al., 2014). The Rx for Change is a standardized curriculum that is routinely updated to reflect current practice guidelines

(RUC, 2018; Whitehead et al., 2014). As such, it is a great foundation for any program to use. Tobacco cessation education is effective and engaging patients for even brief times increase tobacco cessation rates (González et al., 2018; Sarna et al., 2016; Schwindt & Sharp, 2013;

Strengths and Limitations of the Project

Strengths of the Project

Strengths of the project are that the project was completed in a natural setting without manipulating the environment (Grove et al., 2013). Involving the APPs and nurses in all phases of the project was another strength. The major benefit was providing knowledge, skills, and increasing the health care professionals' confidence in evidence-based tobacco cessation education that they can use to assist their clients with tobacco cessation. Participants demonstrated an increase in their knowledge and confidence related to the topic. The project was based on the Rx for Change program which has strong evidence supporting its effectiveness with tobacco cessation (RUC, 2018; USPHS, 2018).

Limitations of the Project

The small sample size ($N = 8$) was a limitation; thus, in the future, the project should be open to a greater number of participants. To increase the precision of the accuracy and reliability of the results, oversampling of the population should also be done (Grove et al., 2013). This project was a single group, pre- and post-test design. As such, there is limited evidence to support the effectiveness of the intervention of the project (Spurlock. 2018). In addition, single-group, pre- and post-test design studies have

minimal relevance to a larger audience (Morton, 2017). A comparison group to show that the documented changes occurred as a result of participation in the program would improve the effectiveness of the intervention. The data that was collected was self-reported via surveys, which lowered the validity and reliability of the data (Grove et al., 2013). No demographic information was collected about the participants; thus, research is not able to describe associations across different groups or description of the sample (Matten et al., 2007). The project presented complicated information (the 5 A's, the 5 R's, the transtheoretical model, motivational interviewing, as well as pharmacotherapy) and was available for five days. Thus the time constraint could have limited knowledge transfer. Also, the staff did not have any time for role play or simulation case studies. Knowledge may be improved by adding a refresher course to assist with knowledge retention. Further exploration with nursing staff related to the lack of significance in reporting an ability to ask about tobacco use should be explored further.

Summary

Health care professionals need to expand tobacco cessation treatments (USDHHS, 2017). However, health care professionals such as nurse practitioners, physician assistants, and nurses lack the education on evidence base tobacco cessation strategies. Studies have shown that behavioral, cognitive, and tobacco dependence treatment significantly improve a tobacco user's likelihood of cessation success (Dahne et al., 2017). Thus, projects that focus on educating health care professionals on tobacco cessation such as this one are necessary for increasing tobacco cessation interventions in the clinic setting and furthermore improving the tobacco user's likelihood of cessation

success (Dahne et al., 2017; Schwindt et al., 2016). Studies have shown that health care professionals that have received tobacco training are more likely to assist patients with tobacco cessation (Sarna et al., 2016; Schwindt et al., 2016). The findings of this project strongly support that educational projects on tobacco cessation can improve health care professionals' knowledge, skills, and confidence in providing tobacco cessation interventions to their patients.

Section 5: Dissemination Plan

Dissemination

Health care professionals' lack of education on tobacco cessation strategies has impacted national tobacco control efforts (Health et al., 2017; Sarna et al., 2014; Schwindt et al., 2016). The project findings showed that projects such as this one can increase the knowledge, skills, and confidence in health care professionals managing tobacco use. Improving clinicians' sense of ownership pertaining to these interventions is an effective and affordable method to improve tobacco control efforts in the clinical setting (Králíková et al., 2016). The RX for Change: Clinician-Assisted Tobacco Cessation Program is a comprehensive program that can be used for training health care professionals on tobacco cessation strategies to assist with the tobacco epidemic (González et al., 2018; RUC, 2018). The organization's research council has requested for me to present the project to the Journal Club and they have expressed interest in moving the current project into all of the family medicine clinics. The project is quick to implement, brief in duration, and effective, based on my project findings. In addition, EBP is a priority for contemporary health care (Williams & Cullen, 2016). Thus, dissemination becomes a priority because acquired knowledge needs to be shared and clinicians can be inspired to promote tobacco cessation education (Williams & Cullen, 2016). An evidence-based project poster format such as the one used for this project can be an effective communication tool to improve dissemination (Williams & Cullen, 2016).

Analysis of Self

As a nurse practitioner, I continuously aim to follow the most current, evidence-based guidelines in my practice. My interest in obtaining a DNP degree was to be the best provider I can be. My doctoral education has prepared me to practice at the most advanced level of nursing by translating, synthesizing, and applying the latest evidence into clinical practice (Root, Nuñez, Velasquez, Malloch, & Porter-O'Grady, 2018). In practice, my long-term goals are to improve health care outcomes in the clinical setting by continuing to translate evidence-based knowledge into practice (Udlis & Mancuso, 2015).

As a nurse scholar, I continuously strive to engage myself in knowledge and articulate the nursing profession's contribution to health care. I believe advocating for nursing is imperative to the success of the profession. Taking leadership positions and translating knowledge-related research may improve and unify the nursing profession (Specht, 2014). Completing this project has taught me to evaluate current practice guidelines, appraise evidence, and apply this information to create clinical strategies that may further improve health outcomes and nursing practice (Root et al., 2018; Udlis & Mancuso, 2015).

As a project manager, this project has allowed me to be a leader and provide much-needed tobacco cessation education to my coworkers. I have found that I excel when I assist with empowering my coworkers and help improve their sense of ownership about implementing evidence-based knowledge in practice. In addition, the project has given me the tools I need to improve patient and population outcomes. My long-term

goals are to continue to implement quality improvement projects in the clinical setting (Root et al., 2018).

Summary

The tobacco cessation educational project for APPs and nurses enhanced their knowledge, skills, and confidence related to tobacco cessation counseling. The fact that there was an improvement in the knowledge, skills, and confidence of the participants who completed this project implies that there is a need to include efforts to support tobacco cessation education among health care providers as part of capacity-building efforts. Based on the current trends in tobacco use in the United States (CDC, 2015b, 2017; SGR, 2014; USDHHS, 2014; 2017), an urgency exists to increase the number of health care professionals proficient in the delivery of evidence-based tobacco cessation interventions. I believe projects such as this one are necessary to address this critical health issue.

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Appendix A: Permission to Use Skills and Confidence for Smoking Cessation Instrument

From: Rutledge, Dana <Dana.Rutledge@stjoe.org>
Sent: Tuesday, July 11, 2017 4:11:52 PM
To: Stephanie Scammell
Subject: RE: Evaluation of Tobacco Cessation Classes Aimed at Hospital Staff Nurses

Ms. Matten has left SJO... you are welcome to use the tool as printed/described in the article... good luck with your project!! Dana

Dana N. Rutledge, RN, PhD
Consultant/Nursing Research Facilitator, St. Joseph Hospital Orange CA

Check out the St. Joseph nursing research blog at <http://evidencebasednursing.blogspot.com/>

From: Stephanie Scammell [stephanie.scammell@waldenu.edu]
Sent: Tuesday, July 11, 2017 5:45 AM
To: Rutledge, Dana
Subject: Evaluation of Tobacco Cessation Classes Aimed at Hospital Staff Nurses

Dear Dr. Rutledge, I hope you do not mind me contacting you. I found your email address on the article "Evaluation of Tobacco Cessation Classes Aimed at Hospital Staff Nurses". I am working on my DNP capstone project titled Tobacco Cessation Education for Clinic Health Care Providers. I am trying to get a hold of Mrs. Matten to request permission to use her tool: Skills and Confidence for Smoking Cessation" to use in my evidence-based project. Can you please point me to the right direction? I am very grateful for your assistance.

Respectfully,

Stephanie Scammell, MSN, FNP, DNP-Student, Walden University
[phone number redacted]
Stephanie.scammell@waldenu.edu

Appendix B: Tobacco Cessation Knowledge Survey

1. Important statistics related to tobacco use include:
 - More than 300,000 deaths annually and \$480 million in health care expenses and loss of work productivity
 - More than 480,000 deaths annually and \$193 billion in health care expenses and loss of work productivity
 - More than one million deaths annually and \$300 million in health care expenses and loss of work productivity
 - More than 480,000 deaths annually and \$300 billion in health care expenses and loss of work productivity
2. The 5 A's recommended through the U.S. Public Health Practice Guidelines include:
 - Ask, Assess, Advise, Adjust, Arrange
 - Ask, Authorize, Assist, Advise, Arrange
 - Ask, Advise, Assess, Assist, Arrange
 - Ask, Assess, Advise, Arrange, Adjust
3. It is important to assess a patient's readiness to quit. The difference between precontemplation and contemplation is:
 - Patient is intending to quit and thinking about quitting
 - Patient has no intention to quit and thinking of quitting
 - Patient is thinking about quitting and planning to quit
 - The time frame for thinking about quitting and actually quitting
4. The difference between contemplation and preparation is:
 - Patient is thinking about quitting and has quit
 - Patient is thinking about quitting and sets a date
 - Patient is planning to quit and is ready to quit soon
 - Patient is planning to quit but has not set a date yet
5. Chantix can be started ___ prior to quit date, and goal of quitting by week ___ or sooner:
 - 1-5 weeks, 6
 - 1 week, 6
 - 2 weeks, 12
 - 1-5 week(s), 12
6. Most common side effects of Chantix include all listed below, except:
 - Strange and vivid dreams
 - Nausea and/or vomiting
 - Constipation
 - Irritability

7. Facts about Chantix include all listed below, except:
 - Cessation for >1 year is 20% (versus 10% with placebo)
 - Can decrease alcohol consumption for patients with comorbid Alcohol Abuse
 - Safety in combination with Bupropion is unknown since both agents increase the risk of seizures
 - Has an FDA black box warning for suicidality, depressed mood, and serious neuropsychiatric symptoms.
8. Even though the USDHHS recommends for clinicians to document cessation advice at every patient encounter, on average less than ___% of the patients are given that advice
 - 25%
 - 50%
 - 68%
 - 75%
9. In 2015, ___ of Americans 18 years old and older smoked
 - 5.1%
 - 10.1%
 - 15.1%
 - 20.1%
10. In 2015, more than ___ of adult smokers attempted to quit
 - 10%
 - 23%
 - 55%
 - 68%

Appendix C: Skills and Confidence Survey

Instructions:

Please rate your smoking cessation counseling skills and confidence by circling one of the numbers for each. Smoking cessation counseling skills values range from 0 to 4 with 0 as no skills, 1 as poor, 2 as good, 3 as very good, and 4 as excellent.

Smoking Cessation Counseling Skills

Asking patients whether they use tobacco

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Advising patients to quit

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Assessing patients' readiness to quit

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Providing tobacco cessation assistance

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Providing patient counseling

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Knowledgeable about available resources for patients

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Please rate your smoking cessation confidence skills values range from 0 to 4, with 0 as no skills, 1 as poor, 2 as good, 3 as very good, and 4 as excellent.

Smoking Cessation Confidence

Knowledge of appropriate questions to ask

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Skills to counsel for addiction

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Ability to provide motivations for those trying to quit

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Knowledge of pharmaceutical products

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Ability to know when to refer patients to physicians

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Ability to sensitively suggest tobacco cessation

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Ability to provide adequate counseling

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Ability to help recent quitters learn coping

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Ability to counsel those not interested in quitting

None	Poor	Good	Very Good	Excellent
0	1	2	3	4

Appendix D: Invitation to Attend the Tobacco Cessation Educational Program Flyer

Research Project: Tobacco Cessation Education for
Advanced Practice Providers and Nursing Staff

Are you interested in increasing your knowledge, skills, and confidence in promoting tobacco cessation to your patients? There is a free tobacco cessation education project targeted towards YOUR needs!!

Tobacco cessation education research project will be conducted via posters posted in the providers' office

Presurveys due 9/18/18
Posters available from 9/19/18-9/21/18
Postsurveys and evaluation forms due by 9/21/18

Information will include:

- The United States Public Health Service Rx for Change Program on providing smoking cessation interventions
- Review of the 5 A's module to decrease tobacco use

Goals:

- Increase in knowledge, skills, and confidence in providing evidence-based tobacco cessation education to patients
- Apply smoking cessation strategies more aggressively to decrease smoking cessation

Appendix E: Evaluation of Program

EVALUATION FORM: Tobacco Cessation Education Program

As a learner, please assist in the evaluation of this presentation. Please circle the number beside each statement that best reflects the extent of your agreement. Thank you.

Content	Strongly Disagree Strongly Agree				
Content					
1. The content was interesting to me.....1					
2. The content extended my knowledge of the topic.....1					
3. The content was consistent with the objectives.....1					
4. The content was related to my job.....1					
5. Objectives were consistent with goals of activity.....1					
Setting					
1. The room was conducive to learning.....1					
2. The learning environment stimulated idea exchange.....1					
3. The facility was appropriate for the activity.....1					
Stephanie Scammell's Effectiveness:					
1. The presentation was clear and to the point.....1					
2. The presenter demonstrated mastery of the topic.....1					
3. The material held my attention.....1					
4. The presenter was responsive to participant concerns.....1					
Instructional Methods					
1. The instructional material was well organized.....1					
2. The instructional methods illustrated the concepts well...1					
3. The handout materials given will be used as a reference..1					
4. The teaching strategies were appropriate for the activity..1					

Comments:

Appendix F: Research Project Education Posters

Introduction

- Tobacco use is a global epidemic and is the leading cause of preventable and preventable death.
- Currently, 15.3% of the population smokes.
- That is 37.1 million Americans which is one in five adults.
- Annually, the economic burden due to medical costs of drug production is \$40 billion dollars.

Evidence Based Project on Tobacco Cessation for Advanced Practice Providers and Nurses

Stephanie Sammel, PhD-C, DNP Candidate

Significance

Nursing Practice

- Improve tobacco cessation rates for patients.
- Improve patient health outcomes.
- Improve patient satisfaction.
- Improve patient adherence to treatment.
- Improve patient knowledge of tobacco cessation strategies.

Social Change

- Reduce the number of people who smoke.
- Reduce the economic burden of tobacco-related health care costs.
- Reduce the number of preventable deaths.
- Reduce the number of people who are addicted to tobacco.
- Reduce the number of people who are hospitalized due to tobacco-related complications.

DNP Essentials

- Apply evidence-based practice to improve patient outcomes.
- Apply evidence-based practice to improve patient satisfaction.
- Apply evidence-based practice to improve patient adherence to treatment.
- Apply evidence-based practice to improve patient knowledge of tobacco cessation strategies.
- Apply evidence-based practice to improve patient health outcomes.

Problem

General Problem

- Two-thirds of smokers (66%) attempt to quit annually.
- Only 3% to 7% of smokers are successful. However, the success can double with medical assistance.
- Only 50% of smokers are advised to quit by their healthcare professionals.
- Evidence-based tobacco cessation interventions are available, but not widely adopted in practice due to gap in clinicians' knowledge on tobacco cessation strategies.
- The recommendation is for healthcare providers to expand nicotine cessation treatments in the clinical setting.

Project Questions

1. Clinician completion of a tobacco cessation educational program will demonstrate a pronounced increase in knowledge and skills related to tobacco cessation strategies?

2. Clinician completion of a tobacco cessation educational program will demonstrate a pronounced increase in confidence in providing tobacco cessation education to patients?

Purpose of Educational Intervention

HEALTH CONSEQUENCES OF SMOKING

- Help improve the tobacco control efforts as required by Healthy People 2020 on decreasing tobacco use to less than 12% of the population.
- Assist with reducing economic burden related to medical expenditures and lost productivity.
- Improve implementation of tobacco cessation interventions in the clinical setting.
- Improve clinicians' knowledge, skills and confidence on tobacco cessation strategies.
- Assist with applying tobacco cessation strategies in the clinical setting more aggressively which will assist with increasing tobacco cessation, which will lead to a decrease in tobacco-related morbidity and mortality.

Nature of the Project: Method/Design

Methodology

- Design and implement a tobacco cessation educational program for advanced practice providers and nurses.
- Implement the program in a clinical setting.
- Evaluate the program's effectiveness.
- Disseminate the program's findings.

Participants

- Advanced practice providers and nurses in a clinical setting.
- Patients who are smokers.

Interventions

- Tobacco cessation educational program.
- Individualized counseling.
- Group counseling.
- Self-help materials.
- Referral to quitline.
- Prescription of nicotine replacement therapy.
- Prescription of bupropion.
- Prescription of varenicline.

Outcomes

- Increased knowledge and skills related to tobacco cessation strategies.
- Increased confidence in providing tobacco cessation education to patients.
- Increased tobacco cessation rates for patients.
- Improved patient health outcomes.
- Improved patient satisfaction.
- Improved patient adherence to treatment.
- Improved patient knowledge of tobacco cessation strategies.

Worldwide Prevalence of Adult Tobacco Use (Men %/Women %)

Surgeon General Report (SGR) recommends healthcare organizations to:

- Support the implementation of evidence-based tobacco control policies and comprehensive programs.
- Expand use of tobacco cessation services in the clinical setting.
- Decrease patient out-of-pocket costs for tobacco cessation therapies.
- Implement reminder systems for clinicians for tobacco use treatments (EMR reminders, vital signs stamps, nurse reminders).

Smoking Cessation Services

