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Nurse Practitioners' Knowledge, Skills, and Confidence in Providing Tobacco Cessation Education

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
2018

Abstract

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by

Indra Sinanan

MSN, Hunter College, 2013

BSN, Lehman College, 2003

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Ceasing tobacco use benefits smokers regardless of age; therefore, it is essential for health care providers to consistently identify smokers and offer evidence-based cessation treatments to those wanting to stop smoking as a proactive approach towards tobacco abstinence. The purpose of this doctoral project, which was underpinned by the knowledge-to-action framework, was to educate nurse practitioners about evidence-based tobacco cessation interventions and assess the impact of the education on their knowledge base, skills, and self-confidence in implementing tobacco-cessation protocols. Participants (n = 14) completed a knowledge-based questionnaire and the Skills and Confidence for Smoking Cessation Tool before and after an education intervention based on the Rx for Change program. Paired sample t-tests were completed to analyze the pretest and posttest results. The results indicated a statistically significant increase ($p <$ .05) in perceived knowledge, skills, and confidence among nurse practitioners related to tobacco cessation education. These findings support the use of tobacco cessation education for nurse practitioners to improve this aspect of care and provide patients with effective interventions to improve quit rates. The impact of this project on positive social change includes fostering a healthier lifestyle for tobacco users that extends to family and community.

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Dedication

This process could not have been accomplished without the love and support of my wonderful family, each in their unique way, but most especially my sons Joel and Justin, and my husband Joey, who continues to prove himself to be my greatest champion.

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Section 1: Nature of the Project

Introduction

Tobacco use remains the leading modifiable risk factor for multiple diseases both in the United States and globally (Centers for Disease Control and Prevention [CDC], 2017a). Annually, smoking kills 480,000 Americans (United States Department of Health and Human Services [USDHHS], 2014). With more than $150 billion in lost productivity and at least $130 billion in medical care costs for adults related to tobacco use, there is also a substantial economic burden (USDHHS, 2014). Exposure to second-hand smoke or passive smoking also has a negative impact on health and increases one's risk of developing smoking-related diseases; this type of exposure has been associated with numerous health problems not only in adults but in infants and children (CDC, 2017b). For health care practitioners and advocates, preventing and reducing tobacco use, therefore, are key goals.

Tobacco cessation treatment is an intervention that is aimed at helping individuals quit tobacco use. Such treatment is highly cost-effective and is recommended in clinical guidelines for secondary disease prevention but remain underused (Chan et al.,2011). For this Doctorate in Nursing Practice (DNP) project, I sought to address this gap in practice by developing a staff education project focused on tobacco cessation interventions for nurse practitioners in the outpatient setting of an urban health care system. Tobacco cessation can engender positive social change through its contribution to a healthier lifestyle beginning with the individual and extending to family, community, and beyond.

This change would potentially decrease the incidence of chronic smoking-related diseases and lower health care costs.

Problem Statement

The doctoral project addressed the lack of evidence-based tobacco cessation interventions provided by nurse practitioners in the outpatient setting through the development of a staff education project. Studies have shown that counseling augmented by pharmacotherapy are more effective in promoting smoking cessation when compared to counseling alone (Fiore et al., 2008); however, cessation treatments are underused. Findings from the 2015 National Health Interview show that, although most cigarette smokers (close to two thirds) were interested in quitting, just over half said that a health provider had given them tobacco cessation advice; fewer than one third of smokers who tried to quit reported using proven cessation treatments (Babb, Malarcher, Schauer, Asman, & Jamal, 2017). It is therefore essential for health care providers to consistently identify smokers and offer evidence-based cessation treatments to those wanting to quit as a proactive approach towards tobacco abstinence.

The Agency for Healthcare Research and Quality (AHRQ) clinical practice guideline *Treating Tobacco Use and Dependence: 2008 Update* provides an evidence-based blueprint for clinicians and health care systems to effectively treat tobacco addiction (U.S. Public Health Service [PHS], 2008). The updated guideline was a product of an independent panel of 24 scientists and clinicians selected by the AHRQ, on behalf of the PHS, with the sponsorship of eight governmental and nonprofit organizations (PHS, 2008). It outlines recommendations on screening, counseling, and implementation

strategies for addressing tobacco use in adults (AHRQ, 2014). Use of these evidence-based guidelines to treat tobacco use is instrumental in the battle against tobacco addiction.

Purpose

I sought to address the practice gap in the provision of evidence-based cessation interventions by nurse practitioners in the outpatient setting for smokers who are willing to quit. The practice focused question was, How will the impact of staff education on tobacco cessation affect the knowledge base and self-confidence of nurse practitioners? The current method at the site involves brief counseling and self-help information and a referral to the primary care physician. I developed a staff-education project to educate and improve the knowledge and skills and confidence of nurse practitioners thereby empowering them to improve the level of care they provided.

Nature of the Doctoral Project

The site for the doctoral project was an urban medical center in the eastern United States. The medical center serves a community with a more significant proportion of socioeconomic and health disparities when compared to other communities within the region. The current modern health care focus on preventive care places nurse practitioners in a prime position to lead smoking cessation efforts; however, evidence suggests that they are not adequately trained to meet this need (Barr, Houston-Miller, Hasan, & Makinson, 2013). A staff education project was developed to educate nurse practitioners on tobacco cessation interventions based on AHRQ's *Treating Tobacco Use and Dependence- 2008 Update* clinical practice guidelines.

I collected data pre and posteducation to evaluate the knowledge base and self-confidence of nurse practitioners in using evidence-based tobacco cessation interventions. Participants completed the Skills and Confidence for Smoking Cessation tool, which was developed by Matten et al. (2011) and subsequently used in evaluating the impact of tobacco cessation classes on hospital nurses and which has a reliability coefficient of 0.81. I acquired permission to use this tool before using it (see Appendix A). Participants also completed a knowledge-based questionnaire before and after the education activity. The questionnaire was also adapted from one developed by Matten et al. and tailored to the presented education content. I also obtained permission from Matten et al. prior to its use (see Appendix A).

Significance

This DNP project will likely be most valuable to stakeholders who are interested in promoting quit rates and improving patient health and outcomes. I expected that the project would highlight the need for staff education and would demonstrate positive outcomes, leading to such training being a mandatory part of the internal education requirements at this institution with a resultant impact on practice changes. Nurse practitioners who are knowledgeable and confident about prescribing cessation interventions regardless of practice setting are uniquely positioned to recognize and prescribe smoking cessation for smokers (McIvor et al., 2009). Furthermore, the nursing profession's role in tobacco cessation remains vital in that nurses, including nurse practitioners, are involved in daily interactions with patients and are in a pivotal position to discuss tobacco cessation interventions (World Health Organization [WHO], 2005).

Health professionals can be initiators or supporters of policy development aimed at supporting tobacco cessation efforts. Decreasing the incidence of chronic smoking-related diseases and improving quality of life would further contribute to positive social change.

Summary

In Section 1, I outlined the problem, purpose, nature, and significance of this doctoral project, which was aimed at addressing the lack of provision of evidence-based tobacco cessation interventions to smokers wanting to quit in an outpatient setting. To address the practice gap at the project site, I implemented a staff education project and collected and analyzed data. Section 2 includes a detailed literature review of the issues involved in tobacco cessation interventions and nursing practice with an explanation of the project's theoretical framework, a discussion of the project's relevance to nursing practice, and an overview of the roles of the DNP student.

Section 2: Background and Context

Introduction

This doctoral project addressed the lack of evidence-based tobacco cessation interventions for smokers interested in quitting by nurse practitioners in the outpatient setting of an urban hospital in the eastern United States. United States Preventive Services Task Force guidelines recommend that clinicians ask all adults about tobacco use, advise them to quit, and provide behavioral interventions and U.S. Food and Drug Administration-approved pharmacotherapy for cessation to adults who use tobacco (Siu, 2015). It is therefore essential for health care providers to consistently offer evidence-based cessation treatments to smokers interested in quitting as a more proactive approach towards tobacco abstinence. The project aimed to address the practice gap through the development of a staff-education program based on the *Walden Manual for Staff Education Project* (2017) guidelines. I completed this project to increase the knowledge base and self-confidence of nurse practitioners, thus empowering them to provide tobacco cessation interventions themselves versus the current practice of brief counseling, self-help information, and referral to the primary care physician for follow-up.

Concepts, Models, and Theories

I used the knowledge-to-action (KTA) framework for this project. Initially developed by Graham et al. (2006) in the 2000s in Canada, it has been adopted by the Canadian Institutes of Health Research and is “one of the most frequently cited conceptual frameworks used for knowledge translation” (Field, Booth, Ilott, & Gerrish, 2014, p. 6). The framework is composed of two components, *Knowledge creation* and the

Action cycle, each of which comprises multiple phases which can both overlap and be iterative (Field et al. 2014). Knowledge creation involves the production and synthesis of knowledge which can be from primary sources, systematic reviews and meta-analyses, and clinical practice guidelines (Crockett, 2017). The inner component of Knowledge creation is further broken down into three phases: knowledge inquiry, knowledge synthesis, and, the creation of knowledge tools and products (Crockett, 2017). The Action cycle has multiple steps which can be carried out simultaneously or sequentially; the action phases can also be affected by the knowledge phases (Field et al., 2014). The Action cycle involves identifying the problem; determining the gap and synthesizing knowledge; adapting knowledge to the local context; assessing barriers and facilitators to use; selecting, tailoring, and implementing interventions; monitoring knowledge use; evaluating knowledge use; and sustaining knowledge use (Crockett, 2017). Use of the KTA framework will guide the process for the development and implementation of the DNP project.

Relevance to Nursing Practice

It is imperative that all nurses provide evidence-based cessation interventions across treatment settings. The current health care focus on preventive care and the increasing scope of nursing practice give nurses the autonomy to provide tobacco cessation education and counseling to smokers to promote quit rates (Keeling, 2015). Health care providers who receive tobacco training are more likely to provide cessation counseling (Herie, Connolly, Voci, Dragonetti, & Selby, 2012; Sarna et al., 2016), and a patient's odds of quitting are approximately doubled with clinician-initiated treatment

(Fiore et al., 2008). Carson et al. (2012) conducted a Cochrane review of 17 studies which focused on the training of health professionals on tobacco cessation. The results of the studies were shown to have a statistically significant effect on the point prevalence of smoking, professional performance, and continuous abstinence which further supports the use of tobacco cessation education for health care providers to address this aspect of care.

Current research involving the role of nurses in tobacco cessation supports the use of educational interventions for both nurse practitioners and registered nurses. WHO (2001) also supports the education of all health care professionals on evidence-based smoking cessation interventions. Sarna, Bialous, and Wells (2016) discussed the global impact of nurses on tobacco control in their overview of a decade of research using web-based educational programs to increase nurses' interventions to help smokers quit. Use of the web-based educational programs reached 6,000 nurses worldwide with a positive impact showing increased interventions provided to smokers as compared to baseline (Sarna et al., 2015). The goal of these educational programs is to ensure that tobacco control becomes an expected part of everyday nursing practice.

Health care professionals can also be initiators or supporters of policy development aimed at supporting tobacco cessation efforts. Professional nursing organizations can show leadership and serve as a benchmark for other agencies and society by aligning themselves with the tenants of the Health Professional Code of Practice on Tobacco Control (WHO, 2005). The nursing profession's role in tobacco cessation remains vital in that nurses, including nurse practitioners, are considered trustworthy, they are involved in daily interactions with patients, and they are in a pivotal

position to discuss and implement tobacco cessation interventions for those interested in quitting (WHO, 2005). The nursing profession can also add its collective voice to state, national, and global tobacco control efforts to promote better outcomes for smokers.

Federal Tobacco Cessation Initiatives

For over 50 years, the U.S. Surgeon General has been reporting on the dangers associated with tobacco use, yet the use of tobacco remains prevalent despite robust evidence regarding cessation interventions. Since the initial landmark report in 1964, adult smoking has fallen from 43% to 18% today (USDHHS, 2014). However, cigarette smoking continues to be the number one preventable killer in America with more than 40 million individuals considered tobacco-dependent and more than 20 million premature deaths related to its use since 1964 (USDHHS, 2014). Each day, more than 3,200 youth (younger than 18 years of age) smoke their first cigarette, and another 2,100 youth and young adults who are occasional smokers progress to become daily smokers with the range of emerging tobacco products further complicating the issue (USDHHS, 2014). Despite these statistics, evidence-based interventions that encourage quitting and prevent youth smoking continue to be underutilized (USDHHS, 2014). Other significant conclusions from the 2014 report include the following:

- Tobacco use has been linked to diseases of nearly all organs of the body, diminishes health status, and causes harm to the fetus. New research continues to identify other diseases caused by smoking such as common conditions including diabetes mellitus, rheumatoid arthritis, and colorectal cancer (USDHHS, 2014).

- Secondhand tobacco smoke exposure has been linked to cancer, cardiovascular and respiratory diseases, and it adversely affects the health of infants and children (USDHHS, 2014).
- The disease risks from smoking by women have risen sharply over the last 50 years and are now equal to those with men for lung cancer, chronic obstructive pulmonary disease, and cardiovascular diseases (USDHHS, 2014).
- Significant disparities in tobacco use remain across groups defined by race, ethnicity, educational level, and socioeconomic status and across regions of the country (USDHHS, 2014).
- Comprehensive policies and tobacco control programs have been shown to be effective for controlling tobacco use which can be further impacted by the full and sustained use of these measures (USDHHS, 2014).

It is evident from the report findings, the continued impact of tobacco use despite the availability of evidence-based interventions to promote quit rates which underscores the importance of addressing tobacco cessation.

Centers for Disease Control and Prevention

The CDC's *Best Practices for Comprehensive Tobacco Control Programs* (2014) provides an evidence-based guide for statewide comprehensive tobacco control programs through an integrative effort to include state and community interventions, mass reach health communication and cessation interventions, surveillance and evaluation, and infrastructure: administration and management. Cessation interventions are aimed at healthcare organizations with the goals of promoting health systems change, expanding

insurance coverage of proven treatments, and supporting state quitline capacity (CDC, 2014). The goals for health system changes to support tobacco cessation includes institutionalizing cessation interventions into the system and integrating them into daily clinical care to increase screening and cessation efforts. Expanding insurance coverage removes cost and administrative barriers and has the potential to reduce tobacco related population disparities. Quitlines remove other barriers such as time to access care, transportation to points of care, and are confidential.

Provisions in the Affordable Care Act (ACA) require that new private health plans and state Medicaid programs expand coverage of tobacco cessation treatments (CDC, 2014). The ACA and the Health Information Technology for Economic and Clinical Health Act, which gave rise to the Meaningful Use of Electronic Health Records Incentive Program (MUEHRIP) provide states with a unique opportunity to focus cessation efforts on promoting and supporting the implementation of policies and systems within health care organizations and health insurers that support cessation. MUEHRIP offers eligible providers and hospitals federal funding to adopt electronic health records and use them in ways that can support improvements in the delivery of clinical preventive services, including tobacco dependence treatment (CDC, 2014, p. 40). These federal initiatives collectively address the issue of tobacco use through provisions at the state and local level to combat addiction.

Agency for Healthcare Research and Quality

AHRQ's *Treating Tobacco Use and Dependence: 2008 Update* clinical practice guideline support the use of both smoking cessation counseling, and Federal Drug

Administration (FDA) approved pharmacotherapy to promote smoking abstinence and outlines recommendations on screening, counseling, and implementation strategies for addressing tobacco use in adults. Counseling includes the 5 As framework:

1. Ask about tobacco use.
2. Advise quitting through clear personalized messages.
3. Assess willingness to quit.
4. Assist in quitting.
5. Arrange follow-up and support.

The intensity of counseling matters. Brief one-time counseling works; however, more extended sessions or multiple sessions are more effective (AHRQ, 2008). Approved pharmacotherapy includes nicotine replacement therapy, sustained-release bupropion, and varenicline however therapy involving both counseling and medications is more efficient than either component alone (AHRQ, 2008). The implementation of these proven evidence-based guidelines is essential to improving tobacco quit rates.

Local Background and Context

The site for the doctoral project was an urban hospital setting in the eastern United States. It serves an inner city community which is predominantly minority and whose residents have disproportionately high morbidity and mortality from chronic conditions. Tobacco cessation has been addressed due to the increased number of current smokers identified in this community when compared to the city overall. Smokers who have been identified in the clinic and who are interested in quitting are given brief counseling and self-help information and referred to their general practitioner for follow-

up. The doctoral project evaluated the impact of a staff education program directed towards educating nurse practitioners on tobacco cessation interventions. The education project was based on clinical practice guidelines with the collection of pre and posttest data for analysis after the intervention to determine any statistical significance associated with improving nursing staff knowledge and increasing their skills and confidence. Use of the Skills and Confidence for Smoking Cessation tool and a knowledge-based questionnaire based on the education content were utilized. Paired sample *t*-tests were conducted to determine statistical significance.

Definition of Terms

Knowledge Questionnaire: A 20-question survey developed and used by Matten et al. (2011), which I adapted.

Skills and Confidence for Smoking Cessation Tool: A valid 15-question tool, with a reliability coefficient of 0.81 that includes six questions addressing skills, and nine questions addressing confidence, which was developed and subsequently used to evaluate tobacco cessation classes aimed at hospital nurses by Matten et al. (2011).

Tobacco cessation education: A 1-hour oral presentation with electronic slides for nurse practitioners based on AHRQ's (2008) *Treating Tobacco Use and Dependence: 2008 Update* clinical practice guidelines to promote smoking abstinence.

Role of the DNP Student

The role of the DNP student was as a planner/facilitator for developing and implementing the doctoral staff education project. As a nurse practitioner presently working in the cardiac catheterization lab and the outpatient cardiology clinic, I am able

to identify many smokers with cardiac issues in which tobacco use is an associated risk factor. Many patients are motivated to quit; however, pharmacotherapy, such as nicotine replacement therapy (NRT), is not initiated in addition to the brief counseling and self-help information provided in the outpatient setting. The project was done to educate nurse practitioners on all aspects of evidence-based tobacco cessation interventions to promote its use and increase quit attempts. It is essential that this practice gap is addressed to promote best practice and better patient outcomes.

Summary

Section 2 involved a detailed discussion addressing the lack of evidence-based tobacco cessation interventions by nurse practitioners to smokers wanting to quit in an outpatient setting. It includes an explanation of the background and context with regards to the supporting literature, theoretical framework being used, the project's relevance to nursing practice, and the role of the DNP student. Section 3 explains the collection and analysis of evidence.

Section 3: Collection and Analysis of Evidence

Introduction

The CDC (2017) identifies tobacco use as the leading modifiable risk factor for multiple diseases both in the United States and globally. Tobacco cessation treatment has been found to be highly cost-effective and is recommended by clinical guidelines for secondary disease prevention (Chan et al., 2011). Studies have shown that counseling in addition to pharmacotherapy have been more effective in promoting smoking cessation when compared to counseling alone; however, cessation treatments are underused. According to Babb et al. (2017), out of two thirds of cigarette smokers who were interested in quitting, just over half reported receiving tobacco cessation advice from a health professional and fewer than one third of smokers who attempted to quit used proven cessation treatments. With the current health care focus on preventive care, nurse practitioners are in a prime position to lead the reform for smoking cessation, yet evidence suggests that they are not adequately trained to meet this need (Barr et al., 2013). Thus, it remains essential that health care providers can consistently identify smokers and provide evidence-based cessation treatments as a proactive approach towards tobacco abstinence.

Practice-Focused Question

The doctoral project addressed the lack of evidence-based tobacco cessation interventions for smokers who want to quit by nurse practitioners in the outpatient setting of an urban hospital in the eastern United States. I aimed to address the practice gap through the development of a staff-education program guided by the Walden University

Manual for Staff Education Project (2017). Based on the manual's guidelines, the use of anonymous questionnaires from site staff were within the guidelines for ethics preapproval for the project. The clinical program manager in the Oncology outpatient setting provided the Site Approval Documentation for Staff Education Doctoral Project. To develop educational content, I used the AHRQ clinical practice guidelines *Treating Tobacco Use and Dependence: 2008 Update*.

The practice-focused question was, What is the impact of a staff education intervention on tobacco cessation on the knowledge base and self-confidence of nurse practitioners? I completed this project to increase the knowledge base and self-confidence of nurse practitioners, thus empowering them to provide tobacco cessation education themselves versus the current practice of brief counseling and self-help information, and referral to primary care. The outcomes for this educational intervention were (a) to increase knowledge on tobacco cessation interventions including counseling, pharmacotherapy, and supportive services and (b) to improve the perceived skills and confidence of nurse practitioners to provide tobacco cessation interventions.

Sources of Evidence

I evaluated the impact of a staff education intervention on nurse practitioners' knowledge base and self-confidence related to tobacco cessation interventions using a pretest-posttest design. The education content was developed in alignment with AHRQ clinical practice guidelines *Treating Tobacco Use and Dependence: 2008 Update* and presented as an hour-long oral/electronic slide presentation. The AHRQ clinical practice guidelines support the use of both smoking cessation counseling and FDA-

approved pharmacotherapy to promote smoking abstinence with recommendations on screening, counseling, and implementation strategies for addressing tobacco use in adults (AHRQ, 2014). The project addressed the gap between knowledge and practice among nurse practitioners when treating tobacco use and empowered them to improve this aspect of care.

The one-group pretest-posttest design involved the use of a knowledge-based questionnaire based on the education content to measure knowledge. The information presented addressed counseling strategies using the "5 A's": Ask, Advise, Assess, Assist, and Arrange (AHRQ, 2008). FDA-approved pharmacotherapy and additional support services were also included. The Skills and Confidence for Smoking Cessation Tool measured skill and self-confidence. Participants completed both the questionnaire and the tool immediately before and after the oral/electronic slide presentation.

Participants

Participants for the project included a nonprobability convenience sample (N = 14) of nurse practitioners in the Oncology outpatient setting. Staff education helps to inform and improve knowledge and skills related to best clinical practice and aligns itself with the American Association of Colleges of Nursing's (AACN's) *DNP Essentials* (Walden University, 2017). The target population of nurse practitioners was relevant to the practice-focused question because of their potential impact on tobacco cessation efforts. The educational program also supports the CDC's (2014) goals for health system changes to improve cessation efforts by institutionalizing cessation interventions into the

system and integrating it into daily clinical care to increase screening and cessation efforts.

Procedures

The Rx for Change program was used in the development of the electronic slide presentation. The Rx for Change: Clinician Assisted Tobacco Cessation program was developed by the University of California, San Francisco (UCSF, n.d.) to equip health professional students and practicing clinicians, of all disciplines, with evidence-based knowledge and skills for assisting smokers with quitting. It is aligned with the U.S. Public Health Service Clinical Practice Guidelines for Treating Tobacco Use and Dependence which served as the basis for the AHRQ's (2008) clinical practice guidelines. The electronic slide presentation was also reviewed by a content expert who is the director of the Smoking Cessation Clinic at a sister site within the health system. I also applied for and obtained approval from the site's education department to provide participants with a 1-hour continuing education credit.

The Skills and Confidence for Smoking Cessation Tool and a knowledge-based questionnaire on the tobacco cessation education was used for pretest-posttest data collection. The Skills and Confidence for Smoking Cessation Tool include six questions related to skills and nine questions addressing confidence for tobacco cessation. I obtained permission to use both the Knowledge questionnaire and the Skills and Confidence for Smoking Cessation tool from the author (Matten, 2011; see Appendix A). I adapted the knowledge-based questionnaire based on the educational content provided.

Protections

As outlined in Walden University's *Manual for Staff Education Project* for doctoral scholarly projects, a blanket ethics preapproval exists for staff education projects which involve anonymous questionnaires from site staff. I obtained the Institutional review board (IRB) approval based on the steps outlined in the Walden manual. I also obtained IRB approval from the clinical site before project development and implementation. Participants were provided with both Walden's Consent Form for Anonymous Questionnaires and the site's Consent Form for Anonymous Questionnaires before obtaining survey responses.

Analysis and Synthesis

Pretest and posttest paper-based questionnaires which were directly related to the learning objectives were completed anonymously before and at the end of the staff education intervention. Collected data were analyzed using paired sample *t*-tests to determine statistical significance. This was conducted using the IBM SPSS Statistics Version 23. Separate paired sample *t*-tests were conducted on the six questions addressing skills and the nine questions addressing confidence, and the twenty questions that comprised the knowledge test related to tobacco cessation interventions.

Missing information and outliers were removed because of their effect on statistical outcomes. The inclusion of missing values can reduce the available data to be analyzed thus compromising the statistical power of the study, and the reliability of its results (Kwak & Kim, 2017). This can also produce a significant bias in the results and degrade the efficiency of the data. Outliers can impact the process of estimating statistics

and result in overestimated or underestimated values (Kwak & Kim, 2017). Complete case analysis was used to manage missing data by using only available data after removing all missing values. Outliers were removed by excluding them prior to analysis.

Summary

Section 3 outlined the steps taken to address the lack of tobacco cessation interventions by nurse practitioners in the outpatient setting of an urban hospital in the eastern United States. A staff education intervention was developed based on the outline of the Walden University's *Manual for Staff Education Project* and aligned with the AHRQ's (2008) clinical practice guidelines for tobacco cessation for adults. IRB approval for the doctoral project was obtained from both Walden University and the institution. The intervention was developed as an oral/electronic slide presentation and approved for a 1-hour continuing education credit by the site's education department. Participants received the Consent Form for Anonymous Questionnaires prior to beginning pretest surveys. Pretest and posttest pencil-based data were collected, and paired *t*-test analyses were conducted using IBM SPSS Version 23 to determine statistical significance. Section 4 discusses the findings and recommendations from the doctoral project.

Section 4: Findings and Recommendations

Introduction

Tobacco use remains the number one risk factor associated with preventable deaths worldwide, yet recommended cessation interventions remain underused. Treatment is also highly cost-effective and is recommended by clinical guidelines for secondary disease prevention (Chan et al., 2011). It remains essential that smokers are consistently identified and offered evidence-based cessation treatments as a proactive approach towards tobacco addiction. The project aimed to address this gap in practice (the lack of provision of evidence-based cessation interventions by nurse practitioners) in the outpatient setting for smokers who are willing to quit. The practice-focused question was, How will the impact of staff education on tobacco cessation affect the knowledge base, skills and self-confidence of nurse practitioners? The current method involves brief counseling, self-help information, and referral to the primary care physician.

I developed a staff education project to educate and improve the knowledge and skills and confidence of nurse practitioners in providing tobacco cessation interventions thereby empowering them to improve their level of care. The purpose of the intervention was to determine the impact on their knowledge and skills and confidence. A convenience sample (N = 14) of outpatient nurse practitioners in the oncology clinic was given paired numbered pretests and posttests which consisted of a 20-question Smoking Knowledge questionnaire and a 15-question Skills and Confidence for Smoking Cessation Tool. The 15 questions on the Skills and Confidence for Smoking Cessation tool included six questions addressing Skills and nine questions related to Confidence.

Data were analyzed using IBM-SPSS Statistics Version 23. Paired sample *t*-tests were conducted separately on the 20 questions addressing smoking knowledge and on the six questions addressing skills and the nine questions addressing confidence to determine statistical significance.

Participants were presented with the Consent Form for Anonymous Questionnaires from Walden University, which is preapproved for online or paper survey data collection by students from staff members and contains no identifiable data. The site also required that its anonymous consent form be presented to participants prior to beginning the pretest surveys. The numbered pretest was given before the education intervention which consisted of a 1-hour oral/electronic slide presentation. Participants completed the corresponding numbered posttest evaluation after the presentation in addition to an activity evaluation survey as requested by the site. They were also presented with a certificate for 1 hour continuing education credit.

Findings and Implications

Findings

The knowledge questionnaire consisted of 20 multiple choice questions with 20 being the highest score. I completed paired sample t-tests using SPSS Statistics Version 23 in which I compared the pretest and posttest knowledge results (see Table 1). The level of significance (p) was set at 0.05. The mean for the pretest scores was 9.71 (SD = 2.92). The mean for the posttest score was 13.64 (SD = 2.71). A statistically significant increase ($p < 0.05$) was demonstrated in the nurse practitioners' knowledge after completing the staff education intervention.

Table 1

Paired Sample Statistics for Pretest and Posttest Scores for Knowledge

Test	*M*	*SD*	*SEM*
Presurvey	9.71	2.92	0.78
Postsurvey	13.64	2.71	0.72

Pretest and posttest scores for the Skills and Confidence for Smoking Cessation tool were analyzed using the paired-sample *t*-tests (see Table 2) with the level of significance set at 0.05. The first six questions addressed skills in dealing with smoking cessation. The five Likert-scale responses on the Skills section of the tool were given numerical codes as follows: 0 = *none*, 1 = *poor*, 2 = *good*, 3 = *very good*, and 4 = *excellent*. The next nine questions determined confidence in providing smoking cessation education. The five Likert-scale responses on the Confidence portion of the tool were also given numerical codes as follows: 0 = *not confident*, 1 = *not very confident*, 2 = *moderately confident*, 3 = *very confident*, and 4 = *extremely confident*. The highest obtainable score on the skills section was 24 and on the confidence section, 36. Internal consistency for the six questions measuring skill was at Cronbach alpha = 0.81, and the nine questions measuring confidence at Cronbach alpha = 0.93 (Matten et al., 2011).

As shown in Table 2, the mean obtained on prescores for the six skills questions was 14.86 (*SD* = 5.14), and the mean obtained on the postscores was 18.86 (*SD* = 6.79). The mean on the prescores for the nine confidence questions was 18.64 (*SD* = 4.07), and the mean on the postscores was 26.21 (*SD* = 5.77). A statistically significant increase ($p < 0.05$) was demonstrated in both the nurse practitioners' perceptions of their skills and

confidence for providing tobacco cessation interventions after completion of the education intervention.

Table 2

Paired Sample Statistics for Pretest and Posttest Scores for Skills and Confidence

Test	*M*	*SD*	*SEM*
Skills pretest scores	14.86	5.14	1.37
Skills posttest scores	18.86	6.79	1.82
Confidence pretest scores	18.64	4.07	1.09
Confidence posttest scores	26.21	5.77	1.54

As a result of the educational intervention addressing tobacco cessation for nurse practitioners, the following outcomes were met:

- Nurse practitioners demonstrated a perceived statistically significant increase in knowledge on tobacco cessation interventions including counseling, pharmacotherapy, and supportive services.
- Nurse practitioners demonstrated a perceived statistically significant increase in confidence to provide tobacco cessation interventions.

Implications

The significant difference in both the knowledge scores and the specific questions addressing skills and confidence in both pretest and posttest scores is aligned with the literature which shows increased knowledge, skills, and confidence to provide cessation interventions in nurses after receiving tobacco cessation education (see Carson et al., 2012; Herie et al., 2012; Sarna et al., 2015). The education project also highlighted

the impact of tobacco use and the importance of providing evidence-based cessation as it relates to professional practice and accountability. It is imperative that evidence-based cessation interventions are provided across treatment settings as this can promote a positive impact on societal conditions with the contribution towards a healthier lifestyle for the individual. This change can also decrease the incidence of chronic smoking-related diseases and factor into lowering overall health care costs.

Recommendations

Tobacco cessation education can be included in the internal education requirements for nursing staff within the organization as this may increase the delivery of tobacco cessation interventions. Healthcare organizations must be committed to providing its healthcare providers, nurses, therapists, and other staff with evidence-based and practical information that they need to successfully integrate tobacco cessation activities into their practices (South Dakota Department of Health, 2018). It can be included as part of the mandatory education requirements with the electronic slide presentation as an online module which participants can access at their convenience via the institution's learning management system and used for yearly continuing education. Evaluations can also be done in this format for ongoing quality improvement and to determine the impact on practice. This promotes the CDC's (2014) goals for health system changes to support tobacco cessation by institutionalizing cessation interventions into the system and integrating it into daily clinical care to increase screening and cessation efforts.

Strengths and Limitations of the Project

Strengths

The major strength of the evidence-based doctoral project was in providing tobacco cessation education for nurse practitioners in an outpatient setting to enable them to assist patients with quitting smoking. This was supported by a significant difference in their pretest and posttest scores which measured their knowledge base and skills and confidence in providing tobacco cessation interventions.

Limitations

The small sample size ($N = 14$) was a significant limitation. The site employs fifty nurse practitioners with various schedules and clinics, and participation was voluntary. Despite three presentations within three consecutive weeks on multiple days meant to capture staff involvement, the response rate was low. The timing of the presentations as well as the time constraints of the nurse practitioners can be considered barriers to more involved participation. Educational content presented in an online platform which participants could access at their convenience can be considered for a future education intervention. Demographic data were not included in this project and may have provided additional insights.

Section 5: Dissemination Plan

Plans for internal dissemination involved a poster presentation at the organization level during the annual Nursing Research Day. The deadline for abstract submission was September 21, 2018. However, due to the unanticipated low response rate of participants, data collection was still in progress and analysis incomplete, resulting in an inability to meet the deadline requirements. A long-term summative evaluation will be done 3 months after the initial presentation as requested by the site to determine the impact on practice and is beyond the DNP Project requirements. Because results will not be available to present at this year's event, a 6-month evaluation can also be considered with a final product being ready for consideration at next year's event.

External dissemination plans include a poster presentation at the 2019 Nurse Practitioner Association New York State Annual Conference. Abstracts submitted now will be held on file for consideration in October 2019. Journal submission to the Journal of the Nurse Practitioner Association of New York State is also being considered. Nurse practitioners are the target group of interest for dissemination of the results of this study because of their pivotal role as health care providers in addressing smoking cessation with patients.

Analysis of Self

Practitioner

A reflection on personal growth over the past 3 years has further strengthened what I already know about myself, which is that I am passionate and determined to succeed while striving for excellence. This project gave me a chance to asses myself as a

scholar practitioner, a role I do not traditionally find myself in. Walden (2018) identifies the scholar-practitioner as an agent of change, one who can contribute to the advancement of society at various levels by bridging the gap between academia and the real world. The DNP Project has allowed me to develop those leadership skills and formulate steps which are necessary for my future endeavors. Guidance provided by the tenets of the AACN's (2006) *DNP Essentials* has resulted in an expanded worldview and nursing paradigm which has prepared me to step into the role of scholar-practitioner regardless of setting. Learning the process of project development from beginning to end has also highlighted the need for patience, persistence, and frequent and clear communication.

Scholar

The skills developed by completing this project in accordance with the AACN's (2006) *DNP Essentials* has led to an enhanced ability to critically appraise, understand, and interpret the literature. The integration of evidence-based practice through professional collaboration at various levels is an ongoing skill which is further enhanced through practice. My plans involve voluntary engagement in future quality improvement opportunities to continue to develop these skills before moving on to other activities. My current involvement in the development of a mentorship program for nurses at the facility, which began as a course project in the DNP program, will be my first project as an independent scholar-practitioner outside of a classroom environment.

Project Developer

Through project development, I was also provided the opportunity to work collaboratively and inter/intraprofessionally with various leaders to implement a staff education program to enhance the knowledge base and skills and confidence of nurse practitioners in providing smoking cessation counseling. I worked independently with the support of mentors to guide this process. In addition to the positive impact that sustainability of such an intervention may have on future patient outcomes, the professional relationships developed with supportive nurse leaders has been one of the main highlights and has had a positive influence on my worldview as a scholar-practitioner. My perspective of how the nursing world works has expanded to include the level of nursing leadership because of the sense of empowerment that comes from the experience of working with those at that level. Undertaking this project has highlighted the impact of leadership support and the process of buy-in in project development and has also demonstrated the importance of preparedness and understanding the workflow.

Summary

The results obtained from the education intervention support the use of tobacco cessation education for nurse practitioners in improving their knowledge and skills and confidence. For health care practitioners and advocates, preventing and reducing tobacco use remain key goals. There was a statistically significant increase in perceived knowledge on tobacco cessation interventions including counseling, pharmacotherapy, and supportive services, and in skills and confidence to provide tobacco cessation interventions. These findings support the use of tobacco cessation education for health

care providers to improve this aspect of care. Future tobacco cessation education interventions delivered in a different format to improve participation and promote a more robust data collection and analysis should be considered.

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Appendix A: Permission to Use the Skills and Confidence for Smoking Cessation Tool and the Knowledge Tool

Pam Matten <redacted>
on behalf of
Pam Matten <pmatten@pycm.org>

Reply all

Tue 5/1, 3:27 PM

Indra Sinanan

Inbox

You forwarded this message on 7/19/2018 12:17 AM

Hi Indra-yes, please feel free to use the tool and questionnaire. I would enjoy reading your paper when you are finished.

Sent from my iPad

IS

Indra Sinanan

Mon 4/30, 10:17 PM

Hello Pamela,

My name is Indra and I am a student of Walden University currently working on a DNP project addressing tobacco cessation for nurse practitioners. I am requesting permission to use the Skills and Confidence for Smoking Cessation Tool. I would also like to use your knowledge questionnaire and adapt it if needed to the education content I would be presenting.

You are welcome to view the outcomes of the project and a final paper.

I appreciate your response.

Thanks.

Indra.

Appendix B: Tobacco Cessation: From Guidelines to Practice for Nurse Practitioners Electronic Slide Presentation (Outline)

TOBACCO CESSATION: FROM GUIDELINES TO

PRACTICE FOR NURSE PRACTITIONERS

INDRA SINANAN, MSN, ANP-BC

- #1 cause of preventable death both in the U.S. and globally.
- Causes 480,000 deaths each year in the U.S., about 1 in 5 deaths annually or 1300 deaths every day
- Costs more than $150 billion in lost productivity and at least $130 billion in medical care costs for adults (USDHHS, 2014).
- In 2015, 15.1% of all adults (36.5 million people): 16.7% of males, 13.6% of females were current cigarette smokers (CDC, 2018).

Tobacco Use:

Fast Facts

2014 REPORT OF THE

SURGEON GENERAL:

HEALTH CONSEQUENCES OF SMOKING

- Cigarette smoking is causally linked to diseases of nearly all organs of the body, causes inflammation, impairs immune function, and causes harm to the fetus
- Disease risks from smoking by women have risen over the last 50 years and for many tobacco-related diseases are now equal to those for men.

- Exposure to secondhand smoke is causally linked to cancer, respiratory, and cardiovascular diseases, and to adverse effects on the health of infants and children.

2014 REPORT OF THE

SURGEON GENERAL:

INVOLUNTARY EXPOSURE TO TOBACCO SMOKE

2014 REPORT OF THE

SURGEON GENERAL:

HEALTH CONSEQUENCES OF SMOKING

- Millions of Americans are exposed to second hand smoke in their homes/workplaces
- Indoor spaces: eliminating smoking fully protects nonsmokers
    - Separating smoking areas, cleaning the air, and ventilation are ineffective

STATE-SPECIFIC PREVALENCE OF SMOKING AMONG ADULTS, 2014–2015

TOBACCO USE:

FAST FACTS

Thousands of young people start smoking cigarettes every day.

- Each day, more than 3,200 people younger than 18 years of age smoke their first cigarette.
- Each day, an estimated 2,100 youth and young adults who have been occasional smokers become daily cigarette smokers.

CDC (2018)

TOBACCO USE:

FAST FACTS

Many adult cigarette smokers want to quit smoking.

- In 2015:
    - Nearly 7 in 10 (68.0%) adult cigarette smokers wanted to stop smoking.
    - More than 5 in 10 (55.4%) adult cigarette smokers had made a quit attempt in the past year.
- Since 2012, the *Tips From Former Smokers*® campaign has motivated at least 500,000 tobacco smokers to quit for good.

CDC 2018

Treatment:

- highly cost-effective
- recommended by clinical guidelines
- remains underused

(Chan et al., 2011).

TREATMENT:

In 2015, out of two-thirds of cigarette smokers who were interested in quitting:

- just over half reported receiving tobacco cessation advice from a health professional
- fewer than one-third of smokers who tried to quit used proven cessation treatments

(Babb, Malarcher, Schauer, Asman, & Jamal, 2017).

TOBACCO CESSATION

It is essential for healthcare providers to:

- consistently identify smokers
- advise them to quit
- offer evidence-based cessation treatments as a pro-active approach towards tobacco abstinence.

TOBACCO CESSATION

- The current modern healthcare focus on preventive care places nurse practitioners in a prime position to lead the reform for smoking cessation
- evidence suggests that they are not adequately trained to meet this need (Barr, Houston-Miller, Hasan, & Makinson, 2013).
- Health care providers who receive tobacco training are more likely to provide cessation counseling (Herie, Connolly, Voci, Dragonetti, & Selby, 2012; Sarna et al., 2016)
- patient's odds of quitting are approximately doubled with clinician-initiated treatment (Fiore et al., 2008).

THE IMPACT ON PRACTICE AND PATIENT SAFETY

Improves professional practice and accountability for improving patient care and outcomes

Aligns with the goals of the Affordable Care Act (ACA) which includes tobacco dependence as a core required outcome and the goals of the Triple Aim:

- Improving the patient experience
- Improving the health of populations
- Reducing the per capita cost of health care.

SO WHY DO PEOPLE SMOKE?

Stress relief, pleasure, social situations

nicotine addiction

FACTORS CONTRIBUTING to

TOBACCO USE

NICOTINE ADDICTION

U.S. SURGEON GENERAL'S REPORT

- Cigarettes and other forms of tobacco are addicting.
- Nicotine is the drug in tobacco that causes addiction.
- The pharmacologic and behavioral processes that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine.

NICOTINE ADDICTION

- Tobacco users maintain their serum nicotine concentration in order to
    - Prevent withdrawal symptoms
    - Maintain pleasure/arousal
    - Modulate mood
- Users self-titrate nicotine intake by
    - Smoking more frequently
    - Smoking more intensely

NICOTINE PHARMACODYNAMICS

Central nervous system

- Pleasure
- Enhanced vigilance
- Improved task performance
- Anxiety relief

Other

- Appetite suppression
- Increased metabolic rate
- Skeletal muscle relaxation

Cardiovascular system

- ↑ Heart rate
- ↑ Cardiac output
- ↑ Blood pressure
- Coronary vasoconstriction
- Cutaneous vasoconstriction

Rx for Change (n.d.)

NICOTINE PHARMACODYNAMICS: WITHDRAWAL EFFECTS

ASSESSING

NICOTINE DEPENDENCE

Fagerström Test for Nicotine Dependence (FTND)

- Developed in 1978 (8 items); revised in 1991 (6 items)

- Most common research measure of nicotine dependence; sometimes used in clinical practice
- Responses coded such that higher scores indicate higher levels of dependence
- Scores range from 0 to 10; score of greater than 5 indicates substantial dependence

TOBACCO DEPENDENCE:

A 2-PART PROBLEM

CLINICAL PRACTICE GUIDELINE FOR TREATING TOBACCO USE AND DEPENDENCE

- Update released May 2008, revised 2014
- Sponsored by the U.S. Department of Health and Human Services, Public Health Service with:
    - Agency for Healthcare Research and Quality
    - National Heart, Lung, & Blood Institute
    - National Institute on Drug Abuse
    - Centers for Disease Control and Prevention
    - National Cancer Institute

Rx for Change (n.d.)

TREATMENT RECOMMENDATIONS:

COUNSELING AND MEDICATIONS FOR ADULTS (>18 Y/O)

- Counseling and medication are effective when used by themselves
- The combination of counseling and medication is more effective than either alone.

- Encourage all individuals making a quit attempt to use both counseling and medication.
- There is a strong relation between the number of sessions of counseling when it is combined with medication
- Ensure patient access to telephone quitlines and promote quitline use
- 1-800-QUIT-NOW AHRQ (2014)

WHAT ARE

“TOBACCO QUITLINES”?

RECOMMENDATIONS FOR ADULT SMOKERS > 18 YRS

- Certain combinations of first-line medications have been shown to be effective smoking cessation treatments with patients who are willing to quit.
- Effective combination medications are:
- Long-term (>14 weeks) nicotine patch + other NRT (gum and spray).
- The nicotine patch + the nicotine inhaler.
- The nicotine patch + bupropion SR
- Pharmacotherapy is contraindicated with specific populations in which medication has not been shown to be effective (pregnant women, smokeless tobacco users, light smokers and adolescents).

AHRQ (2014)

- Nicotine Gum
- Nicotine Inhaler

- Nicotine Lozenge
- Nicotine Nasal Spray
- Nicotine Patch
- Bupropion SR
- Varenicline (Chantix)

COUNSELING

The "5 A's" Model

- Ask about tobacco use. Identify and document tobacco use status for every patient at every visit.
- Advise to quit. In a clear, strong, and personalized manner urge every tobacco user to quit.
- Assess willingness to make a quit attempt. Is the tobacco user willing to make a quit attempt at this time?
- Assist in quit attempt. For the patient willing to make a quit attempt, offer medication and provide or refer for counseling or additional treatment to help the patient quit. For patients unwilling to quit at the time, provide interventions designed to increase future quit attempts.
- Arrange follow-up. For the patient willing to make a quit attempt, arrange for follow-up contacts, beginning within the first week after the quit date. For patients unwilling to make a quit attempt at the time, address tobacco dependence and willingness to quit at next clinic visit.

AHRQ (2014)

BRIEF COUNSELING:

ASK, ADVISE, REFER

- Brief interventions have been shown to be effective
- In the absence of time or expertise:
    - Ask, advise, and refer to other resources, such as local group programs or the toll-free quitline

      1-800-QUIT-NOW

Rx for Change (n.d.)

METHODS for QUITTING

- Nonpharmacologic
    - Counseling and other non-drug approaches
- Pharmacologic
    - FDA-approved medications

NONPHARMACOLOGIC METHODS

- Cold turkey: Just do it!
- Unassisted tapering (fading)
    - Reduced frequency of use
    - Lower nicotine cigarettes
    - Special filters or holders
- Assisted tapering
    - QuitKey (PICS, Inc.)
        - Computer developed taper based on patient's smoking level

- Includes telephone counseling support

Rx for Change (n.d.)

NONPHARMACOLOGIC METHODS

- Formal cessation programs
  - Self-help programs
  - Individual counseling
  - Group programs
  - Telephone counseling
    - 1-800-QUITNOW
  - Web-based counseling
    - www.smokefree.gov
    - www.quitnet.com
    - www.becomeanex.org
- Acupuncture therapy
- Hypnotherapy
- Massage therapy

Rx for Change (n.d.)

PHARMACOLOGIC METHODS:

FIRST-LINE THERAPIES

Three general classes of FDA-approved drugs for smoking cessation:

- Nicotine replacement therapy (NRT)
  - Nicotine gum, patch, lozenge, nasal spray, inhaler

- Psychotropics
    - Sustained-release bupropion
- Partial nicotinic receptor agonist
    - Varenicline

Rx for Change (n.d.)

PHARMACOTHERAPY:

USE IN PREGNANCY

- The Clinical Practice Guideline makes no recommendation regarding use of medications in pregnant smokers
    - Insufficient evidence of effectiveness
- Category C: varenicline (Chantix), Bupropion SR
- Category D: prescription formulations of NRT

PHARMACOTHERAPY:

OTHER SPECIAL POPULATIONS

Pharmacotherapy is not recommended for:

- Smokeless tobacco users
    - No FDA indication for smokeless tobacco cessation
- Individuals smoking fewer than 10 cigarettes per day
- Adolescents
    - Nonprescription sales (patch, gum, lozenge) are restricted to adults ≥18 years of age
    - NRT use in minors requires a prescription

NRT: PRODUCTS

Polacrilex gum

- Nicorette (OTC)
- Generic nicotine gum (OTC)

Lozenge

- Nicorette Lozenge (OTC)
- Nicorette Mini Lozenge (OTC)
- Generic nicotine lozenge (OTC)

Transdermal patch

- NicoDerm CQ (OTC)
- Generic nicotine patches (OTC, Rx)

Rx for Change (n.d.)

NRT: RATIONALE for USE

- Reduces physical withdrawal from nicotine- Cravings peak within 1-3 days of quitting and can last for two weeks
- Eliminates the immediate, reinforcing effects of nicotine that is rapidly absorbed via tobacco smoke
- Allows patient to focus on behavioral and psychological aspects of tobacco cessation

Rx for Change (n.d.)

NRT: PRECAUTIONS

- Patients with underlying cardiovascular disease

- Recent myocardial infarction (within past 2 weeks)
- Serious arrhythmias
- Serious or worsening angina

(Nicotine causes vasoconstriction and increases heart rate)

Rx for Change (n.d.)

NICOTINE GUM: OTC ONLY

GENERIC NICORETTE

- Nicotine Gum (2 mg or 4 mg)
- Caution with dentures
- Do not eat or drink 15 minutes before or during use
- Side Effects: Mouth soreness, Stomach ache
- 1 piece every 1 to 2 hours
- 6-15 pieces per day
- If ≤ 24 cigs: 2 mg
- If ≥ 25 cigs/day or chewing tobacco: 4 mg
- Up to 12 weeks

AHRQ (2014)

NICOTINE PATCH:

OTC OR RESCRIPTION

GENERIC

NICODERM CQ

NICOTROL

- Do not use if you have severe eczema or psoriasis
- Side Effects: Local skin reaction, Insomnia
- One patch per day
- If ≥ 10 cigs/day; 21 mg 4 wks, 14 mg 2-4 wks, 7 mg 2-4 wks
- If <10/day: 14 mg 4 wks, then 7 mg 4 wks
- 8-12 weeks

AHRQ (2014)

NICOTINE LOZENGE:

(2MG OR 4MG)

OTC ONLY:

GENERIC COMMIT

- Do not eat or drink 15 minutes before or during use
- One lozenge at a time
- Limit 20 in 24 hours
- Side effects: Hiccups, Cough, Heartburn
- If smoke ≥ 30 minutes after waking: 2 mg
- If smoke ≤ 30 minutes after waking: 4 mg
- Weeks 1-6: 1 every 1-2 hrs
- Wks 7-9: 1 every 2-4 hrs
- Wks 10-12: 1 every 4-8 hrs
- 3-6 months

AHRQ (2014)

NICOTINE INHALER:

PRESCRIPTION ONLY:

NICOTROL INHALER

- May irritate mouth/ throat at first (but improved with use)
- Side Effect: Local irritation of mouth and throat
- 6-16 cartridges/day
- Inhale 80 times/cartridge
- May save partially-used cartridge for next

  day
- Up to 6 months; taper at end

  AHRQ (2014)

NICOTINE NASAL SPRAY:

PRESCRIPTION ONLY:

NICOTROL NS

- Not for patients with asthma
- May irritate nose (improves over time)
- May cause dependence
- Side Effect: Nasal irritation
- 1 "dose" = 1 squirt per nostril 1 to 2 doses per hour
- 8 to 40 doses per day
- Do not inhale
- 3-6 months; taper at end

AHRQ (2014)

BUPROPION SR 150

ZYBAN

WELLBUTRIN

Not for use if you:

- Currently use monoamine oxidase (MAO) inhibitor
- Use bupropion in any other form
- Have a history of seizures or eating disorders
- See FDA package insert warning regarding suicidality and antidepressant drugs when used in children, adolescents, and young adults.
- Side effects- Insomnia and dry mouth
- Days 1-3: 150 mg each morning
- Days 4-end: twice daily
- Start 1-2 weeks before quit date; use 2 to 6 months
- Prescription only: Generic, Zyban, Wellbutrin SR

AHRQ (2014)

VARENICLINE

PRESCRIPTION ONLY:

CHANTIX

- Use with caution in patients:
- With significant renal impairment

- With serious psychiatric illness
- Undergoing dialysis
- FDA Warning: Varenicline patients have reported depressed mood, agitation, changes in behavior, suicidal ideation, and suicide.
- Go to www.fda.gov for further updates regarding recommended safe use of Varenicline.

AHRQ (2014)

ADHERENCE IS KEY to QUITTING

- Promote adherence with prescribed regimens.
- Use according to dosing schedule, NOT as needed.
- Consider telling the patient:
  - "The products work best in alleviating withdrawal symptoms when used correctly, and according to the recommended dosing schedule."

Rx for Change (n.d.)

HELPING PATIENTS QUIT IS A CLINICIAN'S RESPONSIBILITY

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