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Addressing Tobacco Use with Improved Utilization of 5As Framework in Primary Care

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April 17th, 2022

Abstract

Identifying and treating tobacco use disorder through screening and evidence-based intervention is necessary to assist all tobacco users to quit and or to decrease typical tobacco-linked health risks. The findings from the literature review suggested that the implementation of the technology-enhanced 5As model (asking, advising, assessing, assisting and arranging for follow up) approach might serve as a reminder to clinicians to assess tobacco use, and improve patient outcomes in tobacco cessation care. The purpose of this DNP project was to improve the treatment of tobacco use disorder among adults in a primary care. The objective of this project was to develop and implement a tobacco cessation program protocol using the Computer Facilitated 5As (CF5As) model in the clinic within 12 weeks. The Readiness for Implementing Change (ORIC) tool was done to assess the organization's readiness for practice change. The Computer Facilitated 5As Model was implemented in primary care clinic after staff education and monitored for 12 weeks. The findings revealed that implementing the Computer Facilitated 5As model increased asking, advising, assessing, assisting, and arranging for follow-up by clinicians to achieve tobacco cessation treatment among adults.

Keywords: 5As, tobacco cessation, tobacco use treatment and tobacco screening

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Addressing Tobacco Use with Improved Utilization of 5As Framework in Primary Care

Tobacco use-related illnesses are one of the leading causes of morbidity and mortality in the United States. There is an increasing need to develop sustainable interventions that can reduce tobacco use and sustain the number of people who have quit (Centers for Disease Control and Prevention [CDC], 2019). This objective is particularly important because smoking and smokeless tobacco users are at risk for cancer, cardiovascular diseases, strokes, chronic obstructive pulmonary diseases (COPD), lung failures, and many other comorbidities and negative sequelae (CDC, 2019). The purpose of this DNP project was to improve clinician screening and treatment of tobacco use disorder through improved utilization of the 5As (Ask, Advise, Assess, Assist, Arrange) Framework in a primary care clinic.

Background and Significance

Incidence

Tobacco use remains one of the leading preventable causes of death globally. According to the World Health Organization (WHO) (2020), greater 8 million people die yearly due to tobacco use related illnesses. Furthermore, deaths continue to rise and may hit over 8 million by 2030 (WHO, 2020). Both smoke and smokeless tobacco cause significant health consequences including deadly cancers (WHO, 2020). Tobacco use and addiction remain the leading factor in disease burden, affecting approximately 15.3% for men and 12.7% for women (Mediratta & Poullis, 2016).

Nationally, tobacco use-related diseases are among the leading causes of morbidity and mortality in the United States. According to the CDC, approximately 14% of all United States adults use tobacco products which are well-known implications for chronic illnesses. Yearly deaths of up to 7 million people from smoking-related diseases, especially cancer, cause an

overload on medical facilities and result from failed early medical intervention programs. The mortalities threaten the economy's sustainability and strain the medical financing of our nation. Tobacco-related illness in the United States costs more than $300 billion a year (CDC, 2019). An estimated 1,600 people try their first smoke every day, with most progressing into habitual smokers and eventually leading to addiction (CDC, 2019).

Locally, about 13.9% of adults in Maryland smoke tobacco products and 4.9% of adults use smokeless tobacco. Tobacco related healthcare treatment cost the State of Maryland $2.71 billion per year. The state experiences about 7,500 tobacco related death each year (Maryland Department of Health, 2018).

Screening

Health care providers can have a vital role in decreasing tobacco use. For example, face-to-face visits with clinicians can facilitate a seven percent tobacco cessation rate within a year without a tobacco cessation intervention (Mediratta & Poullis, 2016). Research has shown health care practices that provide cessation interventions and close monitoring show an even more significant increase, about 18% to 23% in quit rates among their patients (Mediratta & Poullis, 2016). It is recommended that at every clinical encounter, providers screen all adult patients for tobacco consumption and dependence, and provide evidence-based treatments for those who use tobacco products (Clinical Practice Guideline Treating Tobacco Use and Dependence (Fiore, et al., 2008)

Most smokers are frequent users of healthcare services, and their contact with the health system can facilitate a road to complete abstinence (CDC, 2019). The primary care clinic encounter particularly can provide a unique opportunity to screen, identify and engage smokers, initiate cessation treatments, and provide appropriate follow-up and support.

Treatment Approach

The United States Prevention Services Task Force (USPSTF) encourages a counseling framework that is well-known as the 5As Framework. These steps involve Asking every patient about tobacco consumption, Advising patients to quit, Assessing motivation to quit, Assist with interventions, and help Arrange for follow-up and support (Fiore, et al., 2008). This Grade A recommendation is founded on high certainty that the net benefit is significant. The approach includes implementation of a tobacco user detection system, promotion of provider intervention through resources, education and feedback, identifying and propositioning staff members to provide the treatment, and assessing staff performance in the delivery of treatment (Fiore, et al., 2008). There are well-accepted and evidence-based tobacco cessation tools in the literature that have proven to be effective in the clinical settings. Unfortunately, data suggest that consistent cessation treatments are not being provided. Additionally, those who quit without assistance are more likely to slide back into tobacco use than those assisted by clinicians (Park et al., 2015).

Many studies and literature reviews that have shown brief interventions by clinicians should cover the 5As of tobacco cessation treatment. Park et al. (2015) did a matched case-control study on 3336 National Lung Screening Trial (NLST) participants. The primary purpose of the study is to determine the relationship between the reported clinician-delivered 5As model (ask, advise, assess, assist and arrange) after lung screening and smoking patterns. The study revealed that ask, advise, and assess have not been significantly associated with tobacco abstinence. The researchers reported increased quit rates among participants who received multisession and more intensive visits that included providing assistance and arranging follow-up (Park et al., 2015). The providers fall short in the last 2 steps, creating an opportunity to improve.

Proposed Evidence-Based Interventions

As mentioned above, tobacco use remains one of the major contributors to chronic diseases, unfortunate deaths, and financial burden at both the state and national level. It is generally accepted that most tobacco users make several quit attempts before they are successful, yet only a small percentage of those who attempt to quit without any cessation assistance succeed (Moody-Thomas et al., 2015; Satterfield et al., 2018). In this regard, healthcare providers have a pivotal role in reducing tobacco use by implementing various evidence-based interventions. The 5As model for tobacco cessation was issued by World Health Organization in 2014 to help clinicians effectively improve their knowledge and skills of treating tobacco dependence (WHO, 2014). The model has shown to be a cost-effective, efficacious, evidenced-based process for health care provider provision of tobacco cessation support. Most healthcare providers across the country have adopted the 5As in trying to assist tobacco users (WHO, 2014).

Effective interventions are available to support all tobacco users who want to quit; however, their delivery in the primary care setting is ad hoc and inconsistent without proper clinical protocol (Mediratta & Poullis, 2016). The increased associated risk of morbidity and mortality for tobacco users may decrease through dependable delivery of the 5As tobacco cessation program in a primary care setting. Therefore, the implementation of tobacco cessation in the primary care setting is highly needed to improve tobacco screening and tobacco cessation interventions.

Literature Review

A formal review of the literature was conducted to answer the question, "Will reminding clinical staff about 5 A's strategy via the EMR (I) improve screening (O) and treatment (O) of

tobacco dependence among adult patients (P) in the primary care setting within 12 weeks (T)?" The database search was conducted using Cochrane Library, MEDLINE, Nursing & Allied Health Database, and PubMed. The keywords used were *tobacco cessation, tobacco use treatment, tobacco screening, and 5 A's strategy reminders.* The article search was narrowed to English-only free full text, and adults aged 18 to 65 years published from 2015 to 2020. A total of 36 articles was found and further narrowed to 6 articles by a hand search of abstract. All evidence was critically appraised using the Melnyk-Fineout Overholt Rapid Critical Appraisal Forms (Appendix A, B, C).

Guidelines and Use in Practice

The Clinical Practice Guideline for Treating Tobacco Use and Dependence recommended the use of brief interventions like the 5As because they are more effective, especially when faced with constraints to time and resources (Fiore, et al., 2008). The 2008 update to this guideline particularly summarizes recommendations from an independent panel of 24 scientists and clinicians on the topic of tobacco cessation. This guideline analyzed more than 8700 peer-reviewed journals between the years 1975 and 2007, aiming to understand how tobacco dependence has been addressed over time. After thorough panel meetings and conference calls, the guideline synthesized the results and developed recommendations which were then reviewed by more than 90 experts. The guideline concluded by recommending brief tobacco cessation interventions and system-level changes that would help in screening and treatment. The extensive review of screening and treatment interventions over time as outlined in this guideline will help in contextualizing the expected outcomes for this DNP project and its future application as evidence-based practice.

Importance of Electronic Medical Record

The employment of a custom-made Electronic Medical Record (EMR) reminder approach can help with a smoking cessation program. EMR can be helpful to timely prompt clinicians to assess for and document tobacco use. It can also help to prompt clinicians to treat accordingly. Bar-Zeev et al. (2019) conducted a meta-analysis and systematic review to improve smoking cessation by health providers among pregnancy women in a primary care setting. The researchers collected data from five databases and included all the components of the 5A intervention model. They also used the Effective Practice of Care taxonomy to characterize the interventions. The included studies were assessed using the Cochrane Collaboration for assessing risk bias, and the Hawker Quality assessment tool. The analysis revealed that interventions for smoking cessation at any preventative care settings have significant effect on tobacco cessation.

Delivery in Primary Care

Moreover, many studies have proven that tobacco cessation treatments can be effectively delivered in a primary care setting. Wray et al. (2018) did a meta-analysis to examine tobacco cessation programs' efficacy in different integrated primary care clinics. In this review, 36 studies were included and up to 12,975 patients. Over 58% of the studies implemented interventions such as cognitive behavioral therapy, the 5As model with straightforward advice, motivational interviews, and health education. Forty-two percent of the studies utilized both the interventions mentioned above and pharmacological treatment (Bupropion SR, Nicotine products, and Varenicline). Eighty-three percent of all studies lasted over six months with at least 3 follow up appointments. The meta-analysis revealed that those who received multiple interventions (non-pharmacological and pharmacological) have a higher chance of tobacco abstinence (1.78 Odds Ratio (OR), confidence interval (CI) 95%) compared to those who receive just received non-pharmacological.

Despite concluding that brief interventions were effective, this review was constrained by limitations of publication bias and sample heterogeneity, both of which factors compromised statistical interpretation. Notwithstanding, Wray et al. (2017) recommended that future research evaluate ways of improving the dissemination of brief interventions in such integrated primary care settings. Considering this recommendation, for effective application in evidence-based practice, the current DNP project seeks to suggest ways of fully utilizing the 5As framework in primary care.

5As Embedded in EMR

Likewise, embedding the 5As tobacco treatment model in the EMR could improve the use of clinical practice guidelines to help increase tobacco abstinence among users. The randomized controlled trial (RCT) by Satterfield et al. (2018) assessed both the efficacy of computer-facilitated 5As for smoking cessation treatment and the adherence by primary care providers. Satterfield et al. (2018) used a cluster RCT design on primary care providers in three urban adult primary care clinics. Study participants were characterized by the criteria of having smoked more than 100 lifetime cigarettes and had at least a cigarette the past week. The patients were assessed and randomly assigned to Computer-Facilitated 5As (CF5As) or usual care based on providers' assignments. The study randomized providers (n=221) who provided care to patients in the intervention group (n=412) and in the control group (n=549). The study revealed the intervention group providers had significantly higher odds of completing all 5A's (2.04 Adjusted Odds Ratio (AOR), CI 95%) compared to the usual care group, suggesting that EMR will increase screening and treatment (Satterfield et al., 2018).

The authors concluded that 5As were a low-cost, time-saving intervention effective at improving smoking cessation care and addiction. As such, this study can help the current DNP

project demonstrate the efficacy of 5As in the primary care environment. One limitation was the study relied on patient self-reporting that could distort actual results. To avoid the bias that this issue creates, the focus will remain on primary care providers' perspectives and various follow-up mechanisms to better assess intervention efficacy.

Implementing the 5As

Next, a study done by Moody-Thomas et al. (2015) demonstrated effective implementation of the 5As treatment model can improve tobacco use quit rate. In this study, the researchers sought to determine the effects of changes in the system and electronic medical records in assisting tobacco smokers in quitting. The data was collected from 79,777 patients who had visited primary care providers for tobacco cessation between January 1, 2009, and January 31, 2012. With the use of the EMR system prompts, the healthcare providers screened and advised 95.8% of their patients to quit tobacco use. The researchers concluded that electronic health records could be a useful clinical intervention leading to reductions in tobacco use and sustained quits. The study's strength was using large sample size and a high confidence level of 95%. The study revealed 9.5 % relative reduction among tobacco users after the 3-year study period.

This study has the potential to support the current DNP project because the research emphasizes the utility of existing technological resources to improve the effectiveness of smoking cessation treatment in primary care settings. However, the study was compromised by two factors: the difficulty to determine the quality of EMR data and patients' tendency to self-report more positive assessments of their tobacco use. To avoid these challenges, this DNP project will examine the personal, environmental, and cognitive factors related to tobacco use in

the primary care environment before testing the effectiveness of the technology facilitated 5As model in a primary care clinic.

EMR can also be advantageous to provide a view on tobacco screening and treatment performance. Another study by Napoles et al. (2016) assessed the perceptions of clinicians and staff about the use of digital technology in primary care. This qualitative study, used a computer-facilitated 5As model to identify conditions, based on the perspectives of primary care providers and clinical staff, would be necessary to facilitate the introduction of digital technology to smoking cessation care. This study was based on the semi-structured interviews of 10 clinical, 12 administrative staff, and 13 primary care providers from three primary care clinics. The interview questions focused on the following items: potential gains in counseling efficiency, relevance for various health behavior counseling programs, confidentiality of data collection from patients, occupying patients while waiting, and serving as a cue to action. The results of this study showed the perceived ease of digital technology use was viewed as dependent on patient characteristics, clinic workflow, and patient volumes.

Synthesis of Literature

Technological tools and resources have the potential to offer efficient alternatives to conventional behavioral counseling mechanisms, primarily by addressing specific challenges of knowledge, resources, communication, and time (Napoles et al., 2016). While brief clinical interventions like those supported by the 5As framework can be implemented to reduce tobacco-related chronic diseases and deaths, current literature indicates a need for systemic change in health organizations to support delivery of these evidence-based tobacco dependence therapies (Satterfield et al., 2018; Wray et al., 2018).

Considering the above synthesis, more comprehensive knowledge is required by healthcare professionals to effectively implement and avail of the 5As strategy to screen for and prevent tobacco dependence. Four of the studies discussed computer-facilitated 5As service delivery models currently used in primary care clinics; one study mentioned the combination of the 5As model with motivational interviews, health education, cognitive behavioral therapy, and pharmacological therapy; another study mentioned a computer-mediated 5As service delivery model in inpatient and outpatient primary care settings. The Clinical Practice Guideline Treating Tobacco Use and Dependence recommended the use of a brief interventions model during patient encounters.

Ultimately, and for application of the current DNP project in evidence-based practice, synthesis of these findings suggests that the implementation of brief interventions, like that supported by the 5As model, and the integration of technology-enhanced behavioral counseling interventions, will significantly serves as reminders, and improve patient outcomes in smoking cessation care.

Guiding Theory

Pender's Health Promotion Model, developed by Dr. Nola Pender in 1982, is an effective theoretical framework that healthcare professionals can use to help patients attain improved health status (Pender & Pender, 1996). The theory contains various concepts and components whose understanding helps in equipping clinicians with the necessary knowledge, skills, and experience needed in addressing patients' needs. The model can be used in diagnosing, treating, and managing a wide range of health conditions, including tobacco use disorder (Pender & Pender, 1996). This model's utilization within this DNP project will help the clinic staff

understand the leading determinants of health behaviors as the basis for behavioral counseling and promoting well-being (Pender & Pender, 1996).

The theoretical model works on four beliefs that play a vital role in informing its philosophical foundation. First, Pender's Health Promotion Model assumes that all people strive to control their health behaviors (Pender & Pender, 1996). Secondly, the model hypothesizes that people in their different bio-psychosocial complexity tend to interact with their environment in a progressive way that, in turn, helps to transform themselves and their surroundings. Thirdly, health professionals, including nurses, form a vital part of the interpersonal environment, affecting people's behaviors throughout their lifespan (Pender & Pender, 1996). Lastly, the self-initiated transformation and unique environment interactive patterns are critical to changing people's actions.

Additionally, Pender's Health Promotion Model has three major concepts (Pender & Pender, 1996). Individual characteristics and experiences refer to the unique personal features that affect the actions taken by people. Such attributes include prior related behaviors and their associated personal factors (Pender & Pender, 1996). Health Cognitions, on the other hand, are the variables that are specific to certain behaviors. The behavior-specific cognitions and affect comprise of the perceived benefits that a person has towards a particular action, its associated barriers, self-efficacy, situational and interpersonal influences, and affect resulting from various activities. Therefore, people can change such factors by using appropriate nursing actions to attain better health status (Pender & Pender, 1996). Lastly, behavioral outcomes are the acceptable and anticipated actions that people changing their risky practices must depict.

It is essential to have a comprehensive strategy and action plan when using this model to improve the screening of tobacco use and cessation treatment among adult patients in primary

care clinics. This identification should involve selecting patients on personal factors, including biological, psychological, and socio-cultural factors. The staff used this model as a guide to assess readiness to quit, preferences on the types of intervention, and the barriers that could hinder patient from utilizing the available screening services.

Organization Description

Setting and Mission

This DNP project was implemented in a primary care clinic in Baltimore, Maryland. The clinic is part of a small community hospital utilized mainly for primary care services. The organization's mission is to improve the health of those they serve at the individual and community level with compassion and quality of care.

Patient Population Served

The practice provides internal medicine services to adult patients aged 18 and above. A significant population of the clinic is the underserved minority population. Most of patients have Medicare and Medicaid insurance. Few uninsured patients are seen without charges for post-hospital discharge follow-ups. Patients were mostly seen on an appointment basis with few walk-ins for minor urgent care needs.

Stakeholders

The inclusive stakeholders were the clinic staff, technology department, billing department, patients and their family members, and the organization leaders. These stakeholders helped facilitate the development and implementation of the program and ascertained it through to the completion stages. The medical practitioners, medical assistants, nurses, and case managers collaborated amongst themselves to facilitate the critical program needs. The Principal Investigator (PI) was available on site and or by email or phone for support.

Target and Impact Population

This quality improvement project's target population was the clinic medical providers, nursing staff, medical assistants, front desk staff, case manager, and leadership. The impact population was active tobacco user patients.

Organizational Assessment

The organization uses an EMR system that helped to prompt staff to assess and treat tobacco use disorder. The clinic has about 800 active patients, and 11 medical providers perform about 70 to 85 face-to-face encounters a day except on Saturdays. The SWOT Analysis (Appendix D) illustrates the strengths, weaknesses, opportunities, and threats of this DNP project within this organization. Notably, the clinic has strong leadership with excellent interpersonal skills that helped influence staff compliance. The implementation of this DNP project has faced internal threats such as current staff use of tobacco products and staff's personal bias about tobacco cessation.

Additionally, according to the Clinical Practice Guideline Treating Tobacco Use and Dependence Update Panel by Fiore et al. (2008), tobacco counseling and or discussion of treatment requires more time than a regular patient visit. The clinic must increase encounter time and frequency for tobacco users, which may lead to fewer patients seen in a day and, in turn, might decrease revenue for the clinic. Also, some patients have high deductible and co-pay, and might not afford more frequent visits for continuous monitoring and evaluations. Nonetheless, external pressure to prioritize preventative care, including tobacco screening and treatment by the department of health in Maryland, was a favorable factor for this DNP project. The project's external threats included peers or family members of a patient who use tobacco products, social determinants of health, and myths associated with tobacco cessation.

Congruence of Project to the Organization

One of the clinic's objectives was to increase tobacco screening and treatment by the clinician to improve health outcomes and maintain certification for the Maryland Primary Care Program (MDPCP). The MDPCP is a voluntary program for interested organizations that aim to provide a higher standard of preventative care and lowing the cost of healthcare. The program encourages an extensive preventative care model and chronic care services to reduce hospitalization and increase health outcomes. It provides funding and support for all certified primary care centers within Maryland (Maryland Department of Health, 2020). In collaboration with both the State's Medicare and Medicaid regulation for MDPCP, the organization desires to help prevent disease and reduce cost, which is inclusive of tobacco use disorder.

Methodology

Aims and Objectives

This DNP project aimed to increase the utilization of 5As five-step tobacco cessation screening by incorporating the elements into a computer-based template.

Objective One

The first objective was to develop and train the staff on tobacco cessation program protocol using the Computer Facilitated 5As model in a primary care clinic within 12 weeks. As a component of this training, the Organizational Readiness for Implementing Change (ORIC) questionnaire was administered to assess readiness for the practice change. Findings from the survey was taken into consideration to promote the success of the practice change implementation.

Outcome: Seventy percent of staff will feel confident by indicating "somewhat agree" or "agree" and commit to the implementation of the tobacco cessation program within the clinic to improve patient care.

Objective Two

The Computer Facilitated 5As Model was implemented in the targeted primary care clinic. The outcome measurements of this objective were documented in the electronic chart as follows over a period of 12 weeks:

1. Triage nurses will **Ask** all adults about tobacco use status 75% of the time and document patient response.
2. Triage nurses will **Advise** and **Assess** for willingness to quit for all active adult tobacco user patients 75% of the time and document the patient response.
3. Health care providers will **Assist** all active tobacco users who express willingness to quit with counseling and or prescribing the FDA approved medication (Appendix E) treatment 75% of the time and document their treatment plan.
4. Health care providers will **Arrange** at least one follow-up for those patients who express willingness to quit 75% of the time and document their treatment plan.
5. Health care providers will select appropriate diagnostic, procedure, and billing codes (Appendix F, G) based upon the documentation as related to findings and care provided 100% of the time.
6. Data collected from the pre, and post 5As utilization questionnaire (Appendix H) will increase by 50% over baseline.

Design and Implementation Framework

The design of this DNP Project was a quality improvement initiative focused on implementation of evidence-based project. The IOWA Model Framework guided the implementation of this DNP project (Appendix I). The IOWA Model is an evidence-based framework designed to guide clinicians in implementing an evidence-based project (Iowa Model Collaborative, 2017). This model emphasizes the significance of considering the entire organization, including the patients and the infrastructure and using research to channel practice decisions. The IOWA model has identified seven significant steps to facilitate engagement in problem identification and solution development related to integrating evidence findings into practice (Iowa Model Collaborative, 2017).

The first step in the Iowa Model is identifying a problem or a trigger that calls for a change in practice or process improvement. Secondly, the model stress that it is crucial to assess the priority nature of the identified problem to the organization. Once the problem is identified and its level of priority is determined, a team selection and collaboration are executed to establish support for the project. The priority problem identified within this organization inconsistent provider screening and management of tobacco use disorder. Consequently, providers were not documenting treatment and billing of tobacco use disorder leading to poor health come and revenue lost for the organization. The third step is team formation. The team of this evidenced based project was the DNP student (PI), DNP team, clinical and nonclinical staff in the clinic, technology department, and the patients.

The fourth step in the Iowa Model EBP involves literature search and synthesis related to the topic, which has been conducted to determine whether there is sufficient evidence to implement the project. Literature review and synthesis suggests that the implementation of brief interventions, such as the integration CF5As serves as reminders, and improve patient outcomes

in tobacco cessation care. The last two steps involve implementing the project and monitoring the outcome (Iowa Model Collaborative, 2017). The project was implemented and successfully monitored and evaluated using the Iowa Model.

Setting

This project took place at outpatient primary care clinic in Woodlawn Center, Baltimore, Maryland.

Recruitment

The PI recruited participants through convenience sampling. The PI had a brief staff meeting with the staff on duty during break period and verbally asked for volunteers to participate in the quality improvement project. A flyer with the project detail (Appendix J) and a recruitment script (Appendix K) was given to each potential participant. The flyer was also printed and posted at different locations within the clinic for easier access. The target population was the entire clinic staff (N = 30) in different roles, and the recruitment target was 30 participants. The inclusive criteria were all active staff, including medical doctors, nurse practitioners, physician assistants, nurses, medical assistants, receptionists, radiology technicians, manager, billing staff, active patients 18 years and older, and patients seen within the project's 12 weeks implementation phase. Exclusive criteria were the volunteer staff, employees younger than 18 years, patients younger than 18 years, and non-active patients. A formal informed consent form was given but signature was not required. This DNP project has minimal risk and very minimal ethical issues. Also, it involved practices that were already in place and did not include experimental intervention. Therefore, a Request for Waiver (Appendix L) was submitted to EKU IRB and was approved.

Intervention

The PI provided one-page of detailed education (Appendix M) regarding the treatment of tobacco use disorder with the utilization of the 5As framework at individual staff convenience time and during their break period. The project workflow (Appendix N), and one-page patient education (Appendix O) was placed at each workstation for easier access and referencing. Each participant was given the Background Survey and the baseline 5As Utilization Questionnaire to complete before the educational session. After the detail education, participants were asked to complete the 12 item ORIC tool to assess for their commitment and confident in the project.

During the project implementation, triaging staff asked every adult patient for tobacco use status. These staff further advised active tobacco users on the benefits of quitting tobacco use and assessed their willingness to quit. Providers reviewed and acknowledged in the chart that tobacco use disorder has been assessed. Additionally, the providers assisted all the patients who expressed willingness to quit by providing counselling and or FDA approved nicotine replacement therapy (Appendix E). Furthermore, providers were asked to document individual plan of care, appropriate diagnostic, and procedure codes (Appendix F, G) based upon the documentation related to findings and care provided. At the end of the project, the participants were asked to complete the posttest 5As Utilization Questionnaire to assess project performance.

Ethical Considerations and IRB

The partnering organization designated EKU to be the IRB of record (Appendix P). The PI applied for an expedited Institutional Review Board (IRB) approval at the Eastern Kentucky University IRB before implementation. The IRB approval for the project was received before the implementation. The project involved practices that are already in place and did include experimental intervention. Therefore, there was minimal risk and very minimal ethical issues. No

personal protected information of staff and or patients was collected during the entire pre- and post-intervention data.

Measurement and Tools

Background Survey. The PI collected participants' background information (Appendix Q) which included age, level of education, role, level of experience, length of employment and employment status. The Background Survey information allowed the PI to better understand background characteristics of the participants which was analyzed using measures of central tendency.

Organizational Readiness for Implement Change. The PI utilized Organizational Readiness for Implementing Change (ORIC) tool to assess the organization's readiness for the DNP project. The ORIC tool (Appendix R) is a multi-faceted and multilevel strategy that requires members to determine with the system to implement a change to prevent project failure (Shea et al., 2014). According to Weiner (2009), the effectiveness of a project depends on team readiness which means the team is agreeing to the project. The degree to which team members perceive a change as essential, needed, and worthy influenced their confidence and commitment (Weiner, 2009).

Shea and colleagues later developed and evaluated the tools to establish their reliability and validity (Shea et al., 2014). The ORIC questionnaire has 12 items that relate to the content of commitment and confidence of the staff. The tool has five items of commitment and seven items of change efficacy assessment. The statements in 1, 3, 5, 7, 8, 10, and 12 assess for confident, and statements in 2, 4, 6, 9, and 11 assess members' commitment. The items are assessed using the 5-point Likert scale from disagreeing to agreeing.

Shea et al. (2014) conducted four studies to evaluate the validity and reliability of the ORIC measurement tool. The researchers evaluated the tool at both individual and organizational levels. In study one, groups were asked to answer each item, and individuals did study 2, 3, and 4 at different locations. The result revealed that reliability for the change commitment and change efficacy scales were more robust at the organizational level ($\alpha = .98$ and $\alpha = .97$, respectively) than at the individual-level ($\alpha = .72$ and $\alpha = .51$, respectively). However, the result provides psychometric evidence supporting the ORIC stool to be helpful at all levels. It also revealed that the items and scales utilize in the ORIC tool can determine the members' readiness and ultimately guide healthcare organizations in implementing a change (Shea et al., 2014). Therefore, the DNP project participants will be asked to complete the ORIC questionnaire after staff education to assess their commitment and motivation for the project.

Since the researchers reported the individual-level assessment variance at 72% and 51% (change commitment and change efficacy), the PI set a goal to obtain at least 70% of staff to feel confident by noting "somewhat agree" or "agree" and commit to the project implementation.

5As Utilization Questionnaire. The PI asked nurses, medical assistants and providers to complete a pretest before the detail educational session to assess their current knowledge and performance of the 5As model. At the end of the DNP project, the staff were asked to complete posttest Utilization Questionnaire to determine their performance. The nurses and medical assistants were asked to complete items A - E, and providers were asked to complete the entire questionnaire, items, A - J. The objective of the detailed education is to enhance the proficiency of the clinic staff in assessing and treating tobacco use disorder. The education was based on the utilization of the 5As within the EMR and the workflow of the project.

Project Evaluation. The data obtained from the background survey and pre-posttest was evaluated using descriptive statistics into recordable observations. This data included the participant's age, level of education, role, and length of employment, employment status, and experience using the 5As approach. Another project data collected and evaluated include the frequency rates of Ask, Advise, Assess, Assist, Arrange, and Current Procedural Terminology (CPT) and Diagnosis Codes. This data was retrieved through hand chart auditing and data download from the EMR.

Audits and Benchmarking. The PI performed a random chart audit of 30 patients on different days before the project go-live to establish baseline performance capturing. Performing the chart audit on different days enabled performance capturing from multiple staff. The PI also performed a random chart audit of 30 patients in weeks 6 and 12 of the project implementation to monitor progress at different intervals. The data collected from the chart audits included the frequency rates of Ask, Advise, Assess, Assist, Arrange, and Current Procedural Terminology (CPT) and diagnosis codes. The data collected was recorded on a spreadsheet (Appendix S).

Data Analysis

Data collected from the Background Survey and the chart audits was entered into an excel spreadsheet (Appendix S) and then entered into the Statistical Package for the Social Sciences (SPSS) version 28 software for data analysis. The quantitative data was analyzed using descriptive statistics. Measures of central tendency, a type of descriptive statistics, helped provide an accurate description, including percentages, means, and medians of the data set. The ORIC tool statements for commitment (1, 3, 5, 7, 8, 10 and12) and confidents (2, 4, 6, 9 and 11) were grouped on 2 different spread sheets and analyzed per group. The 5As utilization questionnaire and ORIC tool was analyzed using Pearson's correlation coefficient and t-test to

estimate the linear relationship between two quantitative measures and assess for the difference between the two groups.

Data Security

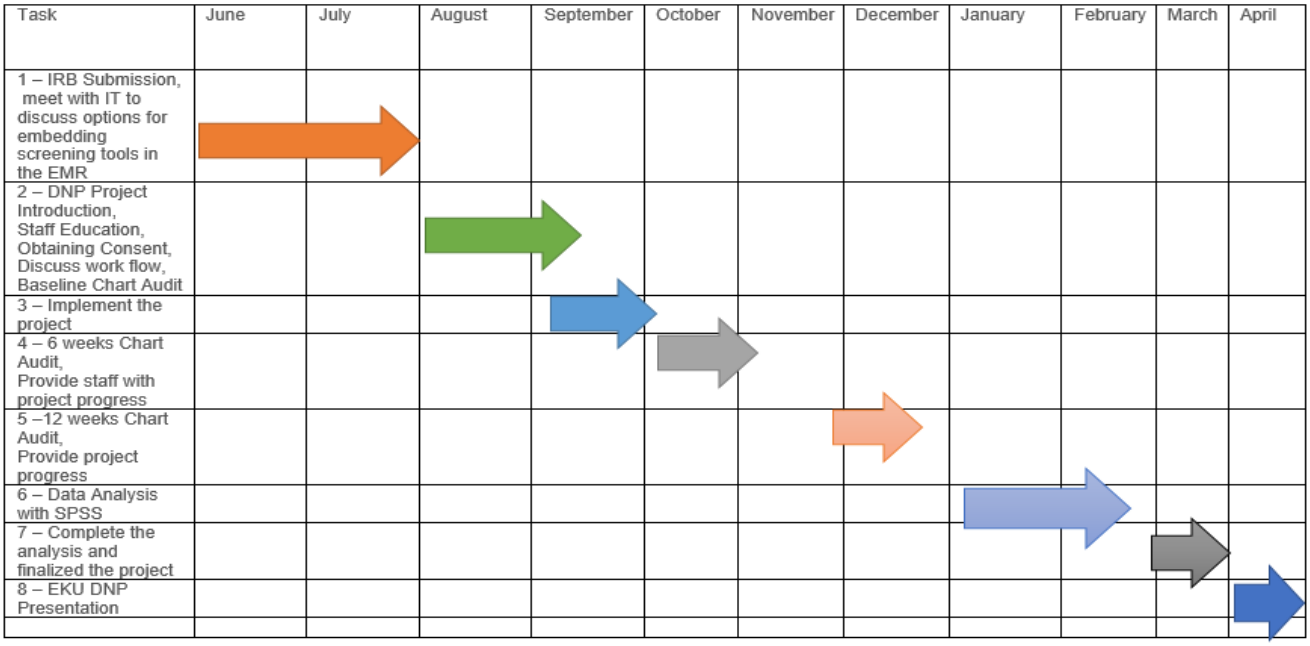
The data collected from this project was de-identified and solely managed by the PI. The data may be accessible by the DNP team via the Eastern Kentucky Blackboard and or Eastern Kentucky Google Drive. The final project data will be stored in the office of the DNP Project Chair Dr. Molly Bradshaw's office 214 in Rowlett building for three years. The data will be destroyed per EKU policy after three years.

Project Phase Timeline

The project was planned to be implemented in 2021 Fall after the IRB approval. Also, the PI sought final approval from the DNP team, who guided the implantation process. The Gantt chart (Figure 2) shows the project task and timeline. The project ran for 12 weeks.

Figure 1

DNP Project Task and Timeline



Results

Collection of all data extended over 12 weeks. Thirty random charts were reviewed at baseline, 6 weeks and at 12 weeks**.** Patient data was extracted directly from the EHR and complied. No personal identifiers were recorded into the data file for patients and or staff. Staff data for confident, commitment, and demographics were entered into a Microsoft file using manual entry of questionnaire data. After data entry was complete, data was exported to IBM SPSS version 28 for analysis.

Staff Demographics

Demographics for staff are presented in Table 1 below. Descriptive statistics were computed for staff demographic variables of age, highest level of education achieved, staff role, length of service in a primary setting, length of service within the organization, and work status. A total of 24 staff agreed to participate**.** The most common age range was 46 to 55 years old (n = 8, 33.3%). The most common level of education was master's degree (n = 6, 25%) and associate degree (n = 6, 25%) and the least common is bachelor's degree (n = 2, 8.3%). Nurse Practitioners were the majority of staff roles (n = 5, 20.8%). Eight (33.3%) had more than 10 years of service in primary care but only two (8.3%) had more than 10 years at the organization. Most participants were full time (n = 17, 70.8%).

Table 1

Demographics for Staff Participants

Variable	*n*	*%*
Age		
18-25	1	4.2
26-35	4	16.7
36-45	5	20.8
46-55	8	33.3
56-65	5	20.8
Over 65	1	4.2

Highest Level of Education		
High School	5	20.0
Associate Degree	6	25.0
Bachelor's Degree	2	8.3
Master's Degree	6	25.0
Doctorate Degree	5	20.8
Staff Role		
Receptionist	4	16.7
Medical Assistant	2	8.3
License Practical Nurse	2	8.3
Registered Nurse	1	4.2
Radiology Technician	2	8.3
Billing and coding	1	4.2
Nurse Practitioner	5	20.8
Physician Assistant	3	12.5
Medical Doctor	3	12.5
Supervisor	1	4.2
Length of Service- Primary Setting (years)		
0-1	2	8.3
1-5	7	29.2
5-10	7	29.2
More than 10	8	33.3
Length of Service – Organization (years)		
0-1	6	25.0
1-5	8	33.3
5-10	8	33.3
More than 10	2	8.3
Work Status		
Full Time	17	70.8
Part Time	5	20.8
As Needed	2	8.3

Objective One

To examine objective one (Seventy percent of staff will feel committed and confident by indicating "somewhat agree" or "agree" and commit to the implementation of the tobacco cessation program within the clinic to improve patient care), descriptive statistics (*n, %, Mean, Median)* were computed on each item for the Commitment and Confident Survey. There were 23 staff that completed the commitment survey and 24 staff that completed the confident survey.

Table 2 represents proof goal of 70% was met with overall percentage of responses reporting commitment 82.6% (95 out of 115).

Table 2

Commitment Survey Results (N = 23)

Commitment Item	*n*	% reporting Somewhat Agree or Agree	*M*	Median
Committed to implementing this change.	23	100%	4.52	5
Will do whatever it takes to implement this change.	5	21.7%	2.74	3
Want to implement this change	22	95.7%	4.65	5
Are determined to implement this change.	23	100%	4.96	5
Are motivated to implement this change.	22	95.7%	4.52	5

Note. M = mean

Table 3 presents the overall percentage of responses reporting confident and the mean and median for each item. The overall percentage of responses reporting confident was 90% (158 out of 168), also supporting the goal rate of 75% confidence.

Table 3

Confident Survey Results (N = 24)

Confidence Item	*n*	% Reporting Somewhat Agree or Agree	*M*	Median
Feel confident that the organization can get people invested in implementing this change.	22	91.5%	4.7	5
Feel confident that they can keep track of progress in implementing this change.	23	95.8%	4.2	4

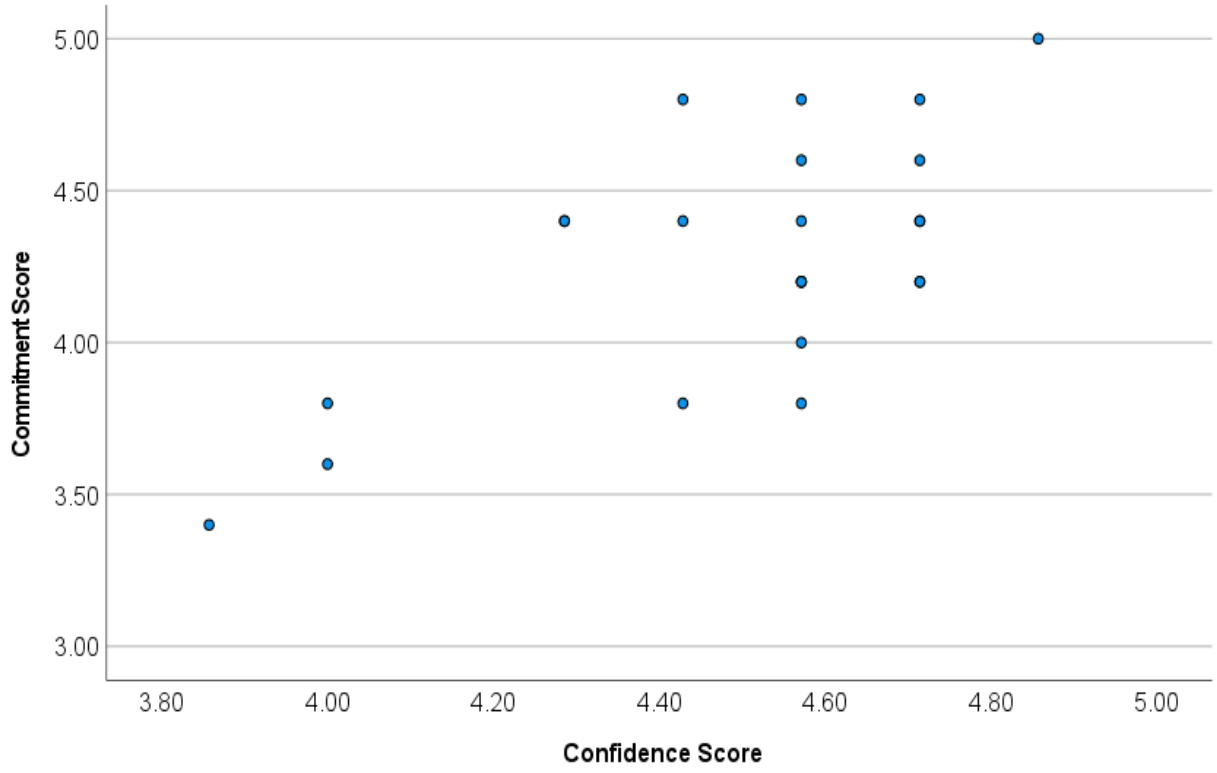
Feel confident that the organization can support people as they adjust to this change.	21	87.5%	4.2	4
Feel confident that they can keep the momentum going in implementing this change.	23	95.8%	4.4	4
Feel confident that they can handle the challenges that might arise in implementing this change.	24	100.0%	4.8	5
Feel confident that they can coordinate tasks so that implementation goes smoothly.	22	91.7%	4.3	4
Feel confident that they can manage the politics of implementing this change.	23	95.8%	4.6	5

Note. M = Mean

Pearson correlations were conducted to measure the strength of the linear relationship between the staff's commitment and confident scores. A scatter plot of the mean scores is displayed in Figure 2. The correlation coefficient was statistically significant, r (21) = .663, p <. 001.

Figure 2

Confident and Commitment Scatterplot

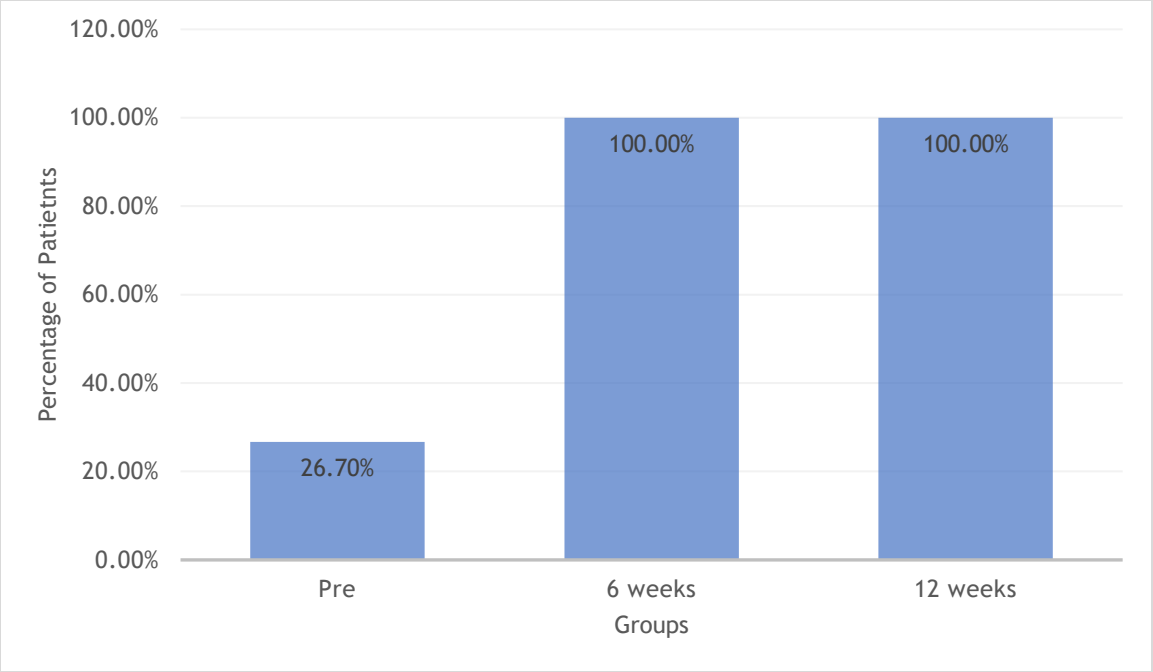


Objective Two

To examine objective 2a (Triage nurses will **Ask** all adults about tobacco use status 75% of the time and document patient response), descriptive statistics were conducted. Each item group had *n* = 30 charts were reviewed at baseline, week 6 and week 12. The findings show Ask was conducted for 8 (26.7%) at baseline. At 6 weeks and 12 weeks, the Ask was conducted for all 30 (100%) of patients. The objective was met for the week 6 and week 12, with more than 75% of adult tobacco users asked by the triage nurse about tobacco status, as seen in Figure 3.

Figure 3

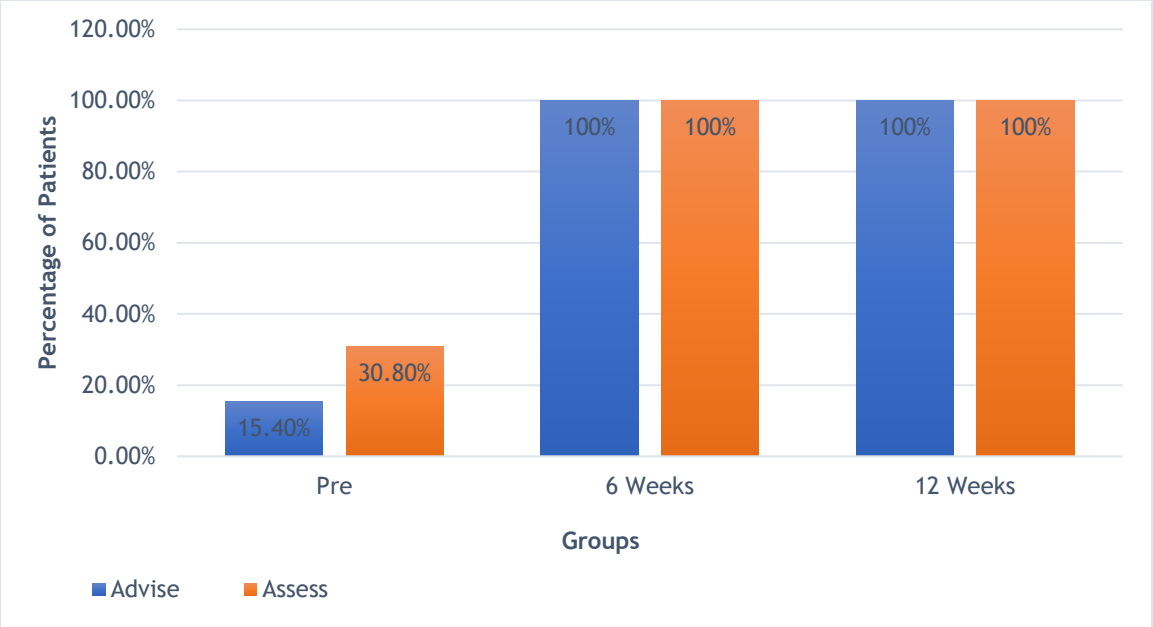
Results for Ask Component of the 5As Model



To examine objective 2b (Triage nurses will **Advise** and **Assess** for willingness to quit for all active adult tobacco user patients 75% of the time and document the patient response), Descriptive statistics were conducted. The sample size for tobacco users was n = 13 for baseline, n =10 at week 6, and n= 10 at week 12. Of the 13 patients in baseline, 2 (15.4%) were Advised and 4 (30.8%) were Assessed for readiness to quit tobacco use. For the week 6, all 10 (100%) were advised and assessed. Similarly, the week 12 group had a 100% rate (n =10) for Advise and Assess. The objective was met for the week 6 and week 12, with more than 75% of adult tobacco users getting advised and assessed by the triage nurse, as seen in Figure 4.

Figure 4

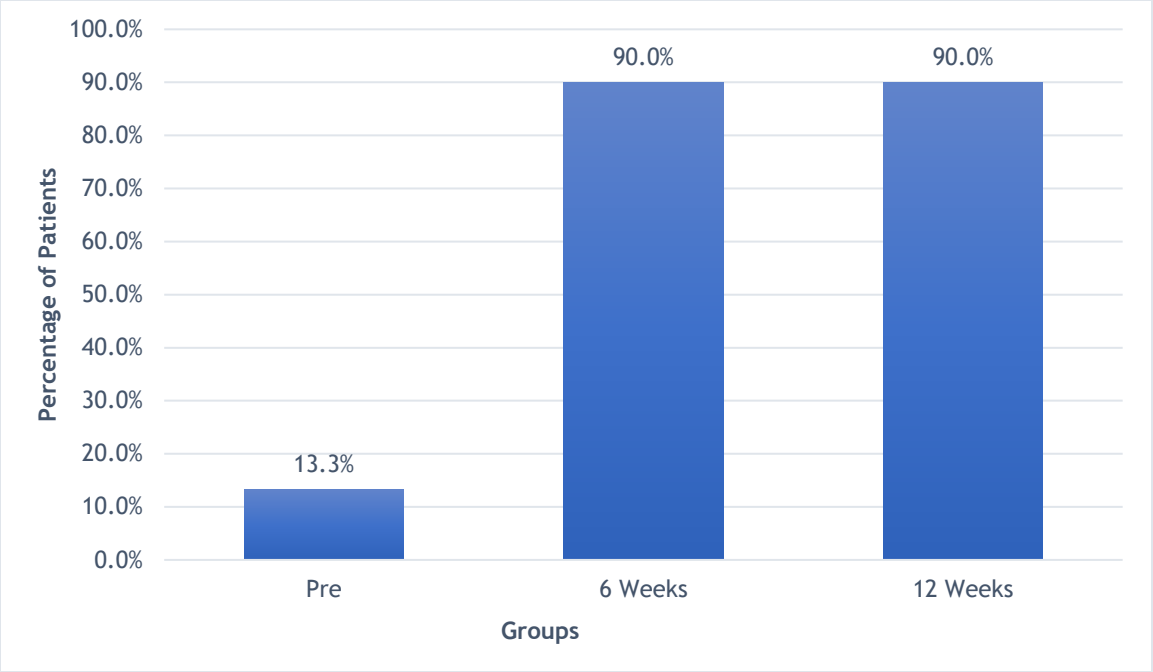
Results for Advise and Assess Component of the 5As Model



Objective 2c (Health care providers will **Assist** all active tobacco users who express willingness to quit with counseling and or prescribing the FDA approved medication treatment 75% of the time and document their treatment plan) was examined using descriptive statistics. The baseline group had four patients that were assisted (13.3%). The week 6 and week 12 group, each had nine out of 10 patients (90.0%) that were assisted. The objective was met, as indicated by over 75% of week 6 and week 12 patients being assisted by the providers, as seen in Figure 5.

Figure 5

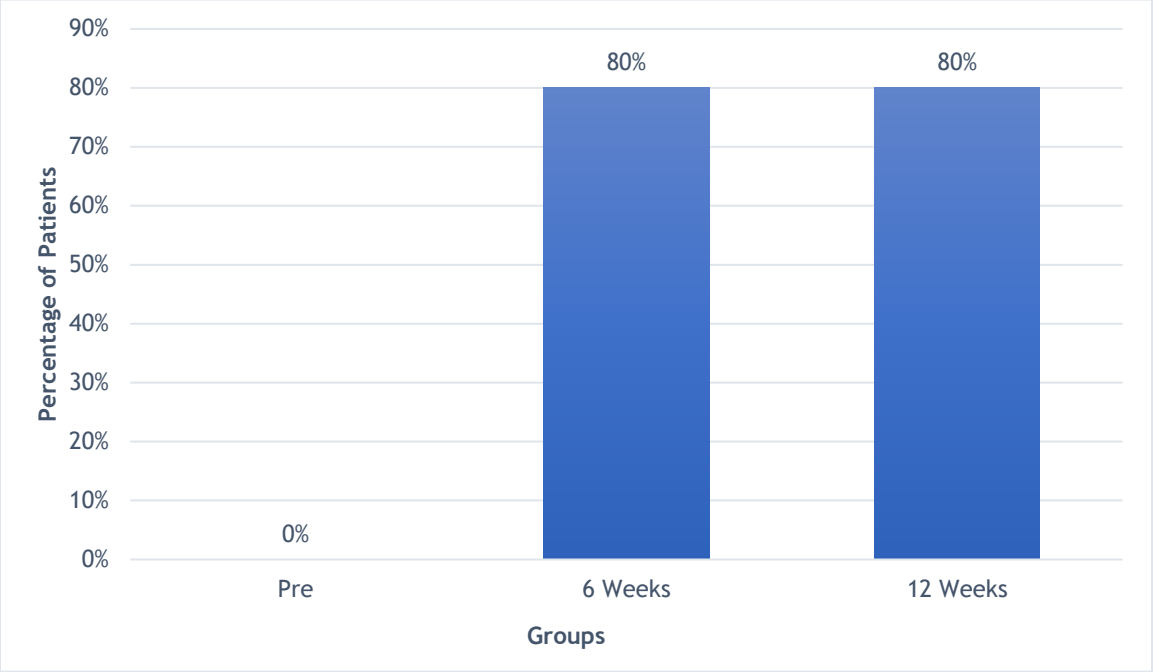
Results for Assist Component of the 5As Model



Objective 2d (Health care providers will **Arrange** at least one follow-up for those patients who express willingness to quit 75% of the time and document their treatment plan) was examined using descriptive statistics. Follow-up was not arranged for any baseline patients (*n* = 0, 0.0%). The week 6 and week 12 intervention groups each had eight (80.0%) participants that were arranged for a follow-up. The objective was met, as indicated by a rate of 80% for the intervention patients, as seen in Figure 6.

Figure 6

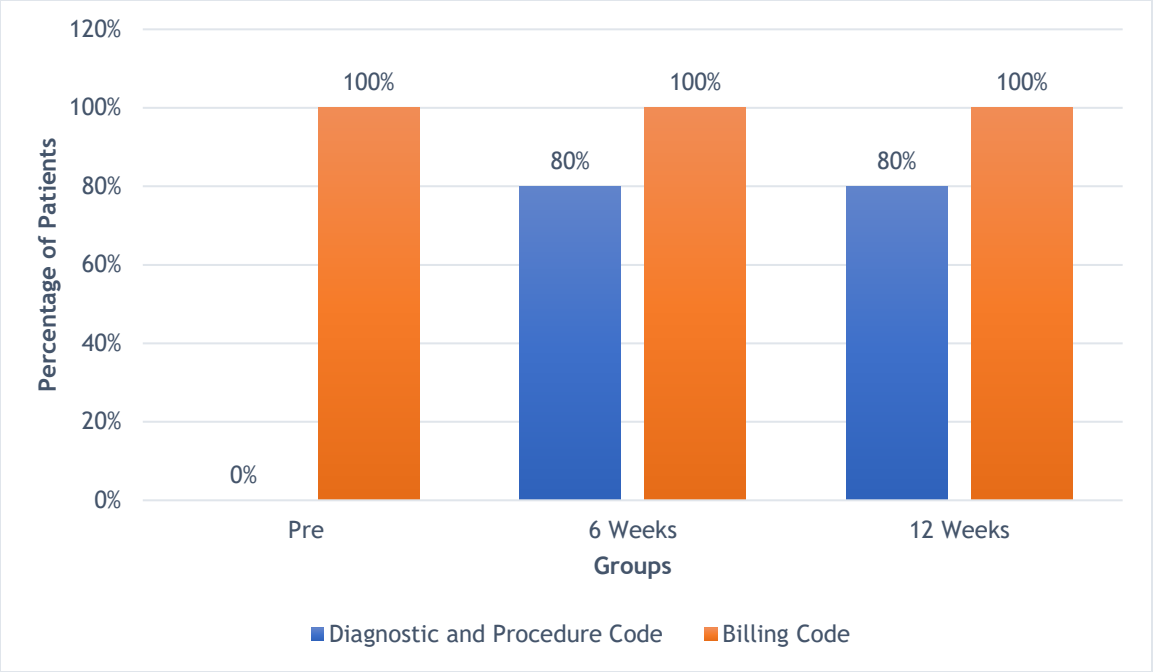
Results for Arrange Component of the 5As Model



Objective 2e (Health care providers will select appropriate diagnostic, procedure, and billing codes based upon the documentation as related to findings and care provided 100% of the time) was examined using descriptive statistics. Diagnostic and procedure codes were documented for none of the baseline patients (0.0%), and eight of the patients at week 6 and week 12 intervention period (80.0%). Billing codes were documented for all patients in baseline (n = 13, 100%), and all patients at week and week 12 intervention group (n = 10, 100%). These findings (Figure 7) are evidence that objective 2e was partially met, as diagnostic and procedure codes did not meet the 100% goal, although the billing code documentation did meet the 100% goal.

Figure 7

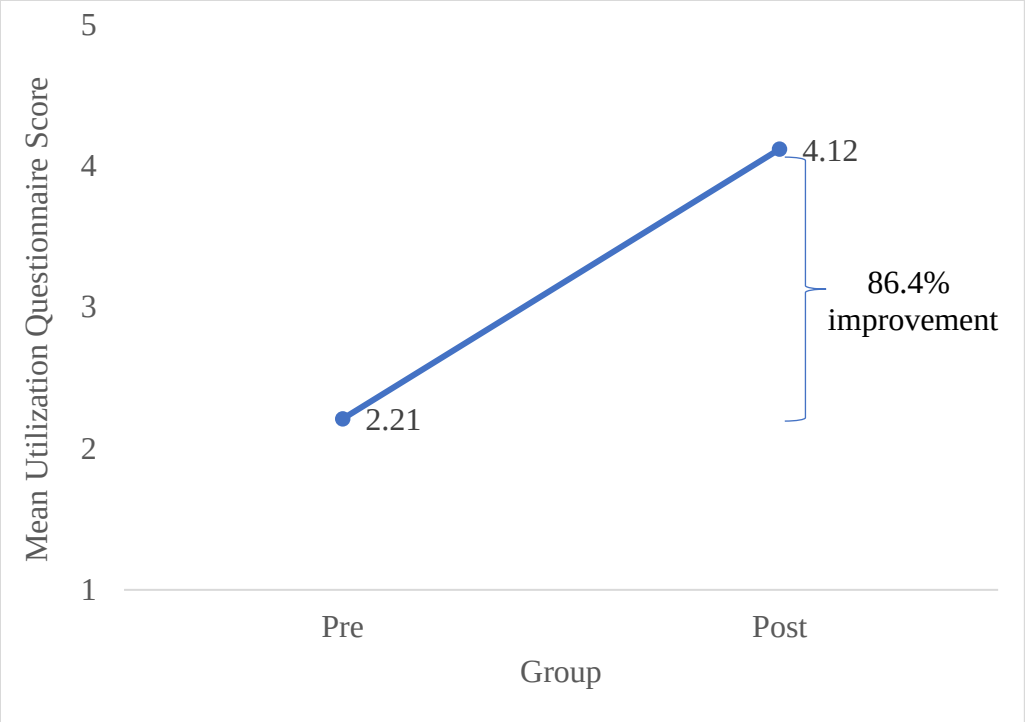
Results for Documentation on Diagnosis and Procedures and Billing Codes



Objective 2f (Data collected from the pre and post 5As utilization questionnaire) will increase by 50% over baseline. The baseline (pre) survey mean score was compared to the post survey mean scores and a % difference was computed. The mean score on a scale from 1 to 5 for the 5As utilization questionnaire at pre was 2.21 (*SD* = .48) and at post the mean was 4.12 (*SD* = .29). Higher scores are evidence of more utilization of the 5As. The increase from 2.21 to 4.12 is an 86.4% improvement, which achieves the objective of at least 50% improvement in the utilization scores (see Figure 8).

Figure 8

Results for 5As Utilization Questionnaire



An independent samples t-test was conducted and showed the mean score increase for the 5A utilization questionnaire was statistically significant from pre to post intervention (see Table 4). The *p*-value was <.001.

Table 4

Variable	Pre			Post			t (36)	p
	M	SD	Median	M	SD	Median		
5As Utilization Questionnaire Score	2.21	0.48	2.22	4.12	0.29	4.00	-14.93	<.001

5As Utilization Questionnaire Independent Samples t-test Results

Discussion

Implementing this DNP project at a site that values quality improvement with committed and confident staff members, and a leadership team supportive of change facilitate project success. The findings revealed that implementing the Computer Facilitated 5As model increased asking, advising, assessing, assisting, and arranging for follow-up by clinicians to achieve tobacco cessation treatment. This is in line with past literature with comparable findings. For instance, Satterfield et al. (2018) found that computer-facilitated 5As increased primary care providers' screening and tobacco cessation treatment and adherence. Similarly, Moody-Thomas et al. (2015) demonstrated effective implementation of the 5As treatment model could improve tobacco abuse quit rate.

The findings can be explained by the fact that the intervention is practical considering tobacco cessation challenges. Also, a detailed education on utilization of the 5As framework was also delivered at individual staff convenience time and during their break period, increasing its adherence and efficacy. The practicability of the intervention is that patients who were active tobacco users were advised and assisted to quit with counselling and or medication. Even though complete abstinence was not evaluated and known in this project, those willing were counseled to quit, which could enable them to overcome challenges associated with quitting tobacco use.

Limitations

One of the limitations was a small sample size which affects the generalizability of the result. Also, the 5As Utilization Questionnaire data was self-reported hence may be biased. It is also possible that when people self-evaluate, they may be inclined to offer an outcome to show

that the process has been effective. Finally, the use of one facility may have increased homogeneity.

Implications

Practice

The Clinical Practice Guidelines for tobacco use disorder treatment offer numerous recommendations to health care providers and clinics on how to deliver evidence-based practice tobacco cessation treatments (Fiore et al., 2008). The guidelines also stressed the significance of all healthcare systems implementing approaches to help quickly identify, document, and treat every tobacco user at every encounter, especially primary care clinic visits. Recommendations from the Guidelines have increased tobacco cessation rates and abstinence (Park et al., 2015). Therefore, implementing a technology-enhanced system with an embedded 5As model is necessary to identify and treat all tobacco users.

Policy

Policy should explicitly outline the processes and expectations of each staff to identify challenging areas better and address them promptly. Unfortunately, most health care providers may not incorporate tobacco cessation interventions into their everyday practices leading to poor quality to care of tobacco users (Moody-Thomas et al., 2015; Satterfield et al., 2018). This clinic would need a tobacco cessation program policy to provide optimal tobacco use disorder treatment. In turn, the policy improves screening, compliance and revenue.

Safety and Quality

Chronic tobacco use is associated with morbidity and mortality (WHO, 2020). Assisting patients to full tobacco use abstinence improves the quality of life and health outcomes. Clinicians, particularly those in the primary care settings centers, plays a significant role in

assisting tobacco users in quitting (Satterfield et al., 2018). Therefore, it is imperative to provide an efficient and effective tobacco cessation program to properly treat tobacco use disorder like any other medical or mental health disorder.

Education

Tobacco use disorder treatment should include counseling and medication treatment as recommended by the guidelines (Fiore et al., 2008). The result of this DNP project has shown a 50% increase in staff's knowledge about tobacco use disorder after thorough education was provided. Clinicians must be trained and utilize both treatment approaches to help patients reach complete abstinence, improving quality of life and health outcomes. Incorporating yearly mandatory education about tobacco addiction screening and treatment would help enhance staff's knowledge and update any evidence-based changes.

Sustainability

The Computer Facilitated 5As model should be implemented by all healthcare facilities that seek to achieve tobacco cessation treatment. Also, health care managers should provide the required resources to support the implementation of the Computer Facilitated 5As model. In particular, there should be necessary technology and staff trained on implementing the model. Furthermore, there should be an evaluation of factors supporting or hindering the implementation of the Computer Facilitated 5As model. Implementers should ensure supporting factors are in place and solutions to address the hindering factors. In addition, a policy would be instrumental in promoting compliance with the 5As framework within the clinic. Lastly, for sustainability of success, it will be necessary to continue encouraging the change, track metric data to evaluate for compliance, and address limitations discovered in the implementation of the project.

Future Scholarship

Implementing an evidence-based practice tobacco cessation program would increase the assessment and treatment of tobacco use disorder. Also, it will improve quality of life and negative health consequences associated with tobacco use disorder. This DNP project indicates a continuation of the project interventions to correctly identify and treat active tobacco users to improve clinician engagement and health outcomes. Funding and future research are needed to replicate this quality improvement project in larger populations. This project did not evaluate the quit rate associated with the utilization of the 5As model. Further research is needed to evaluate the effect of 5As on quite a rate and overall long-term tobacco cessation effect. The result of this project will be presented to the organization's leadership to persuade for the continuation of the practice. Current employer has 10 community health clinics. Collaboration with the leadership is planned to expand the project to larger community health clinics. Poster presentations at each clinic site is planned to engage larger staff.

Conclusion

The objective of this project was to develop and implement a tobacco cessation program protocol using the Computer Facilitated 5As (CF5As) model in the clinic within 12 weeks. The findings showed that staff were confident and committed to implementing the tobacco cessation program within the clinic to improve patient care. Further, the benchmarks for asking, advising, assessing, assisting, and arranging for follow-up by clinicians were all met. This showed that implementation of the Computer Facilitated 5As model increases asking, advising, assessing, assisting, and arranging for follow-up by clinicians to seek to achieve tobacco cessation care. In this regard, healthcare stakeholders, organizations, and practitioners should implement the Computer Facilitated 5As model within their facilities to increase screening and tobacco cessation.

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Appendix A

Intervention Table

Intervention Details	Wray et al., 2018.	Satterfield et al., 2018.	Bar-Zeev et al., 2019)	Moody-Thomas et al., 2015.	Nápoles et al., 2016.	(Fiore, et al., 2008)
Computer-Facilitated 5As service delivery model primary care setting	x	x	x		x	
5As strategy protocol primary care setting	x	x	x	x	x	x
Computer tablet 5A intervention primary care setting			x		x	
Motivational interview, advice to quit, health education Integrated care setting.	x					x
pharmacological treatment (Bupropion SR, Nicotine products, and Varenicline)	x					x
Computer-Facilitated 5As service delivery model in inpatient and outpatient primary care setting				x		

Appendix B

Hierarchy Table

Melnyk Level	Evidence 1 (Wray et al., 2018)	Evidence 2 (Satterfield et al., 2018)	Evidence 3 Bar-Zeev et al., 2019)	Evidence 4 (Moody-Thomas et al., 2015)	Evidence 5 (Nápoles et al., 2016).	Evidence 6 (Fiore, et al., 2008)
I	X					
II		X	X			
III						
IV						
V				x		
VI					X	
VII						x

Appendix C Evidence Table

First Author/ Year	Conceptual Framework	Design/Method	Sample/Setting	Independent Variable(S) (IV) and Interventions for the Dependent Variable (DI)	Measurement for DV	Data Analysis	Finding	Appraisal Worth to Practice	
Wray et al., 2018.	None	Meta-Analysis	36 studies were selected N =12975 patients. 37% studies recruited participants directly from a PC setting, 63% participants are from the Behavioral Health site of the clinics.	IV: Behavioral health services including the 5As and pharmacological treatment DV: Tobacco abstinence	Baseline cigarette per day	Comprehensive MetaAnalysis software Version and 12-item Methodological Quality Scale was used for data analysis.	Multiple interventions (non-pharmacological and pharmacological) have a higher chance of tobacco abstinence (1.78 Odds Ratio (OR), confidence interval (CI) 95%) compare to those who receive just received non-pharmacological.	Level of Evidence: I Strength: Random effects model was used during the data analysis. Weakness: Smaller size studies have systematically different effects from the large ones. Contribution: The stated interventions were noted to improve the odds of smoking cessation. Subgroup analysis did not show significant foundations for moderating factors' heterogeneity.	-
Satterfield et al., 2018.	TAM	Cluster RCT of Providers, intervention	N = 221 providers N = 961 patients	IV: Computer tablet 5A intervention	Provider completion of	Three-level logistics regression	CF5A's patients are more likely to receive the 5As for the first time.	Level Evidence. II Strength:	

		group and usual care group	(n = 412 patients in the intervention group N = 549 patients in the control group) Setting: Primary care clinics	DV: Adherence to the 5A's.	components of the 5As (Ask Advise Assess Assist Arrange)		Looking at multiple visits, providers in the intervention group have higher odds of completing Assess (AOR1⁄41.32, 95% CI1⁄41.02, 1.73) and Assist (AOR1⁄41.45, 95% CI1⁄41.08, 1.94). Similarly, first study visits only showed that intervention providers also have higher odds for Arrange (AOR1⁄41.72, 95% CI1⁄41.23, 2.40) and all 5A's (AOR1⁄42.04, 95% CI1⁄41.35, 3.07)	Variables were randomly assigned and multiple sites were used. Weakness: Outcome was determined by patient and data review instead of observation. Contribution: Healthcare organizations should enforce evidence-based, technology-mediated efforts to improve quitting and cessation services. Technical and implementation barriers may be added in the future to improve care in larger communities.	
Bar-Zeev at al., 2019.	none	Systematic review of RCT and quasi-experimental designs study articles from 5 database	N = 16 articles Setting: Smoking cessation care during pregnancy	IV: 5As model utilization by Healthcare providers DV: Providers behavior regarding any measures of Smoking cessation care	The Technology-adoption model and quitting outcome tools are used in measuring the DV. TAM variables used include PU, PEOU, SNI, and FC. The 5As fidelity receipt model	Data analysis was done by estimating number of participants reporting each outcome, or mean score. The Cohen's d. Crude meta-regressions, and meta-analysis	Significant effect sizes were observed on the five different care components. Cohen's d ranging from 0.47 for 'Ask' (95%CI 0.13–0.81) 1.12 for 'Setting a quit date' (95%CI 0.45–1.79) Crude meta-regression: 'Ask', may improve	Level of Evidence. II Strength: The review include both RCT and quasi-experimental designs study articles Weakness: Low number of study articles and publication bias was not assessed. Contribution: Small improvements in care	

					measured the success of CF-5As.	subgrouping were later performed to examine whether intervention has been effective towards 'Ask', 'Advise' and 'Assist' differed by intervention components	effectiveness (Cohen's d difference 0.62, 95% CI 0.12–1.1). Subgrouping the meta-analysis: Audit and feedback possibly increases intervention effectiveness for 'Advise' and 'Assist'.	components may be observed when such appropriate interventions are used in improving smoking cessation. Feedback and audits must be maintained through such interventions to increase the behavioral outcomes and intervention effectiveness.	
Moody-Thomaset al., 2015.	none	Systems Change review	N = 7 sites N = 79,777 patients N = 1.2 million adult primary care encounters used as sample locations.	IV: Systems Change and 5As embedded EHR use DV: Tobacco quit rates	Chart review	Logistic Regression	9.5% relative decrease in tobacco use prevalence during the study. Each additional intervention slightly increased the quit intentions.	Level of Evidence: V Strength: Large data set, high risk population, includes both inpatient and outpatient clinics. Weakness: Some reports are from self-reports by patients, quality of the EHRs were not determined Contribution: EHR may be used in tracking systems change and reducing tobacco use prevalence.	
Nápoles et al., 2016.	Technology Acceptance Model (TAM)	Semi structure interview	N = 35 participants (n = 12 administrative staff n = 10 clinical staff	IV: Implementation of Computer-Facilitated 5As	The DV was measured using	Semi structure interview analyzed by 3	The usefulness of the CF5As depend many health behavior counseling purposes,	Level of Evidence: VI Strength: Interviews include many	

			n = 13 primary care providers) N = 3 primary care clinics	service delivery model. DV: Perceived Usefulness of the CF5As delivery model.	descriptive statistics.	reviewers who then developed the interviews into themes and categories.	counseling efficiency, confidentiality of data collection, utilization of patients while waiting, and serving as a prompt to action. Perceived ease of use was viewed to depend on the ability to accommodation such as clinic workflow, heavy patient volumes, and patient characteristics	questions that helped yield different views. Weakness: Sample size is too small to generalize. Personal views can be based on bias. Contribution: The interviewees believe that technology such as Computer-Facilitated 5As service delivery model can be effective providing tobacco cessation treatment in primary care setting.	
Fiore, et al., 2008)	none	External experts' reviews	Up to 8700 peer-reviewed abstracts and articles reviewed for data by 24 scientists and clinicians. The selected articles and abstracts were published between 1975 and 2007.	Not applicable	Not applicable	The study focused on an expert review of 35 meta-analyses.	The researchers made recommendations for practice and research.	Level of Evidence. VII Strength: Based systematic of literature, multidisplinary panel of experts, diverse sample and locations, provide clear explanation and recommendations. Weakness: Recommendation just fit the need of average patients. Contribution: The key propositions include effective treatment	

								methodologies and nudging processes to encourage cessation. Both clinical and behavioral techniques are proposed variously for the control of tobacco dependence.	

Appendix D

SWOT Analysis of the Clinic

Appendix E

FDA Approved Medication for Tobacco Use

Name	Forms	Availability	Duration	Dosage	Cost[a]
Bupropion SR	Generic Zyban® Wellbutrin SR®	Prescription only	Start 1–2 weeks before the quit date. May be used for 2–6 months	150 mg tablet twice daily	1 box of 60 tablets, 150 mg = $97/mo (generic); $197–$210/mo (brand name)
Varenicline	Chantix®	Prescription only	Start 1 week before the quit date; use 3–6 months	1 mg twice daily after patient has stopped smoking	1 mg, box of 56 = $131 (about 30-day supply)
Nicotine gum	Nicorette Nicorette DS	OTC only	Up to 12 weeks or as needed	One piece every 1–2 hours; not to exceed 24 pieces daily	2 mg, 100–170 pieces = $48; 4 mg, 100–110 pieces = $63
Nicotine inhaler	Nicotrol inhaler	Prescription only	Up to 6 months; taper at the end	6–16 cartridges per day, tapering at end of treatment	1 box of 168, 10 mg cartridges = $196
Nicotine lozenges	Generic Commit	OTC only	3–6 months	At least 9 lozenges per day in first 6 weeks; not to exceed 20 lozenges daily	2 mg, 72 lozenges per box = $34; 4 mg, 72 lozenges per box = $39
Nicotine nasal spray	Nicotrol NS	Prescription only	3–6 months; taper at the end	Minimum dose = 8 doses daily; Maximum dose = 40 doses daily	$49 per bottle, approximately 100 doses
Nicotine patch	Nicoderm CQ Nicotrol	OTC or prescription	8–12 weeks	21 mg daily, first four weeks; 14 mg daily, next two weeks; 7 mg daily, next two weeks	Two-week supply: 7 mg box = $37 14 mg box = $47 21 mg box = $48

(Coding reference tobacco use prevention and cessation, n.d.)

Appendix F

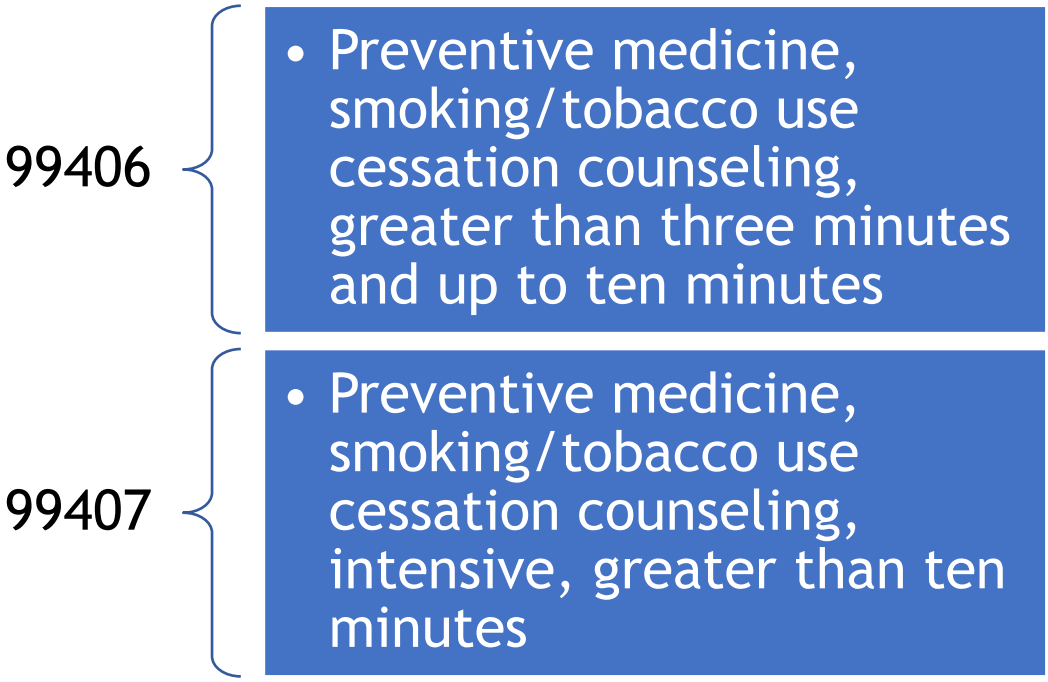
Diagnostic and Procedure Code

Code	Description
F17-	**Nicotine dependence**
F17.20-	**Nicotine dependence, unspecified**
F17.200	… uncomplicated
F17.201	… in remission
F17.203	… with withdrawal
F17.208	… with other nicotine-induced disorders
F17.209	… with unspecified nicotine-induced disorders
F17.21-	**Nicotine dependence, cigarettes**
F17.210	… uncomplicated
F17.211	… in remission
F17.213	… with withdrawal
F17.218	… with other nicotine-induced disorders
F17.219	… with unspecified nicotine-induced disorders
F17.22-	**Nicotine dependence, chewing tobacco**
F17.220	… uncomplicated
F17.221	… in remission
F17.223	… with withdrawal
F17.228	… with other nicotine-induced disorders
F17.229	… with unspecified nicotine-induced disorders
F17.29-	**Nicotine dependence, other tobacco product** (use this series for Electronic Nicotine Delivery Systems [ENDS])
F17.290	… uncomplicated
F17.291	… in remission
F17.293	… with withdrawal
F17.298	… with other nicotine-induced disorders
F17.299	… with unspecified nicotine-induced disorders

(“Coding reference tobacco use prevention and cessation,” n.d.)

Appendix G

Tobacco Use Evaluation and Management ICD 10 Codes



(“Coding reference tobacco use prevention and cessation,” n.d.)

Appendix H

Pre and Post Test - 5As Utilization Questionnaire

Below are the numbers of questions regarding tobacco use assessment. Please read each statement and indicate to what extent you agree or disagree. Nurses and medical assistants should complete ***items A*** **- E.** Providers should complete ***items A - J.***

A. Indicate your role.

1[] Nurse/MA 2[] Provider

B. I am familiar with the 5As tobacco cessation guideline

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

C. I ask every patient for tobacco use at each visit 100% of the time.

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

D. I advise every tobacco user to quit tobacco use at each visit 100% of the time.

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

E. I assess every tobacco user's willingness to quit at each visit 100% of the time.

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

F. I assist every tobacco user to quit by providing counseling.

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

G. I assist every tobacco user to quit by providing pharmacotherapy.

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

H. I arrange follow up encounter for every tobacco user receiving tobacco cessation treatment.

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

I. I know counseling and or medications can be used to treat tobacco dependence.

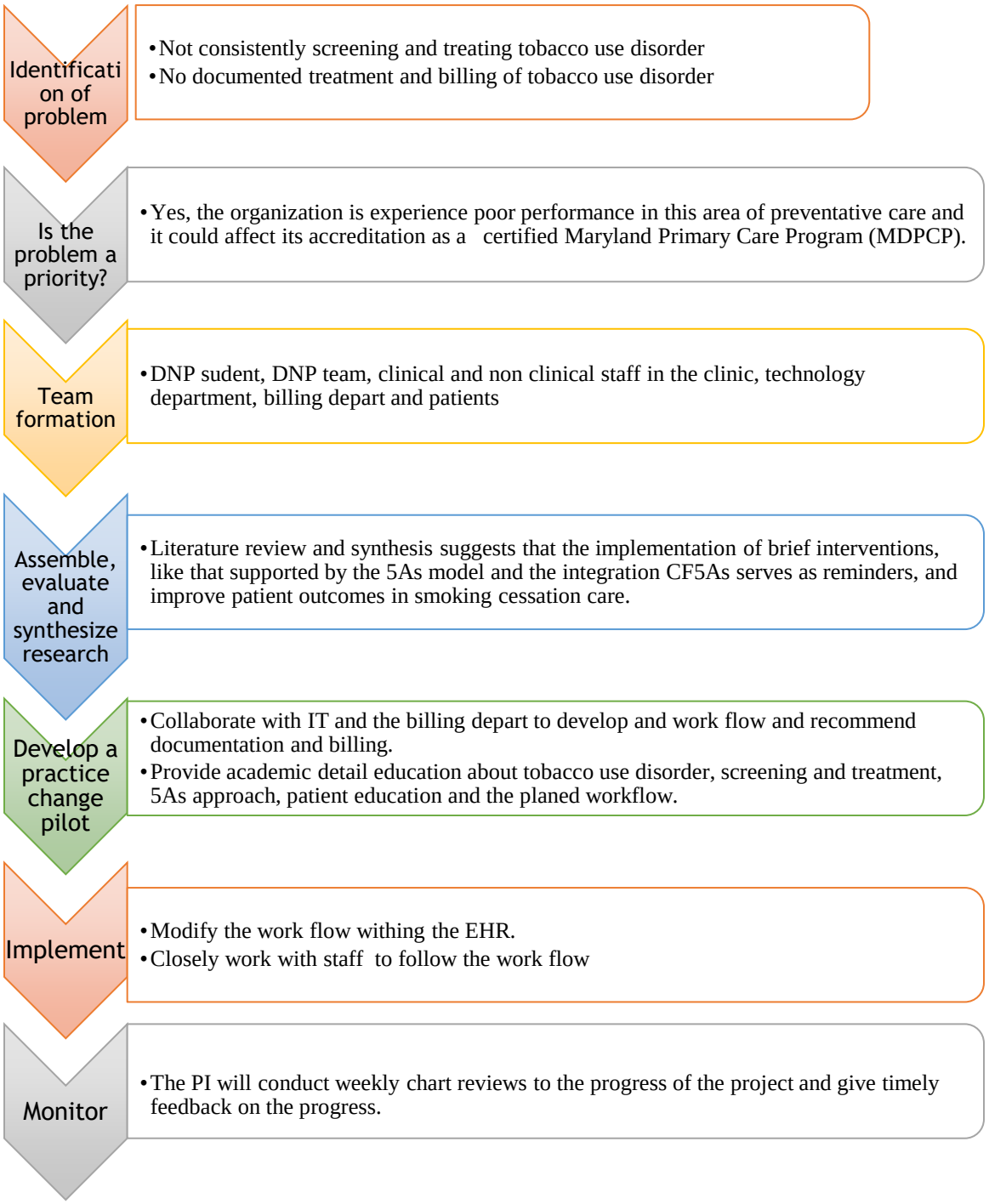
1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

J. I document and enter a billable code for every tobacco user at every visit 100% of time

1[] Disagree 2[] Somewhat Disagree 3[] Neither Agree nor Disagree 4[] Somewhat Agree 5[] Agree

Appendix I

Step-By- Step Implementation of Tobacco Cessation Program Using IOWA Model



(Iowa Model Collaborative, 2017)

Appendix J

Flyer

Quality Improvement Project

Improving Utilization of the 5As in a Primary Care Clinic: Tobacco Cessation Treatment

Purpose

This project is a quality improvement project that intent to improve the treatment of tobacco use disorder among adults in a primary care clinic. The objective is to develop and implement a tobacco cessation program protocol using the Computer Facilitated 5As model in a primary care clinic within 12 weeks.

Inclusive Criteria

- Medical doctors, nurse practitioners, physician assistants, nurses, medical assistant, receptionist, radiology technicians, manager, billing staff and IT representation
- Patients 18 years and older
- Patients seen within the project 12 weeks implementation face

Participants will be ask to document the 5As in every patient encounter

- **Ask** - Identify and document tobacco use status for every patient at every visit. .
- **Advise** - Urge every tobacco user to quit.
- **Assess** - Assess willing to make a quit attempt at this time?
- **Assist** - Use counseling and pharmacotherapy to help him or her quit.
- **Arrange** - Schedule follow-up to support recovery

Primary Investigator

Binta Bojang RN, CRNP-BC, DNP student

Eastern Kentucky University School of Nursing

Location

Lifebridge Outpatient Primary Care Clinic, Woodlawn Center

Date

September 1st, 2021 to December 1st, 2021

IRB approval Number

Project Contact

Binta Bojang

301-379-8180 or binta_bojang@mymail.eku.edu for more information.

Appendix K

Recruitment Script

Dear Participant,

My name is Binta Bojang. I am a Doctor of Nursing Practice student at Eastern Kentucky University. I am implementing a quality improvement project on tobacco screening and treatment.

This quality improvement project aims to increase the utilization of 5As five-step tobacco cessation screening and treatment among all the clinicians in the primary care clinic. The objective is to develop and implement a tobacco cessation program protocol using the Computer Facilitated 5As model in a primary care clinic within 12 weeks.

During this project, a new assessment will be added to the daily workflow within the current Electronic Medical Record (EMR) for each patient encounter. This assessment is called the 5As framework. The 5As framework consists of *Ask, Advise, Assess, Assist and Arrange*. During every patient encounter, the staff member triaging the patient will ask the patient about tobacco use, advice the patient on the benefits of quitting, and assess for patient's readiness to quit. The provider seeing the patient will assist the patients by providing counselling, resources and or recommending nicotine replacement medication. Provider will also recommend and arrange for follow ups if indicated. Additionally, the provider is expected to document the appropriate diagnosis code and the CPT code for each encounter.

Before you decide whether to accept this invitation to take part in the project, please ask any questions that come to mind now. Later, if you have questions about the project, you can contact the investigator, Binta Bojang at 301-379-8180 or binta_bojang@mymail.eku.edu. If you have any questions about your rights as a project volunteer, you can contact the staff in the Division of Sponsored Programs at Eastern Kentucky University at 859-622-3636.

Sincerely,
Binta Bojang
RN, CRNP, DNP Student
Principal Investigator

Appendix L

Request for Waiver

Eastern Kentucky University Institutional Review Board
Request for Waiver of
Informed Consent Documentation

Informed consent is a foundational component of protecting human research subjects and is at the core of the IRB's ethical values. In general, all studies involving human subjects must include a formal informed consent process that is documented with signatures from participants. In a limited number of situations, however, Federal regulations permit an IRB to authorize a waiver of informed consent documentation. When a study is approved with a waiver of informed consent documentation, this means that signatures from subjects are not required on consent forms. However, such a waiver does not eliminate the ethical requirement to provide information to potential subjects and allow them to make an informed decision about voluntarily participating. Investigators are still required to follow a process of obtaining consent and to outline this process in the application for IRB review.

In unique situations where a study cannot be practicably carried out with informed consent documentation, this form may be used to request a waiver of the informed consent documentation requirements. If approved, the waiver will be specifically outlined in the approval notification.

1. Title of Study:

Addressing Tobacco Use with Improved Utilization of 5As Framework in Primary Care

2. Principal Investigator and Faculty Advisor:

Principal Investigator Name: Binta Bojang
Primary Faculty Advisor (required only if principal investigator is a student): Dr. Angela Wood

3. Category of Waiver Request:

Please indicate which of the following situations apply and respond to the items that follow each category.

☐ **A.** The only record linking the subject and the research would be the informed consent form and the principal risk would be potential harm resulting from a breach of confidentiality. In this case, each subject (or legally authorized representative) must be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern.

- Describe the procedures to be followed for offering this choice to each subject.
  Click to enter text.

☒ **B.** The research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

- Provide a justification describing how the proposed study meets this criteria.
  The implementation of the project involves practices that are already in place and do not include experimental intervention. Therefore, there is minimal risk and very minimal ethical issues. No personal protected information of staff and or patients will be collected during the entire pre- and post-intervention data.

☐ **C.** The subjects or legally authorized representatives are members of a distinct cultural group or community in which signing forms is not the norm, the research presents no more than minimal risk of harm to subjects, and an alternative mechanism will be used for documenting that informed consent was obtained

- Identify and provide background on the cultural group and cite references for views on signing forms.
  Click to enter text.

- Describe the alternative mechanism to be used for the documentation of informed consent.
  Click to enter text.

4. Explain how the waiver will not adversely affect the rights and welfare of the subjects.

Tobacco use assessment and treatment is recommended for every patient encounter and will be done regardless of this project. No project results would affect clinical decisions about the individual's care.

5. Explain why the research could not practicably be carried out without the waiver.

The DNP project could not practicably be carried out without the waiver or alteration. For example, to answer the research question and background survey, the PI must view multiple medical records for retrospective data collection. The waiver is needed because no personal protective information will be collected and or stored.

Appendix M

Staff Education

Tobacco Cessation Program: Staff Education

Primary Investigator: Binta Bojang, CRNP-BC, DNP student
Eastern Kentucky University School of Nursing

Lesson Objective

- Enhancing the proficiency of the clinic staff in assessing and treating tobacco use disorder.
- Improve knowledge about the elements of 5 As.
- Enhance knowledge, awareness and engagement among all the clinical staff on the significance of effectively treating tobacco disorder.

Background

Tobacco use related diseases are one of the leading preventable causes of chronic diseases in the United States. In 2018, approximately 14% of U.S. adults currently used tobacco product.

- Tobacco related illness in the United States costs more than $300 billion a year.
- Tobacco cessation reduces the risk for many adverse health effects.
- Interesting, over 50% of tobacco users try to quit each year but fail.
- Clinical guideline highly recommends the use of 5 As in treating tobacco use disorder among all adult patients

The 5 A's

Begin a quit-smoking intervention with a client in five easy steps.

- ***ASK*** – Document each client's tobacco use status at every visit.
- ***ADVISE*** – Urge every tobacco user to quit.
- ***ASSESS*** – Determine whether the tobacco user is willing to try quitting.
- ***ASSIST*** – Use counseling and pharmacotherapy to help willing clients quit.
- ***ARRANGE*** – Schedule follow-up phone calls or meetings, preferably the first week after the quit date

Reasons To Offer Tobacco Cessation

Patients who participate in tobacco cessation programs can:

- Save thousands of dollars each year by quitting smoking.
- Experience physical health benefits almost immediately upon quitting.
- Expect improvement in mood and anxiety levels after initial withdrawal symptoms are addressed.
- Increase their chance of quitting if they are also on nicotine replacement therapy or other cessation medication.

Medications Improve Quit Rates

- Nicotine patch, gum, or lozenge
- Nicotine nasal spray or inhaler
- Bupropion (Zyban)
- Varenicline (Chantix)

Diagnostic Coding for Tobacco Use Disorder

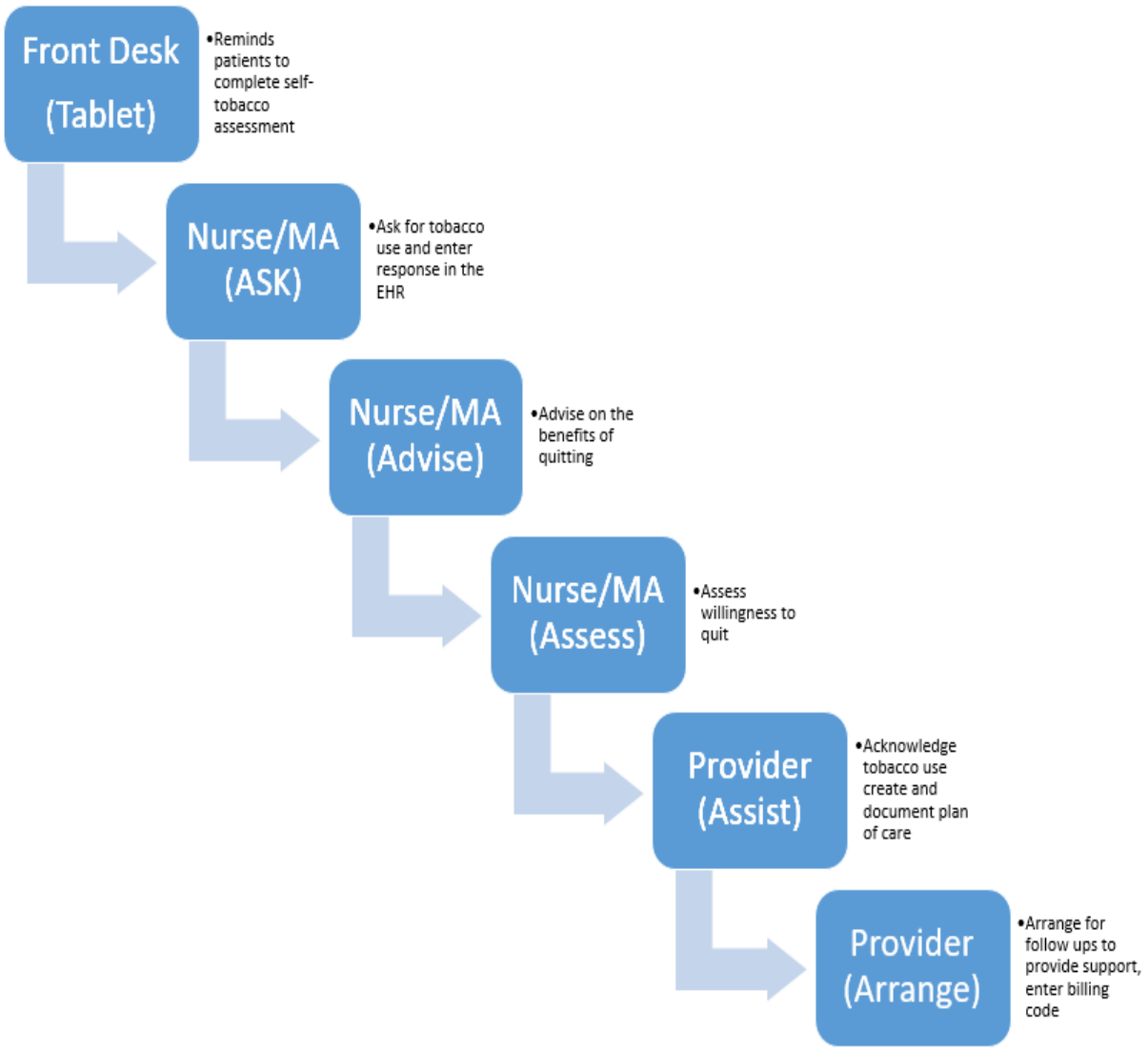
Cigarettes	•F17.21
Chewing Tobacco	•F17.22
Other e-cigaretes	•F17.29

Tobacco use Evaluation and Management Cod

99406	• Preventive medicine, smoking/tobacco use cessation counseling, greater than three minutes and up to ten minutes
99407	• Preventive medicine, smoking/tobacco use cessation counseling, intensive greater than ten minutes

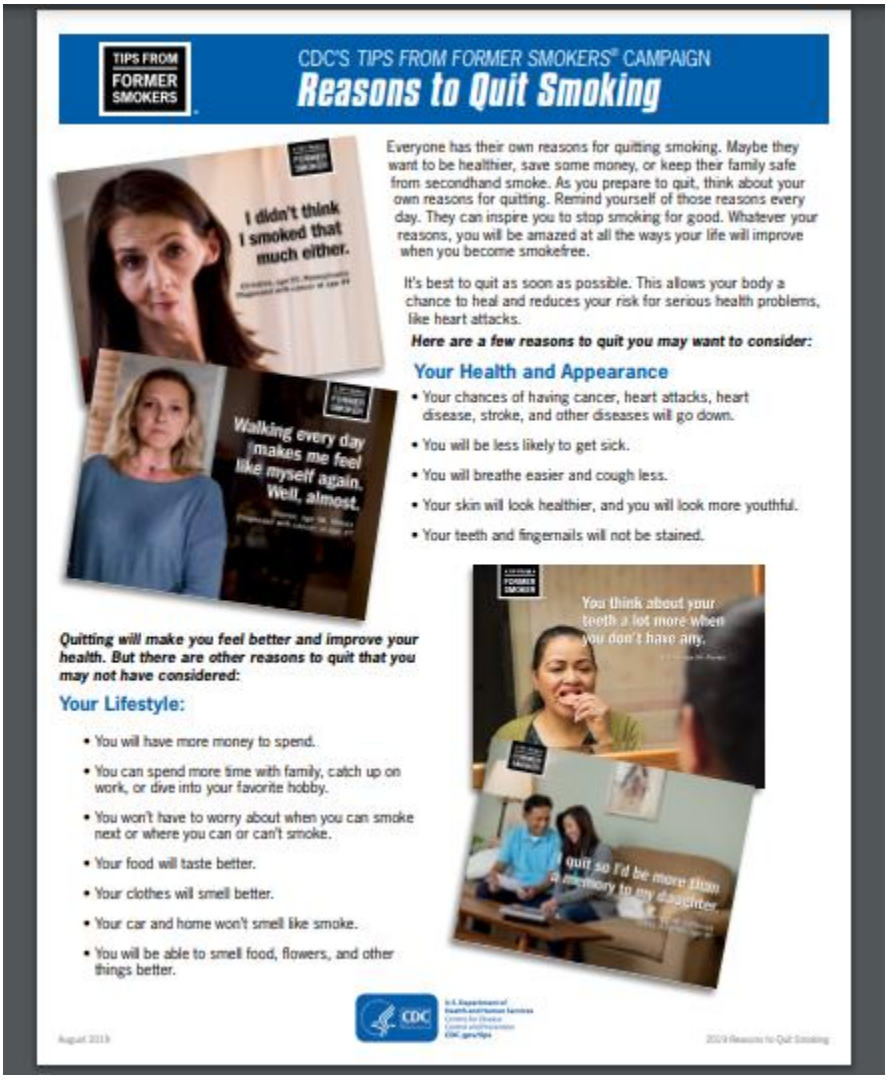
Appendix N

DNP Project Work Flow



Appendix O

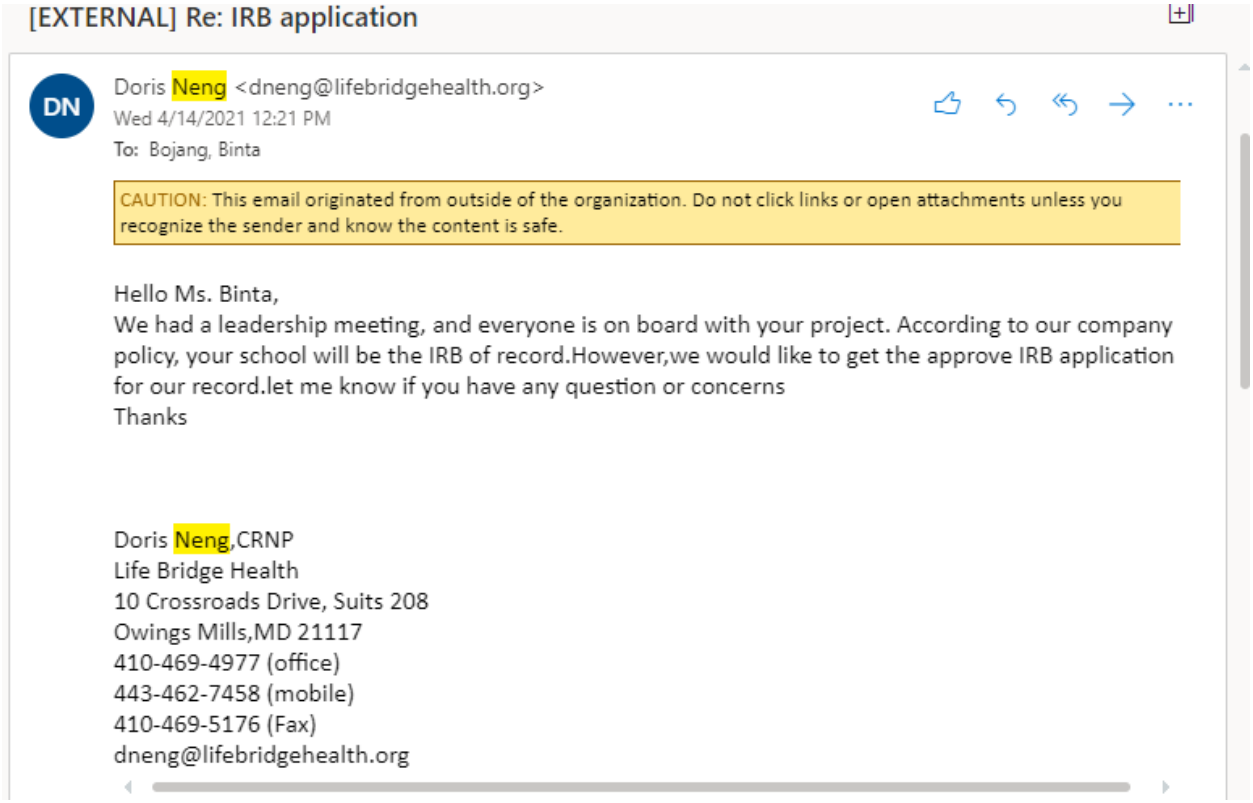
Patient Education



TIPS FROM FORMER SMOKERS
CDC'S TIPS FROM FORMER SMOKERS® CAMPAIGN
Reasons to Quit Smoking
More reasons to quit that you may not have considered:
Your Loved Ones:
• You will set a great example for your kids; it takes a lot of strength to quit.
• Your friends, family, co-workers, and other loved ones will be proud of you.
• You will protect your friends and family from the dangers of secondhand smoke.
• Your children will be healthier.
• You will have more energy to do the things you love with friends and family.
• You will get healthy to make sure you are around to share in your family's special moments.
Make a list of all of the reasons you want to become smokefree. Keep the list in a place where you will see it often, like your car or where you used to keep your cigarettes. When you feel the urge to smoke, take a look at the list to remind yourself why you want to quit.
RESOURCES TO HELP YOU QUIT
CDC.gov/tips
smokefree.gov
Smokefree SmartPhone Apps:
QuitGuide
quitSTART
Smokefree Texting Programs
Free Quit Help: 1-800-QUIT-NOW (1-800-784-8669)
DO YOUR HEART A FAVOR. QUIT SMOKING.
DON'T BE SHY ABOUT TELLING PEOPLE NOT TO SMOKE AROUND YOUR KIDS.
18 years in the military and my biggest battle was against cigarettes.
RECORD YOUR VOICE FOR LOVED ONES WHILE YOU STILL CAN.
CDC

Appendix P

IRB of Record Email



[EXTERNAL] Re: IRB application

DN

Doris Neng <dneng@lifebridgehealth.org>
Wed 4/14/2021 12:21 PM
To: Bojang, Binta

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Ms. Binta,
We had a leadership meeting, and everyone is on board with your project. According to our company policy, your school will be the IRB of record.However,we would like to get the approve IRB application for our record.let me know if you have any question or concerns
Thanks

Doris Neng,CRNP
Life Bridge Health
10 Crossroads Drive, Suits 208
Owings Mills,MD 21117
410-469-4977 (office)
443-462-7458 (mobile)
410-469-5176 (Fax)
dneng@lifebridgehealth.org

Appendix Q

Background Survey

Directions: Please take a few minutes to answer the following questions by circling the answer the best describes you.

1. What is your age?
   a. 18 - 25
   b. 26 - 35
   c. 36 - 45
   d. 46 - 55
   e. 56 - 65
   f. 65+ years

2. What is your highest level of education achieved?
   a. High school
   b. Associate degree
   c. Bachelor's Degree
   d. Master's degree
   e. Doctoral degree
3. What is your role?
   a. Receptionist
   b. Medical Assistant
   c. License Practical Nurse
   d. Registered Nurse
   e. Radiology Technician
   f. Billing and coding
   g. Nurse Practitioner
   h. Physician Assistant
   i. Doctoral Degree
   j. Supervisor
   k. Other
4. How long have you been working in a primary setting?
   a. 0 – 1 years
   b. 1 – 5 years
   c. 5 – 10 years
   d. 10 + years
5. How long have been with the organization?
   a. 0 – 1 years
   b. 1 – 5 years
   c. 5 – 10 years
   d. 10 + years

6. What is your work status?
   a. Full time
   b. Part time
   c. As needed
   d. Contract
   e. Volunteer

7. What is your biggest challenge to use the 5As?

Appendix R

Organizational Readiness for Implementing Change (ORIC): Addressing Tobacco Use with Improved Utilization of 5As Framework in Primary Care

Directions: Please take a few minutes to indicate what extend you agree or disagree with each statement.

	1 Disagree	2 Somewhat Disagree	3 Neither Agree nor Disagree	4 Somewhat Agree	5 Agree
1.	People who work here feel confident that the organization can get people invested in implementing this change.	1	2	3	4	5
2.	People who work here are committed to implementing this change.	1	2	3	4	5
3.	People who work here feel confident that they can keep track of progress in implementing this change.	1	2	3	4	5
4.	People who work here will do whatever it takes to implement this change.	1	2	3	4	5
5.	People who work here feel confident that the organization can support people as they adjust to this change.	1	2	3	4	5
6.	People who work here want to implement this change.	1	2	3	4	5
7.	People who work here feel confident that they can keep the momentum going in implementing this change.	1	2	3	4	5
8.	People who work here feel confident that they can handle the challenges that might arise in implementing this change.	1	2	3	4	5
9.	People who work here are determined to implement this change.	1	2	3	4	5
10.	People who work here feel confident that they can coordinate tasks so that implementation goes smoothly.	1	2	3	4	5
11.	People who work here are motivated to implement this change.	1	2	3	4	5
12.	People who work here feel confident that they can manage the politics of implementing this change.	1	2	3	4	5

Appendix S

Data Collection Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K
1								Organizational Readiness for Implementing Change (ORIC): Confident			
2	Staff	People who work here feel confident that the organization can get people invested in implementing this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here feel confident that they can keep track of progress in implementing this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here feel confident that the organization can support people as they adjust to this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here feel confident that they can keep the momentum going in implementing this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here feel confident that they can handle the challenges that might arise in implementing this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here feel confident that they can coordinate tasks so that implementation goes smoothly. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here feel confident that they can manage the politics of implementing this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree			
3	Staff 1										
4	Staff 2										
5	Staff 3										
6	Satf 4										
7	Staff 5										
8	Staff 6										
9	Staff 7										
10	Staff 8										
11	Staff 9										
12	Staff 10										
13	Staff 11										
14	Staff 12										
15	Staff 13										
16	Staff 14										
17	Staff 15										
18	Staff 16										

	A	B	C	D	E	F	G	H
1						Organizational Readiness for Implementing Change (ORIC): Commitment		
2	Staff	People who work here are committed to implementing this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here will do whatever it takes to implement this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here want to implement this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here are determined to implement this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	People who work here are motivated to implement this change. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree		
3	Staff 1							
4	Staff 2							
5	Staff 3							
6	Satf 4							
7	Staff 5							
8	Staff 6							
9	Staff 7							
10	Staff 8							
11	Staff 9							
12	Staff 10							
13	Staff 11							
14	Staff 12							
15	Staff 13							
16	Staff 14							
17	Staff 15							
18	Staff 16							
19	Staff 17							
20	Staff 18							
21	Staff 19							

Project Evaluation Pretest

Staff	I am familiar with the 5As tobacco cessation guideline (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	I ask every patient for tobacco use at each visit 100% of the time. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	I advise every tobacco user to quit tobacco use at each visit 100% of the time (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	I assess every tobacco users' willingness to quit at each visit 100% of the time. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	I assist every tobacco user to quit by providing counseling and or pharmacotherapy. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	I arrange follow up encounter for every tobacco user receiving tobacco cessation treatment. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	I believe counseling and or medications can be used to treat tobacco dependence. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	I document and enter a billable code for every tobacco user at every visit 100% of time. (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree
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Tobacco Cessation Project Evaluation Form

Date	Chart #	Staff	Ask	Tobacco use - y/n	Advise	Assess	Assist	Counseling	Medication	Arrange	Plan of Care	Dx code	CPT code

Background Survey						
Staff	**Age** 1. 18 - 25 2. 26 - 35 3. 36 - 45 4. 46 - 55 5. 56 - 65 6. 65+ years	**Highest level of education achieved** 1. High school 2. Associate degree 3. Bachelor's Degree 4. Master's degree 5. Post Master's degree	**Staff Role** 1. Receptionist 2. Medical Assistant 3. License Practical Nurse 4. Registered Nurse 5. Radiology Technician 6. Billing and coding 7. Nurse Practitioner 8. Physician Assistant 9. Medical Doctor 10. Supervisor	**Length of service in a primary setting** 1. 0 – 2 years 2. 3 – 5 years 3. 6 – 10 years 4. 11 + years	**Length of service within the organization** 1. 0 – 2 years 2. 3 – 5 years 3. 6 – 10 years 4. 11 + years	**Work status** 1. Full time 2. Part time 3. As needed 4. Contract 5. Volunteer
Staff 1						
Staff 2						
Staff 3						
Satf 4						
Staff 5						
Staff 6						

Project Evaluation Post test										
Staff	**I am familiar with the 5As tobacco cessation guideline** (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	**I ask every patient for tobacco use at each visit 100% of the time.** (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	**I advise every tobacco user to quit tobacco use at each visit 100% of the time** **(1)** Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	**I assess every tobacco users' willingness to quit at each visit 100% of the time.** (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	**I assist every tobacco user to quit by providing counseling and or pharmacotherapy.** (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	**I arrange follow up encounter for every tobacco user receiving tobacco cessation treatment.** (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	**I believe counseling and or medications can be used to treat tobacco dependence.** (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree	**I document and enter a billable code for every tobacco user at every visit 100% of time.** (1) Disagree (2) Somewhat disagree (3) neither agree nor disagree (4) Somewhat agree (5) Agree			
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