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Implementing a Comprehensive Tobacco-Cessation Program for Patients with Tobacco Use Disorder

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Implementing a Comprehensive Tobacco-Cessation Program for Patients with Tobacco Use Disorder

A DNP Project Submitted to the

Graduate Faculty

of Jacksonville State University

in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Nursing Practice

By

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Abstract

Background: Individuals who use tobacco are at an increased risk for the development of heart disease, congestive heart failure, and chronic obstructive pulmonary disease. Tobacco use is one of the most preventable causes of death in the world.

Purpose: The focus of the quality improvement project was to improve access to tobacco cessation resources in patients with tobacco use disorder at a primary care clinic.

Methods: Weekly stakeholder meetings were held to ensure the validity of the project. The plan, do, study, act (PDSA) model of continuous quality improvement guided the project. A comprehensive tobacco-cessation program including informational materials and cards with resource referrals for patients was developed. Nurse practitioners offered informational cards to patients whose electronic health records indicated a diagnosis of tobacco use disorder. Cards included referral information on national, state, and community tobacco-cessation resources.

Results: Out of the 127 patients total, 43 patients (34%) had a diagnosis of tobacco use disorder on their electronic medical record. Of those, 29 accepted and 14 declined the informational cards.

Conclusion: The community clinic plays a vital role in resource allocation for tobacco users. Nurse practitioners should continue to provide patients with continuing education and access to resources.

Keywords*: tobacco cessation, outpatient clinics, smoking cessation, and nicotine dependence*

Acknowledgments

This project was guided by Dr. Douglas Stephens, the DNP project Chair, and Dr. Cynthia Jackson, the DNP project preceptor. I would like to thank my mother, Dr. Carliss Eaton, and father, Lonnie Eaton, for their unwavering support during this process. Lastly, I would like to thank and dedicate this project to my late grandfather, Lonnie Eaton Sr., who helped instill in me the values of hard work and dedication.

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Implementing a Comprehensive Tobacco-Cessation Program for Patients with Tobacco Use Disorder

Tobacco use is the leading cause of preventable death and disease in the United States (Centers for Disease Control and Prevention [CDC], 2018b; Cornelius et al., 2023). Adverse effects of tobacco use include cancer, heart disease, stroke, lung disease, diabetes, and chronic obstructive pulmonary disease (COPD). Nationwide, over 16 million tobacco users have at least one tobacco-related comorbidity. Approximately 80% of deaths related to COPD are linked to smoking (CDC, 2023). Tobacco use disorder is a pattern of tobacco use, based on the addictive nature of nicotine (Leone & Evers-Casey, 2022). The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association, 2013) lists 15 subfeatures of tobacco use disorder; a patient using tobacco over a year must have at least two of the subfeatures to receive a diagnosis. Subfeatures include unsuccessful attempts to quit tobacco use, cravings, continued use despite adverse social or medical consequences, and increasing nicotine tolerance.

Tobacco cessation significantly reduces morbidity and mortality. Initiating a quality improvement project on a comprehensive tobacco-cessation program for patients with tobacco use disorder helped address the issue of tobacco use disorder. By implementing evidence-based practices, the community clinic may increase tobacco-cessation rates and drastically improve overall health outcomes.

According to the World Health Organization (WHO, 2023), tobacco kills nearly half of users who do not quit. Smoking and vaping also negatively affect others' health through secondhand smoke (Barton et al., 2020; Romberg et al., 2021; Tobacco Control Network, 2016). Moreover, tobacco use has economic costs; smokers have more absenteeism, resulting in lower

productivity (Mache et al., 2019; Romberg et al., 2021). Berman et al. (2013) estimated smokers cost employers $5,800 more per year than nonsmokers, based on health care costs, work breaks, and absenteeism. Targeted interventions such as nicotine replacement therapy, counseling, behavioral therapy, and continuing education have been shown to effectively support individuals in their journey to tobacco cessation. Collaborative efforts between health care providers, patients, and families are essential to most behavioral modification programs and will enhance the success of the comprehensive tobacco-cessation program.

Background

An estimated 46 million (18.7%) adults used tobacco products in 2021 (Cornelius et al., 2023). Of those, 11.5% used cigarettes, and 4.5% used e-cigarettes; the prevalence of cigarette smoking is decreasing, while the use of e-cigarettes or vaping devices is increasing (Cornelius et al., 2023). Alabama ranks sixth in the nation for tobacco use, with a smoking rate of 20.2% (Bascom, 2022; CDC, 2018a). Tobacco use leads to heart disease and other morbidities. The Alabama Center for Health Statistics (2021) stated that statewide, 28.8% of deaths in 2021 were from cardiovascular disease and 4.6% from smoking-related cancers. On a local level, in Mobile, Alabama, in 2021, 31.7% of deaths were due to heart disease, 4.1% to smoking-related cancers, and 4% to other respiratory diseases (Alabama Center for Health Statistics, 2021). Additionally, 750 nonsmokers in Alabama die each year from illness based on secondhand smoke exposure (Alabama Department of Public Health, 2024b). Residents in Alabama have spent $5.16 billion on healthcare related to tobacco use (Alabama Department of Public Health, 2024b). Tobacco-cessation programs have a positive economic impact on a community.

The community clinic where the quality improvement project was implemented serves a diverse population of 127 patients, reflecting the broader demographics of the Gulf Coast. The

clinic's population is composed of patients from various socioeconomic backgrounds who may present with a host of health conditions such as congestive heart failure, COPD, diabetes mellitus, and heart disease. The clinic lacked a tobacco-cessation program, despite serving patients who report using tobacco. Tobacco users at the clinic may desire to quit but lack the necessary resources. The clinic's mission is to provide primary care services, preventative care, chronic disease management, and health education to assist patients in achieving optimal health outcomes.

The American Cancer Society (n.d.) stated the most effective way to reduce the dangers associated with e-cigarettes and tobacco use is to quit use entirely. Due to the addictive nature of tobacco, those trying to quit typically need the aid of tobacco-cessation treatments and programs (Tobacco Control Network, 2016). Individuals who quit smoking show rapid health improvement. Within a year of quitting, the risk of heart attack drops sharply, and within 5 years the risk of a stroke drops to the same as that of a nonsmoker (CDC, 2020). Health care providers can provide access to materials and treatment.

Problem Identification

The project facility is a community health clinic in the third-largest metropolitan city and the fastest-growing county in Alabama. In the clinic, 34% of the patients were diagnosed with tobacco use disorder, and 61% of the patients at the project facility are covered by Medicaid. According to the CDC (2024), individuals covered by Medicaid have a smoking rate twice that of privately insured individuals, 23.9% compared to 10.5%. Often, adult tobacco users have tried or desired to quit using tobacco but lack access to resources. The CDC (2024) identified 69% of smokers using Medicaid wanted to quit, but only 6% succeeded. I conducted a gap analysis at the community health clinic that revealed the clinic lacked tobacco-cessation resources. Patients at

the clinic with a diagnosis of tobacco use disorder were not receiving tobacco-cessation materials or counseling.

Problem Statement and PICOT Question

The quality improvement project aimed to address the lack of a tobacco-cessation program for patients at the community clinic. The project question was whether, in a community health clinic with patients with tobacco use disorder, the implementation of a comprehensive tobacco-cessation program, compared to no intervention, led to an increase in access to tobacco-cessation resources.

Review of Literature

To provide a critical appraisal of the literature, I searched databases using the following search terms: tobacco cessation, outpatient clinics, smoking cessation, and nicotine dependence. Delimiter terms were used, such as cohort study, economic impact, implementation challenges, and addiction treatment. Library databases included PubMed, CINAHL, Cochrane, and Web of Science. I critically appraised articles based on trustworthiness and applicability to this intervention. Themes in the literature include the role of nurse practitioners in providing tobacco-cessation services in outpatient clinics, the elements of effective tobacco-cessation programs, and implementation challenges.

The Role of Practitioners in the Outpatient Setting

According to the CDC (2020), 80% of smokers see a doctor each year, making health care providers vital in tobacco-cessation programs. Practitioners should ask patients about their smoking status and tobacco use at every visit (Sadek et al., 2021; U.S. Preventive Services Task Force, 2021). Nurse practitioners have the patient-centered information necessary to help develop individualized programs for smokers based on each patient's circumstances (Jitnarin et

al., 2021). Nurse-practitioner-directed clinics can be key in providing cost-effective tobacco-cessation services in outpatient clinics. Nurse-practitioner-led interventions resulted in a 14% smoking cessation rate over 6 months (Rice et al., 2017). Tobacco-cessation clinics in an outpatient setting similar to this project site have led to significant reductions in health care costs (Gilbert et al. 2017). Tobacco-cessation clinics have resulted in improved patient outcomes (Reddy et al., 2016). The CDC (2020) described improved cancer survival rates, reduced pregnancy complications, and a decreased incidence of heart disease and substance abuse within a community as benefits of outpatient tobacco-cessation clinics. Using evidence-based practices, nurse practitioners at the project site can ask patients about tobacco use at each visit and recommend personalized treatments for each patient. Nurse practitioners can provide individualized resources, information, and referrals to patients with tobacco use disorder.

Elements of Effective Tobacco-Cessation Programs

The best approach to tobacco-cessation programs includes a variety of interventions for a comprehensive approach to cessation of tobacco use (CDC, 2018b; U.S. Office of Personnel Management [OPM], n.d.). Effective programs aimed at helping individuals quit tobacco use combine information resources, cessation medications, and individual or group counseling (Patnode et al., 2021; Sadek et al., 2021; U.S. OPM, n.d.). According to the WHO (2023), the combination of medical treatment and counseling has been shown to double the chances of quitting tobacco use.

Counseling is an important aspect of a comprehensive tobacco-cessation program. Behavioral interventions in tobacco cessation include advice from health care providers as well as individual and group counseling, with the greatest effect with interventions including at least eight counseling sessions (Patnode et al., 2021). However, even a brief session can be effective; a

20-minute counseling session can increase the likelihood of smoking cessation (Reid et al., 2019). Sadek et al. (2021) developed a low-cost tobacco-cessation program including asking patients about tobacco use, encouraging them to quit, prescribing nicotine replacement therapy (NRT), offering the patient an educational booklet, and referring the patient to additional resources. The intervention resulted in a 19.2% quit rate at 6 months (Sadek et al., 2021).

Quit lines are part of a comprehensive program recommended by the U.S. Preventive Services Task Force (2021). State quit lines are effective and highly accessible, as anyone with a phone can use them (CDC, 2020). Quit line counseling services are typically available at any time and in various languages, overcoming in-person counseling barriers such as transportation, childcare, and language (North American Quitline Consortium, 2016). QuitAssist (2024) is a national quit line that provides 24/7, 365-days-a-year treatment referral and information. Trained counselors help create individualized cessation plans, and current quit lines include mobile apps as well (CDC, 2020).

The Alabama quit line treats 4,100 individuals annually, with a 6-month quit rate of 32.3% (Dunlap & McCallum, 2021). Additionally, quit lines are cost-effective; the Alabama quit line costs $229 per enrollee but results in state savings of $7.1 million annually in productivity and health care costs (Dunlap & McCallum, 2021). The Alabama state quit line, called QuitNowAlabama, provides individuals with individualized coaching and interactive online sessions as well as free NRT (Alabama Department of Public Health, 2024a; QuitNowAlabama, 2024). NRT medications to aid in tobacco cessation have been proven effective and address the physical addiction symptoms before attempting to address behavior through counseling (CDC, 2020; Leone & Evers-Casey, 2022). The project implemented in the study clinic included several components of best practices in the literature, including quit lines and counseling referrals.

Additionally, information from the CDC on smoking cessation and potential triggers was posted throughout the clinic and provided to patients with tobacco use disorder.

Implementation Challenges

Although health care providers are well placed to provide smoking-cessation materials and programs to patients, they do not always do so. In 2015, fewer than 60% of smokers received cessation advice from a health care provider (Babb et al., 2017). Sadek et al. (2021) reported that fewer than 10% of the 116 surveyed patients reported being asked about tobacco use, and none had been offered cessation services. Time is a challenge; nurse practitioners have limited time with each patient and may not prioritize cessation interventions when managing comorbid conditions like uncontrolled hypertension and diabetes (Sharpe et al., 2018). Practitioners may lack training in tobacco cessation and therefore hesitate to attempt to provide counseling or materials (CDC, 2020; Sharpe et al., 2018). Therefore, change must be implemented in clinic settings like the current project site by initiating comprehensive tobacco-cessation interventions actively supported by the clinic provider (CDC, 2020). Challenges in the project site include lack of nurse practitioner time and training on tobacco-cessation treatment. Part of the significance of the project implementation was increasing awareness among nurse practitioners of the importance of providing patients access to tobacco-cessation resources.

Theoretical Framework

The Health Promotion Model by Nola J. Pender provided a theoretical framework for the quality improvement project. Both individual and environmental factors influence health behaviors, as each patient possesses diverse motivations, beliefs, motivations, and experiences. Based on the theory of health promotion, health care providers need to address individual patient characteristics such as knowledge as well as environmental factors such as social support and

access to resources (Pender et al., 2011; Santi et al., 2022). The model's emphasis on individual perceptions, characteristics, and commitment to action aligns with the patient-centered approach required to successfully support those seeking tobacco cessation. Nurse practitioners at the project site can provide patients with referral information and resources, emphasizing particular treatments appropriate to the individual patient. Providing patients with access to a variety of cessation resources, including quitlines, counseling, and information, can individualize treatment options and increase the chances of successful behavioral change.

Quality Improvement Methodology

The model guiding the project was the plan, do, study, act (PDSA) model of continuous quality improvement. Planning involved identifying the problem and planning an implementation. A gap analysis was conducted to determine the gap in practice. The gap analysis indicated the clinic had no existing tobacco-cessation program, although 34% of patients were diagnosed with tobacco use disorder. A project team was formed including key and influential staff members. The project site administrators supported implementing the tobacco-cessation program. A subcommittee for the Institutional Review Board (IRB) reviewed the quality improvement project and granted approval (see Appendix A), and protection of human subject training was completed (see Appendix B).

The second phase of the PDSA cycle involved developing and implementing the intervention. The intervention materials provided for the clinic patients were informational materials and cards with resource referrals. Patient education information, obtained from the Alabama Department of Public Health, was posted throughout the clinic, including brochures on trigger avoidance. For 8 weeks, nurse practitioners offered informational cards to patients whose electronic health records indicated a diagnosis of tobacco use disorder. Cards included referral

information on national, state, and community resources. Patients were informed about QuitAssist (2024) and QuitNowAlabama (Alabama Department of Public Health, 2024a). A community resource was a local women's clinic providing smoking-cessation services as well as a variety of self-care therapies.

For the study phase of the PDSA cycle, the nurse practitioner documented in the electronic health record the number of patients who were offered and accepted the information card. After 8 weeks, the staff provided this number to the researcher. For the final phase of the PDSA cycle, results were considered to determine needed adjustments to refine the intervention as well as ideas to scale up future implementation and sustainability by providing on-site counseling and continuing education.

Project Design

Prior to the intervention, the study clinic offered no tobacco-cessation resources to patients. This quality improvement project was a pre and post design. The implemention was conducted for 8 weeks, beginning January 2024. Patients involved in the intervention at the project site had been diagnosed with tobacco use disorder, based on the DSM-5 (American Psychiatric Association, 2013). Informational cards with referral information to various tobacco-cessation resources were created for this project. Nurse practitioners at the study clinic offered the patients with a diagnosis of tobacco use disorder the informational cards with referral information and recorded the number of patients receiving the information.

Project Results and Evaluation

The clinic had 127 patients in total. Of those patients, 76 (59.8%) self-reported tobacco use on the clinic intake questionnaire. Of those, 43 (34%) had a diagnosis of tobacco use disorder in their patient record. The 43 patients with a diagnosis of tobacco use disorder at the clinic were

offered the informational cards as a tobacco-cessation intervention. Of those patients, 14 declined the informational cards, representing 32.6% of the patients with tobacco use disorder, and 29 patients (67.4%) completed the intervention by receiving informational services and other comprehensive components.

Conclusion

In conclusion, the goal of this quality improvement project was to improve access to tobacco-cessation resources. Patients with a diagnosis of tobacco use disorder were provided with community tobacco-cessation information and resource referral cards. Evidence-based practice indicates effective tobacco-cessation programs combine information, referrals, and counseling (Patnode et al., 2021; Sadek et al., 2021; U.S. OPM, n.d.). Referrals to counseling and quit lines are cost-effective measures to quit tobacco use (Dunlap & McCallum, 2021).

A limitation of the study was that the only available local in-person support group listed on the informational card was a women's clinic. A more inclusive local resource that could be added to the program is a federally qualified health center in the county offering smoking cessation. Another barrier of the study was that not all patients who indicated tobacco use received a diagnosis of tobacco use disorder, as the diagnosis was based on patients reporting at least two of the subfeatures listed in the DSM-5. To expand the study, tobacco-cessation information should be made available to all patients who check the box on the intake questionnaire indicating tobacco use of any kind. As indicated by the results, that expansion could reach an additional 26% of patients.

Sustainability of the project can be promoted by asking patients on each visit about their tobacco use and whether they accessed any of the tobacco-cessation resources provided. The community clinic plans to become a local resource to patients all patients, providing

pharmaceutical assistance, counseling, and continuing education resources for tobacco cessation. The clinic tobacco-cessation program will evolve from identifying resources to becoming a resource for tobacco cessation. Project findings will be disseminated to administrators and nurse practitioners of the study site as well as interested colleagues. Implications for the profession include the need to increase awareness among nurse practitioners of the importance of asking patients each visit about their tobacco use and providing a variety of resources and referrals for tobacco cessation.

References

Alabama Center for Health Statistics. (2021). *2021: 113 causes of death by county of residence, race and sex.* Alabama Department of Public Health. https://www.alabamapublichealth.gov/healthstats/assets/113causes_2021.pdf

Alabama Department of Public Health. (2024a, January 26). *Tobacco.* https://www.alabamapublichealth.gov/tobacco/

Alabama Department of Public Health. (2024b, April 17). *Alabama Tobacco Quitline.* https://www.alabamapublichealth.gov/tobacco/quitline.html

American Cancer Society. (n.d.). *American Cancer Society position statement on electronic cigarettes.* Retrieved February 20, 2024, from https://www.cancer.org/healthy/stay-away-from-tobacco/e-cigarettes-vaping/e-cigarette-position-statement.html

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Babb, S., Malarcher, A., Schauer, G., Asman, K., & Jamal, A. (2017). *Quitting smoking among adults—United States, 2000–2015* (Morbidity and Mortality Weekly Report, Vol. 65, No. 52). U.S. Department of Health & Human Services, Centers for Disease Control and Prevention. https://doi.org/10.15585/mmwr.mm6552a1

Barton, B., Spicer, K., & Byrd, T. (2020). E-cigarettes in the workplace: The impact on company alcohol & drug policies. *Professional Safety*, *65*(9), 24–31. https://onepetro.org/PS/article-abstract/65/09/24/448780/E-Cigarettes-in-the-Workplace-The-Impact-on?redirectedFrom=fulltext

Bascom, E. (2022, September 6). *US states with the highest smoking rates in 2022.* Healio. https://www.healio.com/news/primary-care/20220906/us-states-with-the-highest-smoking-rates-in-2022

Berman, M., Crane, R., Seiber, E., & Munur, M. (2013). Estimating the cost of a smoking employee. *Tobacco Control, 23*(5), 428–433. https://doi.org/10.1136/tobaccocontrol-2012-050888

Centers for Disease Control and Prevention. (2018a, April 3). *State Tobacco Activities Tracking and Evaluation (STATE) system: State highlights.* U.S. Department of Health and Human Services. https://www.cdc.gov/statesystem/statehighlights.html

Centers for Disease Control and Prevention. (2018b). *Workplace health in America 2017.* U.S. Department of Health and Human Services. https://www.cdc.gov/workplacehealthpromotion/data-surveillance/docs/2017-Workplace-Health-in-America-Summary-Report-FINAL-updated-508.pdf

Centers for Disease Control and Prevention. (2020). *Best practices user guide: Cessation in tobacco prevention and control.* U.S. Department of Health and Human Services. https://www.cdc.gov/tobacco/stateandcommunity/guides/pdfs/best-practices-cessation-user-guide-508.pdf

Centers for Disease Control and Prevention. (2023, October 13). *Smoking and COPD.* U.S. Department of Health and Human Services. https://www.cdc.gov/tobacco/campaign/tips/diseases/copd.html

Centers for Disease Control and Prevention. (2024, January 4). *State Tobacco Activities Tracking and Evaluation (STATE) system Medicaid coverage cessation treatments fact sheet.* U.S.

Department of Health and Human Services. https://www.cdc.gov/statesystem/factsheets/medicaid/Cessation.html

Cornelius, M. E., Loretan, C. G., Jamal, A., Lynn, B. C. D., Mayer, M., Alcantara, I. C., & Neff, L. (2023, May 5). *Tobacco product use among adults—United States, 2021* (Morbidity and Mortality Weekly Report, Vol. 72, No. 18). U.S. Department of Health & Human Services, Centers for Disease Control and Prevention. https://doi.org/10.15585/mmwr.mm7218a1

Dunlap, S. T., & McCallum, D. M. (2021). *Investment in health update: Alabama's Tobacco Quitline continues to save lives (and dollars).* Alabama Department of Public Health. https://www.alabamapublichealth.gov/tobacco/assets/roi2021.pdf

Gilbert, C. R., Ely, R., Fathi, J. T., Louie, B., Wilshire, C. L., Modin, H., Aye, R. W., Farivar, A. S., Vallieres, E., & Gorden, J. A. (2017). The economic impact of a nurse practitioner-directed lung cancer screening, incidental pulmonary nodule, and tobacco cessation clinic. *Journal of Thoracic and Cardiovascular Surgery, 155*(1), 416–424. https://doi.org/10.1016/j.jtcvs.2017.07.086

Jitnarin, N., Poston, W. S. C., Jahnke, S. A., Haddock, C. K., Kelley, H. N., & Severson, H. H. (2021). A qualitative study to assess perceptions, barriers, and motivators supporting smokeless tobacco cessation in the U.S. fire service. *PLoS One.* https://doi.org/10.1371/journal.pone.0251128

Leone, F. T., & Evers-Casey, S. (2022). Tobacco use disorder. *Medical Clinics of North America, 106*(1), 99–112. https://doi.org/10.1016/j.mcna.2021.08.011

Mache, S., Vitzthum, K., Groneberg, D. A., & Harth, V. (2019). Effects of a multi-behavioral health promotion program at worksite on smoking patterns and quit behavior. *Work*, *62*(4), 543–551. https://doi.org/10.3233/WOR-192889

North American Quitline Consortium. (2016). *Quitline services: Current practice and evidence base.* https://cdn.ymaws.com/www.naquitline.org/resource/resmgr/issue_papers/Quitline_Services_issue_pape.pdf

Patnode, C. D., Henderson, J. T., Melknikow, J., Coppola, E. L., Durbin, S., & Thomas, R. (2021, January). *Interventions for tobacco cessation in adults, including pregnant women: An evidence update for the U.S. Preventive Services Task Force* (AHRQ Publication 20-05264-EF-1). Agency for Healthcare Research and Quality. https://pubmed.ncbi.nlm.nih.gov/33523610/

Pender, N. J., Murdaugh, C. L., & Parsons, M. A. (2011). *Health promotion in nursing practice.* Pearson.

QuitAssist. (2024). *You're not quitting alone.* https://www.quitassist.com

QuitNowAlabama. (2024). *For providers.* https://quitnowalabama.com/?page_id=17

Reddy, K. P., Parker, R. A., Losina, E., Baggett, T. P., Paltiel, A. D., Rigotti, N. A., Weinstein, M. C., Freedberg, K. A., & Walensky, R. P. (2016). Impact of cigarette smoking and smoking cessation on life expectancy among people with HIV: A US-based modeling study. *Journal of Infectious Diseases, 214*(11), 1672–1681. https://doi.org/10.1093/infdis/jiw430

Reid, J., Hammond, D., Tariq, U., Burkhalter, R., Rynard, V., & Douglas, O. (2019). *Tobacco use in Canada: Patterns and trends, 2019 edition.* Propel Centre for Population Health Impact, University of Waterloo. https://uwaterloo.ca/tobacco-use-canada/sites/default/files/uploads/files/tobacco_use_in_canada_2019.pdf

Rice, V. H., Heath, L., Livingstone-Banks, J., & Hartmann-Boyce, J. (2017). Nursing interventions for smoking cessation. *Cochrane Database of Systematic Reviews, 12*(12), Article CD001188. https://doi.org/10.1002/14651858.CD001188.pub5

Romberg, A. R., Diaz, M. C., Briggs, J., Stephens, D. K., Rahman, B., Graham, A. L., & Schillo, B. A. (2021). Vaping in the workplace: Prevalence and attitudes among employed US adults. *Journal of Occupational and Environmental Medicine, 63*(1), 10–17. https://doi.org/10.1097/JOM.0000000000002061

Sadek, J., Moloo, H., Belanger, P., Nadeau, K., Aitken, D., Foss, K., Zwiep, T., McIsaac, D., Williams, L., Raiche, I., Musselman, R., & Mullen, K. A. (2021). Implementation of a systematic tobacco treatment protocol in a surgical outpatient setting: A feasibility study. *Canadian Journal of Surgery, 64*(1), E51–E58. https://doi.org/10.1503/cjs.009919

Santi, D. B., Rossa, R., Bomfim, L. D. S., Dias, A. R., Higarashi, I. H., & Baldissera, V. D. A. (2022). Adolescent health in the COVID-19 pandemic: A construction through Nola Pender's model. *Revista Brasileira de Enfermagem, 75*(6). https://doi.org/10.1590/0034-7167-2021-0696

Sharpe, T., Alsahlanee, A., Ward, K. D., & Doyle, F. (2018). Systematic review of clinician-reported barriers to provision of smoking cessation interventions in hospital inpatient settings. *Journal of Smoking Cessation, 13*(4), 233–243. https://doi.org/10.1017/jsc.2017.25

Tobacco Control Network. (2016). *2016 policy recommendations guide.* http://tobaccocontrolnetwork.org/wp-content/uploads/2016/07/TCN-2016-Policy-Recommendations-Guide.pdf

U.S. Office of Personnel Management. (n.d.). *Policy, data, oversight: Work-life.* Retrieved February 28, 2024, from https://www.opm.gov/policy-data-oversight/worklife/reference-materials/tobacco-cessation-guidance-on-establishing-programs-designed-to-help-employees-stop-using-tobacco

U.S. Preventive Services Task Force. (2021). Interventions for tobacco smoking cessation in adults, including pregnant persons: U.S. Preventive Services Task Force recommendation statement. *JAMA, 325*(3), 265–279. https://doi.org/10.1001/jama.2020.25019

World Health Organization. (2023, July 31). *Tobacco.* https://www.who.int/news-room/fact-sheets/detail/tobacco

Appendix A

JSU IRB Approval Letter

Institutional Review Board for the Protection of Human Subjects in Research
203 Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

November 7, 2023

Jalen Eaton
Jacksonville State University
Jacksonville, AL 36265

Dear Jalen:

Your protocol for the project titled "Implementing a Comprehensive Tobacco Cessation Program for Patients with Tobacco Use Disorder" protocol number 11072023-02, has been approved by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB).

If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project.

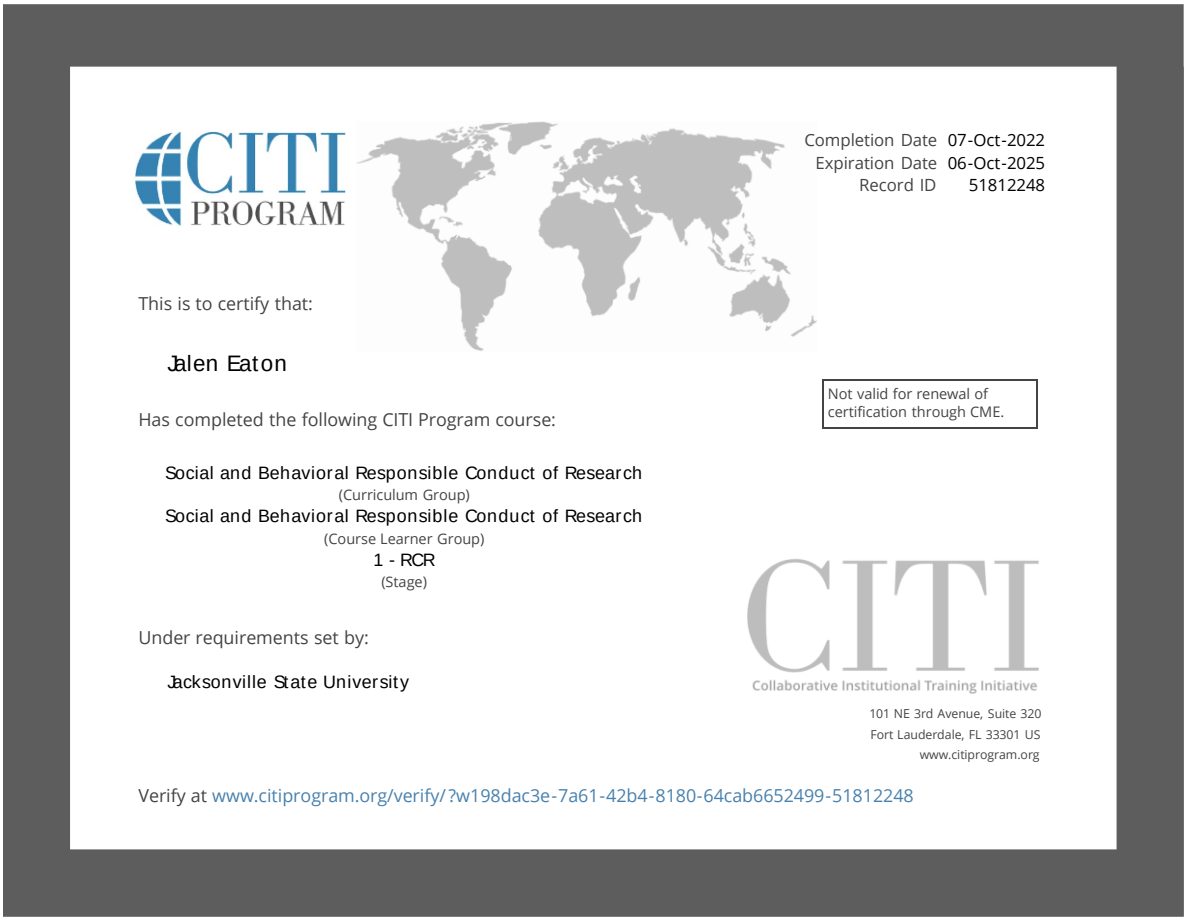
Best wishes for a successful research project.

Sincerely,

Sarah Donley
Human Protections Administrator, Institutional Review Board

Appendix B

CITI Training



CITI PROGRAM

Completion Date 07-Oct-2022
Expiration Date 06-Oct-2025
Record ID 51812248

This is to certify that:

Jalen Eaton

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Social and Behavioral Responsible Conduct of Research
(Curriculum Group)
Social and Behavioral Responsible Conduct of Research
(Course Learner Group)
1 - RCR
(Stage)

Under requirements set by:

Jacksonville State University

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