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Ready to Quit: A Feasibility Study for Practice Change in Smoking Cessation Readiness

Melody Lehosit

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Ready to Quit: A Feasibility Study for Practice Change in Smoking Cessation Readiness

Melody Lehosit, MSN/ED, APRN, FNP-BC

Doctoral Capstone Project submitted
to the School of Nursing
at West Virginia University

in partial fulfillment of the requirements for the degree of

Doctor of Nursing Practice

Laurie Theeke, APRN, PhD, Chair
Jennifer Mallow, APRN, PhD, Faculty
Kathy Danberry, MSPH, EdD, Subject Matter Expert

Department of Nursing

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ABSTRACT

Ready to Quit: A Feasibility Study for Practice Change in Smoking Cessation Readiness

Melody Lehosit, MSN/ED, APRN, FNP-BC

BACKGROUND: Readiness for change is a foundational principle in theory and structure of behavior change. Individual readiness is an indicator of success toward implementing interventions for smoking cessation programs.

OBJECTIVE: The purpose of this project was to determine the feasibility and benefit of a smoking cessation intervention impacting patient readiness to quit, in urgent care and low acuity emergency room patients.

METHODS: The project compared two cohorts, one being a control group who completed a demographic and a smoking questionnaire, and one being an intervention group, who completed the same information, in addition to receiving an intervention. The intervention group were shown a brief personal story video from the CDC Tips to Quit, a demonstration of smokefree.com as a resource web site and a motivational cessation discussion by a nurse practitioner. The intervention was 3-10 minutes in length with each subject. Readiness assessment toward cessation of smoking was assessed utilizing the Assessment of Motivation: Readiness to Quit Ladder upon enrollment and in one month.

RESULTS: There were 60 subjects enrolled and 24 follow up respondents at one month. Data results were analyzed using the SPSS software. An independent t test was used to compare the readiness change between groups at one month. There was no significant readiness score difference between the groups ($p=0.836$). Comparison however within the groups was then conducted using the paired t test. The intervention group did show a significant positive change in movement up the readiness scale $p=0.045$. Actions taken toward cessation demonstrated a clinically significant difference in the intervention group cutting back on smoking $p=0.007$. Two of the subjects in the control group and one in the intervention group reported to have quit smoking, neither of which was a clinically significant measure in the overall analysis.

IMPLICATIONS: The questionnaires included verbal interactions with a provider of medical care who asked questions about smoking use, barriers to quitting and benefits. This attention may have had unintended motivational interviewing impact on the control group. The group receiving the focused and encouraging motivational discussion with intervention components had significant movement overall toward readiness to quit. Feasibility for this practice is enhanced by potential reimbursement from medical care payers for this provider activity. Urgent care and low acuity emergency room patients would benefit from interventions that promote and encourage behavior change toward improving readiness to quit smoking.

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Introduction

Urgent care facilities and low acuity emergency room settings, provide medical services in a quick and focused point of care model. This does not replace primary care, but due to limited providers and limited hours of operation in primary care medical practices, this care model is widely accepted and utilized by the public. It is a service derived from need and patient convenience. While meeting a need in the community, this point of care design does not provide a mechanism for health promotion activities, secondary prevention screening referrals, or preventive counseling. Thus individuals who do not have a primary care provider, or who do not seek primary care for wellness lack preventive medical care.

This capstone project was a 30 day feasibility study designed to determine effectiveness provider counseling, utilizing motivational counseling with video/ web features as an intervention to impact readiness toward smoking cessation in urgent care and low acuity emergency room settings. The population is considered rural. The target population was in north central West Virginia at an urgent care site and a fast track in a community emergency room.

Tobacco cessation counseling is a Level A recommendation from the United States Preventive Task force (AHRQ, 2014). Level A preventive guidelines have strong support in clinical epidemiological studies, showing that they are beneficial and should be performed (USPTF, 2012). Further this recommendation supports using the 5 A model to encourage smoking cessation: Ask, Advise, Assess, Assist, Arrange (U.S. Public Health Service, 2008). Though longer discussions between medical provider and patient show strong evidence of benefit, even short discussions have been shown to improve cessation efforts (AHRQ, 2014).

Readiness to quit is a factor in smoking cessation (DiClemente et al, 1991; Fiore et al, 2008). By forgoing smoking cessation counseling in urgent care and low acuity emergency room settings, medical service providers miss opportunities to affect change in behavior; specifically toward improved smoking cessation readiness. Smoking cessation counseling utilizing the 5 A model should occur at every point of care (Fiore et al, 2008).

This project utilized two cohorts; an intervention and control group. The subjects were recruited from an urgent care and a fast track department of an emergency room, at random selection by numbered envelope. Both groups completed the same demographic information via verbally asked questionnaires by this investigator. The intervention group subjects were shown a brief personal story video from the CDC Tips to Quit, a demonstration of smokefree.com as a resource web site and a motivational cessation discussion by a nurse practitioner during this process. The video choice was Becky's Tips commercial or Michaels tip commercial (Tips from Former Smokers, 2018). Either is approximately 30 seconds long. Initially some thought was given to broadening this selection, toward each subject's characteristic of age and circumstance, based on the many options of personal stories in the CDC collection. However due to the faster pace of the setting, refining the selection and having the video prepared on an electronic tablet was necessary for the flow of patient care. The non-intervention discussion was approximately 5 minutes in length and consisted of collecting demographic data and smoking history. The intervention with motivational counseling and video/ web component was typically 10-15 minutes in length. See Appendix A Intervention Flow.

Readiness assessment toward cessation of smoking was assessed utilizing the Assessment of Motivation: Readiness to Quit Ladder, at initial enrollment and at one month via telephone. The project was a 30 day feasibility study to determine effectiveness of such an intervention on readiness toward smoking cessation. See Appendix B Assessment of Motivation: Ready to Quit Ladder.

Background

Epidemiology

Though experiencing a steady decline in the past decade, cigarette smoking cessation has plateaued. The current U.S. prevalence is slightly over 15% (CDC, 2018). Men smoke more than women and multiracial adults smoke more than whites. Adults ages 25-64 are the most common age of smokers. Those with mental illness diagnosis have nearly a 40% smoking prevalence rate. Among those who live below the poverty level, a third smoke. Lesbians, gays and bisexuals are more likely to smoke. The lower the socioeconomic status, the higher rates of smoking. This holds true for groups with less education. Half of the Americans with a General Education Degree (GED) smoke; a 50% prevalence rate. Yet only 6% of individuals with a graduate degree smoke (CDC 2018).

Smoking population rates can be evaluated regionally. In the United States, generally less people smoke in the West. The Midwest and South have a prevalence rate of low 20's%. Utah has the lowest rate of smokers; 8.8% prevalence. West Virginia currently has the highest rate of adult smokers in the US at 24.8% prevalence. Rural areas have a higher rate of smoking. Poor access to health care, socioeconomic disparity, less restrictive smoking policies and culture influences negatively affect the smoking prevalence in rural areas (CDC, 2017).

Evidence Based Guidelines

Smoking cessation attempts are impacted by a person's motivation to quit (Hughes, 2013). Provider counseling impacts this motivation and improves readiness. Interventions that improve readiness benefit overall cessation efforts, moving the patient along the change continuum from thought toward action. Provider led counseling, brief encounters, telephone encounter, motivation support and application of the 5 As, improve readiness toward smoking cessation (Boudreaux, Carmack., Scarinci, & Brantly, 1998; Fagan, 2007; Goldberg, Hoffman, Farinha, et al, 1994;

McGrath, 2014; Rogers, 2005; Sesney, et al, 1997). Smoking cessation counseling in urgent care and low acuity emergency settings can improve readiness toward cessation. Rural geographic areas depend on urgent care to fill the void of hospitals and primary care providers (Barnett, 2015; Parks, Hoegh & Kuehl, 2015). Smoking cessation interventions conducted on a consistent basis in such sites would benefit the population.

Significance of Smoking

A tobacco user's morbidity and mortality is three times greater than the nonsmoking population (CDC, 2016). Cancers directly linked to smoking include those of the head and neck, lung, gastrointestinal tract including stomach and colon, renal system cancers including kidney and urinary bladder, cervix and leukemia. Chronic disease rates as well are increased due to risks associated with cigarette smoking. These include stroke, blindness, gum diseases, asthma, chronic obstructive pulmonary disease (COPD), emphysema, pneumonia, aortic rupture, heart disease, arteriosclerosis, and infertility and hip fracture risk (CDC, 2016).

Cigarette smoking is a health hazard, increases mortality and is responsible for 400,000 deaths annually in the United States. Nearly half of those who smoke cigarettes will die from a smoking related disease (WHO, 2011a). Smokers may have misconceptions that light smoking is not harmful. Lack of understanding that many cancers, other than lung, are caused from smoking, such as gastrointestinal and renal, may delay cessation efforts. The extremely addictive properties of cigarettes may be under estimated. Further second and third hand smoke broadens the impact for environmental exposure to nonsmokers, negatively impacting health (Burton, 2011).

Improving a person's readiness to quit smoking is a benefit to success in smoking cessation programs. Readiness impacts cessation efforts in the individual smoker, their families and

communities. Primary care provider counseling has been shown to be an effective tool toward readiness and cigarette smoking cessation (McIvor, 2009).

Problem Statement

The occurrence of provider led smoking cessation counseling is limited in urgent care and low acuity emergency room settings. Adults' ages 18 to 65 benefit from medical provider led motivation to quit smoking. Development of an evidence based intervention applicable to these medical service settings, with a focus on rural populations, will improve readiness to quit.

PICOT Question

In adult rural patients between the ages of 18 and 65, what is the initial efficacy of a tobacco education intervention program, on readiness to quit smoking, presented by a medical provider in urgent care and low acuity emergency room settings, as assessed initially and evaluated at one month after receiving the intervention?

Project Purpose

The purpose of this project was to conduct a feasibility study for a practice change in urgent care and low acuity emergency room settings; promoting the incorporation of medical provider delivered smoking cessation counseling for each smoking adult patient. This practice adoption would improve readiness to quit in patients seeking care in these facilities. Success was measured by improved subject readiness to quit smoking at one month. This provided evidence based support for the practice change. There were two outcome goals of the feasibility study:

- 1) Improve subject readiness to quit smoking at one month
- 2) Provide evidence based support for the practice change

Needs Assessment

The needs assessment for this project stemmed from the high rate of adult smokers in West Virginia. There are limited primary care providers in rural areas. There is no standard smoking cessation product for urgent care or process to facilitate counseling. This intervention would lead to improved readiness to quit smoking and improve patient health.

The defined change is provider led smoking cessation intervention in urgent care and low acuity emergency rooms. This intervention included the use of a short video in the form of a personal story from the CDC Tips to Quit, demonstration of an interactive website with downloadable apps, smokfee.gov, during a motivation counseling discussion with a nurse practitioner, this investigator. A follow up phone call assessment occurred one month after the intervention.

Stakeholders in this practice change included departmental medical providers, nursing and ancillary facility staff and patients. Insurance payers would provide reimbursement and ultimately have less medical cost payout in patients who were successful in cessation. Employers of patients are stakeholder. Non-smokers are healthier and have less days lost due to illness.

Population

The target population is in north central West Virginia and surrounding counties. Medicaid covers 29% of the population of West Virginia and 7% in the state do not have health insurance coverage (Kaiser Family Foundation, 2017). The mean age of WV residents is 41. Eighty-six percent of WV's population has a high school or higher education. Twelve percent do not have a high school equivalency. The mean household income is 42, 644 in WV (Kaiser Family Foundation, 2017). The WV poverty rate is as 18.9 in 2016 and the national poverty rate 12.7 (United States Census Bureau, 2017a).

Culture and geography play a role when developing health promotion initiatives. Consideration of cultural values, sub cultures, community standards and acceptable norms within a population leads to more effective health promotion programs (Kreuter et al, 2003). In rural populations low socioeconomic status impacts health in a negative manner. There is generally more poverty and less education in rural communities than in urban areas (Smith, Humphreys, & Wilson, 2008). Appalachian culture is unique due to various sub cultures within regions or communities. Emotionally there is strength on religious beliefs more so than in urban environments. Strong family support systems may exist juxtaposed to extreme isolation. Smoking cessation readiness evaluation and interventions to improve readiness within this culture requires an understanding of the people and the sub-culture of the particular group (Russ, 2010).

Organizational Change Framework: Transtheoretical Theory

Program management and system changes designed to move teams and groups toward a practice change can be founded and guided by theoretical models. The Transtheoretical Model utilizes stages of change to assess readiness in health behavior. This theory's application and utilization was toward the practice change within the healthcare facility system for this project. Having a strong basis in health promotion this model utilizes concepts of intentional change, thus it can be applied toward organization change (Kruger et al, 2012; Prochaska, Prochaska, & Levesque, 2001). Strongly based on self-efficacy, learning new information and individual motivation, improvement in organizational change levels have been shown when team leaders and group support have been added (Prochaska & Velicer, 1997).

Prochaska and DiClement developed this model in the 1980's from an analysis of different theories of psychotherapy. The five stages of behavior were identified as individuals progressed through a purposeful change. The change process continuum progresses among medical providers

and employees toward adopting the practice of smoking counseling with urgent care patients. The model constructs, as identified below, demonstrates the process of change within an organization as related to this feasibility study.

Precontemplation – (not ready)

- The facility developed an awareness of need for smoking cessation via improving patient readiness to quit. A need for an intervention and a more systematic counseling program for urgent care patients was introduced to the facilities via project request development and awareness.

Contemplation – (getting ready)

- Project development began in this stage and key leaders, including department chair, medical directors and managers provided approval. Institutional Review Board approval was obtained for the study to determine benefit and feasibility of the change. This stage continued throughout the project feasibility study as awareness and interest increased.

Preparation – (ready- Current stage in process)

- The feasibility study is completed and data is analyzed.
- This phase of the change is the current phase as post analysis and study results have been completed. The next step in the preparation phase is disseminated of results to the facility administration and affected department's faculty and chair persons.

Action – (doing the change- Future)

- Facility adoption of the cessation intervention occurs.

- Reinforcement is needed through coaching and mentoring. Medical Directors will be the drivers via directives and education to staff as supported by outcome evidence from project and reimbursements for cessation counseling.

Maintenance – (monitoring- Future)

- The practice change strength is established via management support and training of providers.
- Positive feedback and encouragement is provided by leadership.
- Electronic Medical Record, EMR, is utilized and captures revenues via billing processes.

Proposing a change within an organizational system requires evidentiary support to gain buy-in. Once the change has begun, sustainability is dependent on the change being maintained. The preparation, action and maintenance phases of the change to provide smoking cessation counseling in urgent care and low acuity emergency room patients would occur after this project completion. Benefit by the outcome of improving patient's health and promoting smoking cessation readiness, is a clear and measurable goal. Change within a health care system would be appropriately motivated by such measures. Additionally a primary driver for the sustainability of the project is the possibility of reimbursements and benefit in the revenue stream. Principles of institutional system change within this theory include leadership led change, reducing resistance, increasing participation and reducing drop out.

Literature Review

The Problem: Readiness Defined

Smoking cessation readiness is defined as having thoughts, plans or actions about quitting. Readiness to quit is imperative to action. Lack of readiness equates to lack of attempts or actions toward quitting. Though the transtheoretical theory was applied to organization change in this project,

it is also commonly associated with smoking cessation as a behavior change. Readiness is associated with contemplation to change. Contemplation leads toward preparation and action. Readiness is measured by scales and the personal evaluation of the subject's self-reflection toward quitting. The Assessment of Motivation: Readiness to Quit Ladder measures readiness on a scale of one to ten. The readiness level is not targeted typically in smoking cessation interventions, nor given consideration in the development. Interventions in behavior change should be targeted toward the stage or readiness of the participant (Velicer, 1995). In the tool, The Assessment of Motivation: Readiness to Quit Ladder, the higher rung, moving toward 10, the higher the readiness toward final successful change; smoking cessation. Thus readiness can be measured via statements that reflect the person's thoughts and actions toward quitting smoking (Abrams, Niaura, Brown, Emmons, Goldstein, Monti, 2003). An intervention targeting readiness to quit smoking, based on evidence found in the literature, would be appropriate for the urgent care and low acuiting emergency room settings.

Search Strategy

During March 1, 2017 and March 6, 2017, a non-exhaustive literature search was conducted which began with EBSCOhost. The following data bases, CINAHL with full text, ERIC, Medline, PSycInfo, PsycArticles, PubMed and Social Work Abstracts were selected. Utilizing advanced search text box, "smoking cessation" was entered then subject terms selected. "Readiness" was selected in the second box and all terms left in the search options. "Rural" was entered in to the third box in advanced search and then the search button was selected. The result yielded 231 articles. After limiting to peer reviewed the result lowered to 217. Age limitations were placed to capture adult only which resulted in 46 articles to review and sort. Some consideration was given initially toward searching for only Appalachian and culture, but this proved to be limiting in both the number of studies addressing readiness in smoking cessation and only qualitative studies. Since the two sites

of subject recruitment are in a state whose population is considered rural and micro metropolitan, the search explored studies with populations who were considered rural and include some populations in more urban areas, where the subjects had similar characteristics or disparities of rural peoples.

Article Screening Process

Articles were reviewed based on quantitative design. Qualitative articles were eliminated, as were those with no assessment of, or at least an inference to, readiness impact by the intervention. A review of references within the articles yielded two additional inclusions based on readiness assessment, though abstracts only were available. Dates of publication for the review set are 1994 to 2017. A total of 14 quantitative studies were critiqued for synthesis of findings in this review.

Smoking cessation interventions to improve readiness in rural populations are most effective if key points and principles are evaluated based on a careful review of the literature. Fourteen intervention studies have been reviewed based on similarities. Noted categories of intervention techniques that affect readiness in smoking cessation are method of intervention, medical provider motivational counseling, intervention duration and social support involvement. A review of studies with information to improve readiness, and those that have moved persons toward readiness, as evidenced by effective cessation efforts, have demonstrated apparent and important factors for consideration.

Literature Synthesis

Medical provider motivational counseling. There is strong support in meta-analysis that primary care physician counseling is effective in improving smoking cessation readiness (Fiore Jaén, Baker, et al, 2008). Point of care discussions with medical providers proved to be an effective tool in improving readiness and moving patients toward smoking cessation efforts (Goldberg, Hoffman, Farinha, et al, 1994; Sesney, et al, 1997).

Fiore et al (2008) provides strong support for the impact of motivational counseling, advising this practice is strongly recommended. The content from Fiore et al (2008) is largely based on cessation outcomes verses improving readiness, but does elude that clinician counseling moves toward readiness. The 5 A's and 5 R's are addressed at length by Fiore et al (2008). The 5 A's are identified as: 1) **Ask** about tobacco use at each encounter. 2) **Advise** to quit in an individualized and personal dialogue with the client. 3) *Assess* willingness to make a quit attempt. 4) **Assist** in quit attempt by offering medication or referring to additional support or counseling. 5) **Arrange** follow-up to after quit day. The 5 R's included in Fiore et al (2008) are to enhance motivation during the counseling and are identified as: 1) **Relevance**. Why cessation is personally relevant for the client; disease, history, age, children in the home and health condition should be addressed. 2) **Risks**. What the clinician identifies as risks for the patient. These include short term and long term symptoms and diseases, including risks to family members. 3) **Rewards**. Positive features that are identified by the clinician and should include improved health and appearance as well as other factors that are pertinent to the individual. 4) **Roadblocks**. These are barriers to successful cessation or those identified by the patient that may be an impediments to quitting, such as withdrawal. 5) **Repetition**. Motivational counseling should occur at every clinician visit even if the patient lacks motivation. Further explanation to the patient that it may require several attempts to quit, should be included in the counseling. The motivational intervention should be repeated every time an unmotivated patient visits the clinic setting.

Method of intervention. Written cessation material was not as effective in improving readiness as were telephone calls in rural low income pregnant populations. Further audio and visual cessation materials were more beneficial in moving toward cessation than pamphlet materials (Boudreaux, Carmack., Scarinci, & Brantly, 1998). Telephone support combined with written

intervention also proved more effective than written literature on cessation alone, indicating that personal contact and expectation of behavior socially is a motivator toward readiness and cessations success (McGrath et al, 2014). Mobile applications that provide cessation encouragement, information and smoking tracking were show to be beneficial in reduction of smoking (Rodgers, 2005). Not only affordability but mobility is a factor with phone applications, since they are not location dependent. Fiore et all (2008) notes the national quit line network accessed via one toll-free number (1-800-QUIT-NOW). These link into state managed quit lines. Offering proactive telephone counseling, quit-lines provide cessation support and may include nicotine replacement services dependent on the state and personal insurance coverage. Quit lines programs are funded through United States public service, state legislation and managed via states.

Intervention duration. Readiness to quit may not be related to number of cigarettes per day or the amount a person smokes (Hodge & Casken, 1999). In a healthy heart program intervention, with a 6 month overall health intervention, the significant change was smoking prevalence declined, inferring that a longer duration educational intervention on health promotion positively impacts readiness (Nafziger, et al, 2001). A longer duration of follow up may also bolster cessation efforts and improve readiness (Goldberg, Hoffman, Farinha, et al, 1994; Sesney, et al, 1997). Frequency and specific intent of patient – provider discussion improved readiness (Goldberg, Hoffman, Farinha, et al, 1994; Sesney, et al, 1997). More often and a longer period of time for smoking cessation programs and interventions positively impact readiness to change and overall cessation.

Social support involvement. Readiness improved when a family member would be impacted by the subjects' cessation. Where both parent and child smoked and family intervention was offered the readiness score significantly improved (Tilson et al, 2001). Family motivation was an important factor in smoking cessation consideration (Yang et al 209). Community support with

meetings as adjunct intervention improve readiness and is an added factor in smoking cessation outcomes (Andrews et al, 2005). The greater the partner support the greater the readiness to quit smoking (Rayens et al, 2008). One of the strongest factors for success in smoking cessation is a non-smoking partner and a social support intervention, indicating an improved readiness by being offered these types of interventions (Bullock et al, 2009). Group effect of community support positively impacted readiness in non-treatment seeking smokers (Webb, 2008). Also in a qualitative study strong social influences were found to impact smoking cessation in rural faith based communities (Kruger et al 2012).

Literature Review Conclusion: Evidence Based Practice Applied

The literature search yielded the observation of five key characteristic of smoking readiness to quit: 1) Provider led motivational counseling 2) use of technology 3) more frequent counseling and longer interventions and 4) family and social support. In urgent care and emergency rooms, there is no predictability of scheduled appointments. Further the nature of the services is ideally a rapid process and speed is a quality indicator in these settings. More frequent counseling's and a longer duration of intervention sessions are not applicable to the intermittent and unpredictable nature patients seeking urgent care services. Though these evidence based principles would be very applicable in a community based intervention or in a primary care environment, application of all four are not feasible to apply in these sites. Evidence based practices that are feasible were applied toward intervention including the 1) provider led motivational counseling, and 2) use of technology, via video education; introduction to smokefree.gov as a resource and for downloadable phone applications.

These components align with strengthening the behavioral change. Specific social experiences present in the interactive web resource as outside media influences will be presented in the intervention. These include downloadable applications that send encouraging texts and cigarette

tracking tools. Family support and/or friend observation and enrollment during the intervention was allowed and even encouraged, should the person accompany the individual in the exam room. This intervention design was based on encouraging individual behavior change with motivational interviewing from a nurse practitioner and technology sources including a video and website with downloadable applications. The follow up call was not considered part of the intervention or motivational counseling. Thus there were two points of contact in the project Time 1, the initial enrollment face to face and Time 2, at one month via phone.

Feasibility Analysis

Market Analysis

The economic costs of tobacco use in rural areas are very high and correspond to high prevalence. Every West Virginia smoker who dies, loses an average of 14.6 years of life due to premature death (WV Tobacco Cessation Program, 2014). Each West Virginia smoking-related death equals an average of \$283,000 in lost wages. The annual preventable costs total \$4,676 for each smoker in West Virginia.

Operational Support

The two project sites are managed by one organization, whose mission is “to improve the health of West Virginians and all we serve through excellence in patient care, research, and education.” The project goals align well with facility goals, working toward improving health of community via improving smoking cessation readiness by providing education at point of care during urgent care and fast track service visits.

The approval of the feasibility study by the facility executive leadership and awareness of department managers enhanced likelihood of adoption of practice. Applying the project to several sites allows for an in-depth evaluation of operational use. The feasibility study design, utilizing two sites within the system, supports adoption by this health system on a wider basis. Refinement of the

project implementation would be developed post feasibility study and project completion. Systematic provider training post project completion will enhance practice change. Some level of electronic medical record adaptation will ideally occur for practice to be adopted post study.

Key Site Support

To utilize the tool Assessment of Motivation: Readiness to Quit Ladder, permission was obtained from Guilford Press. See Appendix H, Guilford Publications Permission. Project approval was given by the Chief of Emergency Medicine, in the form of a signed letter on letter head, covering site support for the urgent care center and the emergency department site. See Appendix I, Emergency Department Approval. In addition both facility site medical directors gave written agreement with the approval via email communication. The project proposal was submitted to the Nursing Research Counsel from the governing facility corporation and Institutional Review Board approval was obtained from the associated university. See Appendix J, Nursing Research Council Approval and Appendix K West Virginia University IRB Approval.

Financial Considerations for Adoption

There are very limited operational costs to adopt this practice change. Already in existence is a reimbursement mechanism for services. In 2014, smoking cessation services became a covered benefit. Sustainability for the practice change can be driven via reimbursements for services through governmental and private payer sources. Tobacco cessation reimbursable services include:

1) Tobacco use screening for all adults and adolescents 2) Tobacco cessation counseling for adults and adolescents and 3) Expanded counseling for pregnant women. Thus reimbursement may be possible. As with the urgent care provider fees, the patient's insurance company will be billed (American Academy of Family Physicians, 2017).

Medicare covers two cessation attempts per 12-month period. Each attempt includes a maximum of up to four intermediate or intensive counseling sessions per quit attempt. The total

Medicare benefit for tobacco cessation counseling includes eight sessions per year. Billing via International Statistical Classification of Diseases and Related Health Problems, ICD 10, codes F17.200 should include the following: CPT codes: 99406 – Smoking and tobacco use cessation counseling visit; intermediate, > than 3 min. to 10 min or 99407 – Smoking and tobacco use cessation counseling visit; intensive, > than 10 min (American Academy of Family Physicians, 2017; HealthQuest Health Plus, 2011). See Table 1 Reimbursement trends from smoking cessation counseling per code and encounter.

Sufficient documentation must be evident in the encounter record as to the content of the counseling. Using the evidence based standard of 5 A’s and 5 R’s a provider can document along these processes and provide suggestions and skills for cessation preparedness. A quit date goal, or suggestion date, would be ideally established. For use in the urgent care and low acuity emergency room settings, a project focusing on maximization of reimbursement would be ideal and was not considered for this project. Nonetheless, the knowledge that smoking cessation counseling is a reimbursable provider service warrants discussion, and the potential promise of improving revenue provides support for adoption of the practice.

Table 1. *Reimbursement trends from smoking cessation counseling per code and encounter*

CPT Code 99406*	CPT Code 99407*
Intermediate >3 minutes provider counseling	Intensive >10 minutes provider counseling
WV Medicaid = \$ 9.19	WV Medicaid = \$18.39
Commercial = \$13.92	Commercial = \$27.34
Medicare = \$14.32	Medicare = \$27.93

*Medicare maximum of up to four intermediate or intensive counseling sessions per 2 quit attempts per year. (HealthQuest Health Plus, 2011; Medicaid Reimbursement Survey, 2015; Quick guide, 2017).

Project Resources

Project resources included those that were needed for preparation, implementation, and post intervention for data analysis. Items budgeted for the feasibility project included those in the input section of the model. Costs for the project were based on retail value and are shown in Table 2. Ready to Quit project costs. See Table 2. There are no personnel costs incurred. Intervention and data collection were conducted by this investigator.

Table 2. *Ready to Quit project costs.*

Input item	Cost
Copy and print costs	\$ 70
Encrypted flash drive	\$ 20
Locking Briefcase/ storage	\$ 20
Cell phone and service	\$ 80
Travel costs to sites- gas/mileage	\$200
SPSS software 6 month subscription	\$ 70
Total	\$470

A logic model figure was created during the project planning to provide a snapshot visual of the needs, activities and processes and intended outcomes of the DNP project. See Figure 1. Ready to Quit Logic Model used for Ready to Quit intervention, DNP project.

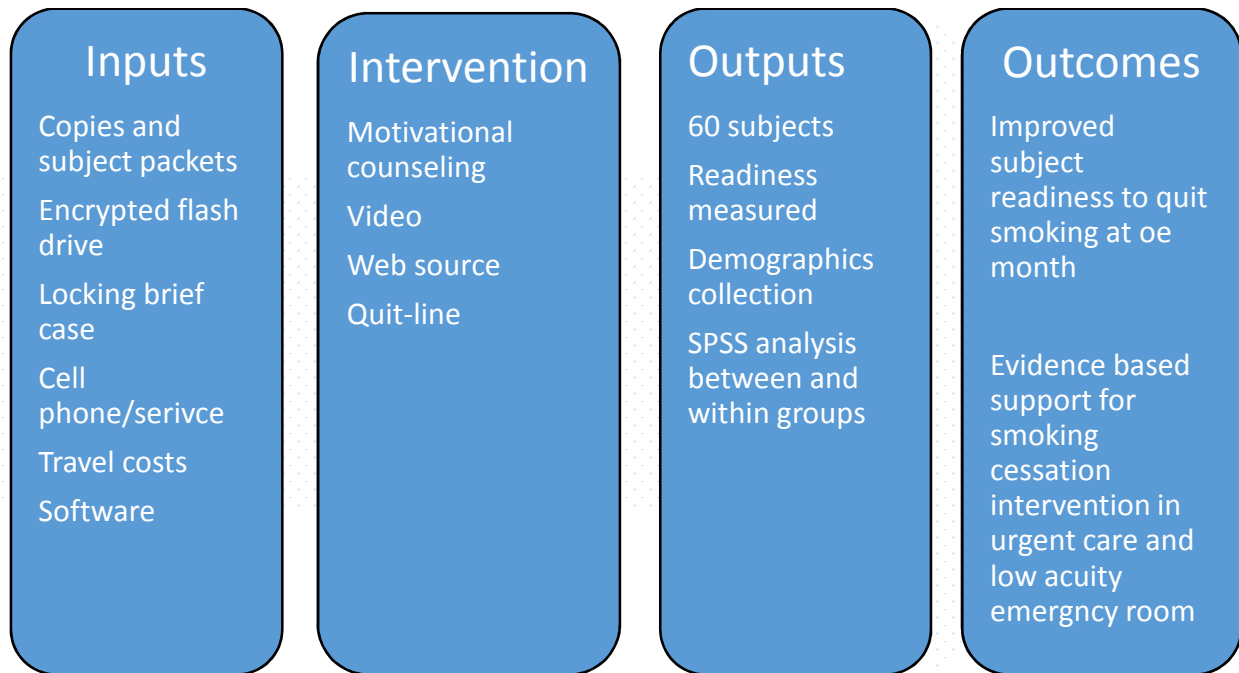


Figure 1 Ready to Quit Logic Model

Strengths Weakness Opportunity Threats

A Strengths, Weaknesses, Opportunities and Threats, (SWOT) was utilized for planning this feasibility project and future adoption of the proposed change. See Figure 2 Ready to Quit SWOT Analysis. The strengths and weaknesses are focused on the proposed change, and the project itself. The primary strength is that 5-15 minute, of counseling is a brief amount of time for a face to face intervention. This was considered a benefit to the project since conducted in a fast paced setting. The design of the intervention did not impede on the flow of the patient care. The resources were already developed by public service and did need to be created. Even a motivational counseling and a

facility video on cessation in the already existing television channel could be implemented if further development of resources were initiated. The key feature in movement toward adoption is the provider driven motivational counseling with supportive resources given and explained to the patient. The primary weakness in the intervention was that the Time 2 components may not be feasible follow up in urgent care ongoing without dedicated and assigned personnel. However since this is not a part of the intervention it is not needed for adoption. The Time 2 phone survey was used for data collection toward evidence of the outcome. Overall, threats to accomplish such a practice change include provider resistance or perhaps an attitude that people will not change. This is a threat and rather ironic in itself, considering that change must occur at the executive, and provider level to promote a change in the personal patient level.

Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ 2 sites to conduct the project show greater evidence for adoption ▪ Simple short counseling process ▪ Beneficial for all subjects ▪ Billable counseling if adopted ▪ Point of care practice change ▪ Many educational resources: predeveloped and prepared ▪ 5A's, Internet site information, Visuals, Quit-line all available and via governmental sources 	<ul style="list-style-type: none"> ▪ 2 sites to conduct the project was concerning for success. Applying practice change in multiple locations that may have varied work flow patterns ▪ Compliance with practice change if adopted may be difficult for intervention components beyond point of care provider counseling

Opportunities	Threats
<ul style="list-style-type: none"> ▪ Affect change to improve readiness ▪ Increase provider awareness ▪ Beneficial for wide based population ▪ Revenue source if adopted ▪ Electronic Medical Record use 	<ul style="list-style-type: none"> ▪ Time constraints during clinic ▪ Resistance of providers ▪ EMR system adaptation to practice change to ease documentation

Figure 2. Ready to Quit SWOT Analysis

Timeline

Overall SMART Goal (Specific, Measurable, Attainable, Realistic, and Timely)

By April 30, 2018 the feasibility project’s goal was to demonstrate efficacy for the Ready to Quit intervention practice change proposal in urgent care and in low acuity emergency departments settings; via an intervention which included smoking cessation counseling at point of care and the evaluation of readiness at one month. This was conducted via a feasibility study model. The project was completed on time and did achieve statistical evidence for the practice change.

The following timeline was in the initial proposal as end of month goals which were achieved with dates as noted.

SMART objective 1: September 5, 2017. The Ready to Quit draft proposal was reviewed and approved by the doctoral committee.

SMART objective 2: September 18, 2017. The Ready to Quit proposal was approved by the Nursing Research Council and submitted to the facility Institutional Review Board, IRB.

SMART objective 3: November 11, 2017 IRB approval was granted and subject enrollment in project began which was completed by December 27 2017.

SMART objective 4: February 10th 2018 data collection at Time 2 was completed and analysis process began with data entry in to SPSS.

SMART objective 5: April 10, 2018 data analysis completed and feasibility draft results completed.

Project Description and Design

This project determined intervention effectiveness on smoking cessation readiness adult populations who sought medical care in an urgent care or low acuity emergency department. It was designed as a randomized feasibility study with intervention and a control group. Appendix A, Intervention Flow, describes the steps and process for the intervention. See Appendix A. The results support a practice change in these settings to routinely include smoking cessation counseling for the purpose of improving readiness to quit. The same provider conducted the enrollment, intervention and follow up phone assessments. Study enrollment posters were placed at patient sign-in locations on days of recruitment. One site was an urgent care and the other a “fast track” section of an emergency department with lower acuity patients.

Data Collection

There were two points of contact in the intervention. **Time 1** was the enrollment and included the subject randomization, surveys, and the intervention for just the intervention group: 1) Provider motivational counseling 2) video component; from CDC Tips to Quit and 3) smokefree.com website demonstration. Both groups were shown Assessment of Motivation: Readiness to Quit Ladder, Appendix B. The ladder sections were discussed briefly with the subject while subjects viewed choice descriptions. The subject circled the numerical response. Next subjects were asked the questions on Appendix C, Demographic Sheet, and Appendix D, Cigarette Use Survey. See Appendix C and D. In the envelopes that contained Appendix E, Intervention Group Resource Sheet, a motivational counseling by a nurse practitioner was integrated throughout the process of demonstrating smokefree.com, CDC Tips to Quit and the Quit line number fact sheet. Subjects were

encouraged to take action toward cessation, provided with examples of benefits for health and options for cessation medication and nicotine replacement discussed. The intervention group received counseling including smoking health information education/ cessation information that is visual and interactive, as described. Further, intervention group subjects were encouraged to make an appointment to follow up with their primary care provider to take the next step toward cessation.

Time 2 was the follow up at one month post intervention and included the Assessment of Motivation: Readiness to Quit Ladder, Appendix B, and brief general survey of measures taken toward cessation, One Month Follow Up, Appendix F. Subjects were reminded of the levels of the readiness on the tool to obtain the response. They were not told their previous response.

The total subject number was 60. The key measure was the pre and post readiness assessment survey response, Assessment of Motivation: Readiness to Quit Ladder, at day 0 and during week 4; at one month.

Randomization

Sixty plain manila envelopes were filled in no particular order and numerically from 1 to 60. The contents are divided so as to allow for 30 control subjects and 30 intervention subjects. Contents that included Appendix E, Intervention Group Resource Sheet, were placed in the intervention group. Facility staff identified smoking persons as they arrived after triage. Persons were approached by the same interviewer, nurse practitioner and evaluated based on inclusion and exclusion criteria. A bottle of water was given as incentive. As the subject agreed to participate the envelope was opened. If there was no Intervention Resource Sheet present in the envelope the subject was placed in the control group. Twenty one subjects were obtained from an urgent care site and thirty nine from a fast track low acuity emergency department. See Table 3 Randomized envelope contents and Table 4 Intervention components and key features. All surveys are filled out by the same interviewer.

Table 3. *Randomized envelope contents*

Intervention Group N=30	Control Group N=30
Consent x 2	Consent x 2
Demographics sheet	Demographics sheet
Readiness to Quit Ladder x 2	Readiness to Quit Ladder x 2
Cigarette Use Survey	Cigarette Use Survey
Intervention Resource Sheet /Quit line	

Table 4. *Intervention components and description of key features*

Intervention component	Description
5 A Counseling session	5-15 minute counseling with incorporation of:
<ul style="list-style-type: none"> • Video education 	CDC Tips to Quit video
<ul style="list-style-type: none"> • Interactive website review 	smokfree.gov
<ul style="list-style-type: none"> • Quit-line Fact Sheet/ Number 	800-QUIT-NOW (800-784-8669)
<ul style="list-style-type: none"> • Intervention resource sheet 	Links to discussed resources

Inclusion and Exclusion Criteria

Subject inclusion criteria included adults ages 18-65, non-emergent status, current cigarette smoker and the ability to receive telephone calls. Subjects were asked for an email address, but one was not required for inclusion. Family member or friend who accompanied the subject and was present at the time of consent discussion was eligible to participate if all criteria met, and were consented as well. See Table 3 Subject inclusion and exclusion criteria.

Table 5. *Subject inclusion and exclusion criteria*

Inclusion Criteria	Exclusion Criteria
Adults Age 18-65	Ages < 18 or >65
Non- emergent medical status	Status determined to be emergent
Current cigarette smoker	Current non-smoker
Able to receive phone calls	Not able to receive phone calls
Smoking family member or companion present with subject that meets inclusion criteria	

Measurement Instruments

The initial exploratory analysis was followed by descriptive and comparative data analysis using SPSS to evaluate the study the results. The primary measurement was the comparison of pre and post Assessment of Motivation: Readiness to Quit Ladder scores. Mean comparisons were used comparing readiness between the intervention and control groups via the independent t test and within the two groups utilizing the paired t test. Comparative analysis and chi-square was used when

comparing by categorical variables such as gender. Additionally measures of demographics and smoking survey responses were compared. See Appendix B, Appendix C, Appendix D and Appendix F.

Results

Time 1: Descriptive Statistics and Analysis of Sixty Subjects

Sixty subjects were recruited based on the inclusion and exclusion criteria. Self-report of smoking related diagnosis was assessed. Additionally it was asked if subjects felt they were in clinic that day due to a smoking related problem. Table 6 provides the general descriptive data collected and resulting Chi-Square analysis.

Table 6. *Chi-Square results of intervention and control group descriptive categorical variables.*

Variable	Category	Intervention (N = 30) N (%)	Control (N = 30) N (%)	Chi-Square <i>p</i> - value
Race	White	28 (93.3)	29 (96.7)	1.018, <i>p</i> = 0.601
	Middle Eastern	1 (3.3)	1 (3.3)	
	Black	1 (3.3)	0 (0)	
Gender	Male	14 (46.7)	13 (43.3)	0.067, <i>p</i> = 0.795
	Female	16 (53.3)	17 (56.7)	
Education level	Some High School	3 (10)	7 (23.3)	3.714, <i>p</i> = 0.446
	High School/ GED	14 (46.7)	13 (43.3)	
	Some College	6 (20.0)	7 (23.3)	
	Associate Degree	4 (13.3)	1 (3.3)	
	Bachelor’s Degree	3 (10)	2 (6.7)	
Parental smoking	No Parents Smoked	3 (10.0)	5 (16.7)	2.358, <i>p</i> = 0.501
	Father Smoked	10 (33.3)	6 (20.0)	
	Mother Smoked	4 (13.3)	7 (23.3)	
	Both Parents	13 (43.3)	12 (40.0)	
Visit today related to Smoking	Yes	5 (16.7)	4 (13.3)	
	No	25 (83.3)	26 (86.7)	

				0.131, $p = 0.718$
Self-reported diagnosis history related to smoking	Yes	10 (33.3)	4 (13.3)	
	No	20 (66.7)	26 (86.7)	
				3.354, $p = 0.067$

Note. Variances were assessed as equal.

Table 7 provides mean score comparison for descriptive numerical data in intervention and control groups. There is a significant different between the Age, Number of years smoking and Pack years.

Table 7. Mean score comparisons for age, age began smoking, number of years smoking and previous quit attempts in intervention and control groups

Variable	Intervention (N = 30)		Control (N = 30)		Significance	
	Mean	SD	Mean	SD	t	p
Age	42.77	13.826	35.00	12.723	-2.264	0.027
Age began smoking	15.40	3.092	14.57	3.245	-1.018	0.313
Number of years smoking	27.37	13.753	20.30	13.378	-2.017	0.048
Pack years	35.27	31.488	18.8	17.604	-2.500	0.015
Previous quit attempts	3	2.779	2.8	2.657	-0.285	0.777

Barriers and benefits toward smoking cessation was collected from both the intervention and the control group. Subjects commented on what they perceived as a benefit. These were grouped into four 4 categories, health, money, family and smell. Likewise barrier responses were grouped into eight general response categories; as noted in Table 8. This was assessed only initially. The

intervention group subjects all reported that personal health would benefit from cessation. This showed significance difference from the control group, of which 80% reported Personal health as a benefit of smoking cessation. Subjects may have reported more than response. The responses are broken down by group and category.

Table 8. *Chi-Square results of subject reported benefits and barriers for smoking cessation*

Variable	Category	Intervention	Control	Chi-Square
		(N = 30) N (%)	(N = 30) N (%)	p - value
Benefits	Personal health	30 (100)	24 (80.0)	6.667, p=0.010
	Money savings	9 (30)	12 (40.0)	0.659, p=0.417
	Family benefit	7 (23.3)	5 (16.7)	0.417, p=0.519
	Smell	1 (3.3)	2 (6.7)	0.351, p=0.554
Barriers	Stress management	15 (50)	16 (53.3)	0.067, p=0.796
	Withdrawal	8 (26.7)	6 (20)	0.373, p=0.542
	Enjoy it	5 (16.7)	4 (13.3)	0.131, p=0.718
	Hand Habit	4 (13.3)	2 (6.7)	0.741, p=0.389
	Personal reward	2 (6.7)	3 (10)	0.218, p=0.640
	Work/Social pressure	2 (6.7)	3 (10)	0.218, p=0.640
	Boredom	2 (6.7)	1 (3.3)	0.351, p=0.554
Weight gain	1 (3.3)	1 (3.3)	0.0, p=1.000	

Smoking patterns including if the subject identified a co-smoker, and history of cessation measures were assessed. There is a significant difference in the Spouse/ Partner. E-cigarette use demonstrated a significant difference also. Table 9 provides a summary of these results.

Table 9. *Chi-Square results of subject reported smoking patterns*

Variable	Category	Intervention	Control	Chi-Square
		(N = 30) N (%)	(N = 30) N (%)	p - value

Co-smokers	Close Family or Friends	23 (76.7)	22 (73.3)	0.089, p=0.766
	Spouse / Partner	12 (40)	20 (66.7)	4.286, p=0.038
	No co-smoker	4 (13.3)	2 (6.7)	0.741, p=0.389
<hr/>				
Packs per day	Less than 1	7 (23.3)	15 (50)	7.052, p=0.070
	1	15 (50)	13 (43.3)	
	2	6 (20)	2 (6.7)	
	3 or more	2 (6.7)	0 (0)	
<hr/>				
Cigarette	Menthol	6 (20)	7 (23.3)	0.098, p=0.754
	Self-Roll	3 (10)	1 (3.3)	1.072, p=0.301
	Filter	29 (96.7)	28 (93.3)	0.351, p=0.554
	Lite brand	8 (26.7)	6 (20)	0.373, p=0.542
<hr/>				
E- Cigarette	No-never	14 (46.7)	8 (26.7)	7.124, p=0.028
	Yes- currently	2 (6.7)	10 (33.3)	
	Only in past	14 (46.7)	12 (40)	
<hr/>				

Measures of previous actions toward cessation including, nicotine replacement use and medications were assessed. See Table 10.

Table 10. *Chi-Square results of subjects previous actions toward cessation.*

Variable	Category	Intervention		Control		Chi-Square <i>p</i> - value
		(N = 30)	N (%)	(N = 30)	N (%)	
Previous use	NRT Patch	19	(63.3)	13	(43.3)	2.411, p=0.121
	NRT Gum or lozenge	9	(30)	7	(23.3)	0.341, p=0.559
	bupropion	2	(6.7)	0	(0)	2.069, p=0.150
	varenicline	3	(10)	3	(10)	0.000, p=1.000
	No NRT/medication	11	(36.7)	12	(40)	0.071, p=0.791

Note. Variances were assessed as equal.

Time 2: Descriptive Statistics and Analysis of Twenty-Four Subjects

Analysis of Assessment of Motivation: Readiness to Quit Ladder tool results were analyzed using an independent t test and was considered the primary measure in the project. The change in response between subjects in the intervention to the nonintervention group were analyzed using an independent t test with SPSS software. There was no significant difference between these groups in readiness at one month. See Table 11.

Table 11. *Mean score comparisons of change in readiness for intervention and control groups with 24 subjects responding to follow-up.*

Variable	Intervention (N=15)		Control (N=9)		Significance	
	Mean	SD	Mean	SD	t	p
Change in Readiness at Time 2	<hr/>					
Between Groups	0.67	1.175	0.78	1.394	.209	0.836

Note. Variances were assessed to be equal.

Comparison was then made within the groups themselves utilizing the paired t test. The intervention group demonstrated a clinically significant improvement in self-reported readiness assessment scores within the group. The control group showed non-significant improvement within itself. See Table 12.

Table 12. *Mean score comparisons of readiness at initial response to readiness at 1 month, within the intervention and control groups with 24 subjects responding to follow-up.*

Variable	Readiness Initial	Readiness at 1 Month	Significance
<hr/>			

	Mean	SD	Mean	SD	t	p
Intervention Group (N=15)	5.27	1.223	5.93	1.668	-2.197	0.045
Control Group (N=9)	5.11	1.900	5.89	2.804	-1.673	0.133

Additionally positive measures, actions, taken toward cessation were assessed and analyzed. Six subjects who did not receive intervention and five who did receive intervention described no movement toward actions that would indicate a change in readiness. Thirteen subjects of the twenty four respondents at 1 month, reported actions taken toward cessation, some with multiple actions, such as cutting back and using a nicotine replacement. The intervention group showed clinically significant change in behavior change toward cessation, which was cutting back on cigarette smoking. Specific questions of downloading any phone applications from Smokefree.com, calling the tobacco quit line and discussing cessation efforts with spouse friends or family, were all negative responses and not included in the analysis. See Table 13.

Table 13. *Chi-Square results of new actions taken within the intervention and control groups of the 24 subjects responding to follow-up.*

Variable	Category	Intervention (N = 15) N (%)	Control (N = 9) N (%)	Chi-Square <i>p</i> - value
Actions Taken	Quit	1 (6.7)	2 (22.2)	1.244, <i>p</i> =0.265
	Cut-back on smoking	8 (53.3)	0 (0)	7.200, <i>p</i> =0.007
	E-cig use	1 (6.7)	1 (11.1)	0.145, <i>p</i> =0.703
	NRT use	2 (13.3)	0 (0)	1.309, <i>p</i> =0.253
	bupropion	1 (6.7)	1 (11.1)	0.145, <i>p</i> =0.703
	None	5 (33.3)	6 (66.6)	2.517, <i>p</i> =0.113

Further analysis on demographics was conducted on the group of 24 who responded based on initial responses at Time 1. See Table 14.

Table 14. *Chi-Square results of intervention and control group responding at 1 month categorical variables.*

Variable	Category	Intervention (N = 15) N (%)	Control (N = 9) N (%)	Chi-Square <i>p</i> - value
Race	White	14 (93.3)	9 (100)	0.626, <i>p</i> = 0.429
	Middle Eastern	0 (0)	0 (0)	
	Black	1 (6.7)	0 (0)	
Gender	Male	8 (53.3)	4 (44.4)	0.178, <i>p</i> = 0.673
	Female	7 (46.7)	5 (55.6)	
Education Level	Some High School	3 (20)	1 (11.1)	2.169, <i>p</i> = 0.705
	High School/ GED	8 (53.3)	4 (44.4)	
	Some College	2 (13.3)	3 (33.3)	
	Associate Degree	1 (6.7)	0 (0.0)	
	Bachelor's Degree	1 (6.7)	1 (11.1)	
Parental Smoking	No Parents	2 (13.3)	1 (11.1)	1.651, <i>p</i> = 0.648
	Father Smoked	5 (33.3)	2 (22.2)	
	Mother Smoked	3 (20)	4 (44.4)	
	Both Parents	5 (33.3)	2 (22.2)	
Visit today Related to Smoking	Yes	3 (20)	2 (22.2)	0.017, <i>p</i> = 0.897
	No	12 (80)	7 (77.8)	

Self-reported Diagnosis History	Yes	3 (20)	1 (11.1)
Related to Smoking	No	12 (80)	8 (88.9)
0.320, $p = 0.572$			

Note. Variances were assessed as equal.

Table 15 provides mean score comparison for descriptive numerical data for subjects responding at 1 month in intervention and control groups.

Table 15. *Mean score comparisons for age, age began smoking, number of years smoking and previous quit attempts in intervention and control groups responding at 1 month.*

Variable	Intervention (N = 15)		Control (N = 9)		Significance	
	Mean	SD	Mean	SD	t	p
Age	41.00	12.048	35.78	12.347	-1.019	0.319
Age began smoking	14.47	3.482	14.22	4.381	-0.151	0.881
Number of years smoking	26.53	13.330	21.56	12.827	-0.898	0.379
Pack Years	39.40	37.719	22.67	19.755	-1.226	0.233
Previous quit attempts	2.8	3.121	2.22	.833	-0.539	0.595

Note. Variances were assessed as equal.

Table 16 provides the comparison with the benefits and barrier analysis with in the Time 2 respondents. Personal reward and Work/ Social were significant but responses in these categories were less than 5. See Table 16.

Table 16. *Chi-Square results of subject reported benefits and barriers for smoking cessation intervention and control groups responding at 1 month*

Variable	Category	Intervention	Control	Chi-Square
		(N =15) N (%)	(N = 9) N (%)	p - value
Benefits	Personal health	15 (100)	9 (100)	*
	Money savings	7 (46.7)	2 (22.2)	1.434, p=0.231
	Family benefit	4 (26.7)	3 (33.3)	0.121, p=0.728
	Smell	0 (0)	0 (0)	*
Barriers	Stress	7 (46.7)	5 (55.6)	0.178, p=0.673
	Withdraw	6 (40)	2 (22.2)	0.800, p=0.371
	Enjoy it	1 (6.7)	1 (11.1)	0.145, p=0.703
	Hand Habit	2 (13.3)	0 (0)	1.309, p=0.253
	Personal reward	0 (0)	3 (33.3)	5.714, p=0.017
	Work/Social	0 (0)	2 (22.2)	3.636, p=0.057
	Boredom	1 (6.7)	0 (0)	0.626, p=0.429
	Weight gain	0 (0)	0 (0)	*

*Variable is a constant

Smoking patterns of the 24 subjects responding at Time 2 were analyzed, including if the subject identified a co-smoker, and history of cessation measures were assessed. Table 16 provides a summary of these results.

Table 17 *Chi-Square results of subject reported smoking patterns intervention and control groups responding at 1 month*

Variable	Category	Intervention	Control	Chi-Square
		(N = 15) N (%)	(N = 9) N (%)	p - value
Co-smokers	Close Family or Friends	11 (73.3)	7 (77.8)	0.059, p =0.808
	Spouse / Partner	8 (53.3)	5 (55.6)	0.011, p=0.916
	No co-smoker	3 (20)	0 (0)	2.057, p=0.151
	Less than 1	3 (20)	4 (44.4)	

Packs per	1	7 (46.7)	4 (44.4)	2.625, p=0.453
	2	3 (20)	1 (11.1)	
	3 or more	2 (13.3)	0 (0)	
Cigarette features	Menthol	3 (20)	2 (22.2)	0.017, p=0.897
	Self-Roll	3 (20)	1 (11.1)	0.320, p=0.572
	Filter	15 (100)	8 (88.9)	1.739, p=0.187
	Lite brand	2 (13.3)	3 (33.3)	1.364, p=0.243
E- Cigarette	No-never	9 (60)	4 (44.4)	0.807, p=0.668
	Yes- currently	2 (13.3)	1 (11.1)	
	Only in past	4 (26.7)	4 (44.4)	

Note. Variances were assessed as equal.

Measures of previous actions toward cessation including, nicotine replacement use and medications were assessed at Time 1 and compared in the Time 2 responders. See Table 17.

Table 18. *Chi-Square results of subjects previous actions toward cessation of intervention and control groups responding at 1 month*

Variable	Category	Intervention	Control	Chi-Square <i>p</i> - value
		(N = 15 N (%))	(N = 9) N (%)	
Previous use	NRT Patch	8 (53.3)	3 (33.3)	0.906, p=0.341
	NRT Gum or lozenge	5 (33.3)	1 (11.1)	1.481, p=0.224
	bupropion	0 (0)	0 (0)	*
	varenicline	0 (0.0)	2 (22.2)	3.636, p=0.057
	No NRT/medication	7 (46.7)	4 (44.4)	0.011, p=0.916

Results Discussion

Analysis of the results concluded that smoking cessation provider counseling intervention conducted in urgent care and low acuity emergency room settings has a positive clinically significant

effect on the subjects Assessment of Motivation: Readiness to Quit Ladder, within the intervention group alone, $p > 0.045$. This is a key factor in the analysis and important to the supportive outcome of the project, demonstrating efficacy for practice change. Though not an excessively strong statistical support, with only a 40% response rate at Time 2, the result does represent clinically significant support for cessation counseling in this setting as a practice adoption.

Actions taken toward cessation were also analyzed and demonstrated a clinical significance in reducing number of cigarettes smoked per day, $p = 0.007$. The intervention group demonstrated this positive change at Time 2 in 8 subjects. None of the control group reported cutting back at Time 2. The only clinically significant action taken in the intervention group was cutting back on cigarettes smoked as a change post the intervention. The intervention group had a 53.3 % rate of cutting back reported at Time 2. Soulakova, & Crockett, (2016) found that cutting back on cigarettes gradually along with social support was a more common method used than nicotine replacement. Though there was no significant relationship noted in social smokers or co-smokers in this study, the action of cutting back was noted to be of impactful change. This was not an anticipated finding.

Of interest, Quitting, Cutting back, NRT use and E-Cigarette actions taken were those that the subjects could initiate on their own without the assistance of a medical provider. Four subjects at Time 2 did begin either nicotine replacement or medication for cessation. One subject in each group at Time 2 reported starting bupropion. Two of the subjects in the control group and one in the intervention group reported to have quit smoking, neither of which was a clinically significant measure in the analysis. These actions though significant at an individual level did not result in any clinical significance when compared in groups.

When the control group was compared to the intervention group readiness results at Time 2, there was no clinically significant difference, $p = 0.836$. Both groups did have movement up the

readiness scale. The two subjects in the control group who reported cessation of smoking would have the highest rung score on the ladder to readiness, possibly reducing any statistically significant difference between the groups readiness otherwise.

The impact of a medical provider, Nurse Practitioner, asking questions on smoking behavior, benefits and barriers of cessation and general discussion for the control group data collection, may have had some unintended motivation impact. The low number of respondents at Time 2 could have affected the lack of significance comparing the two groups. The assumption was that the change would be significant between the groups. This did not occur. The key and somewhat surprising indicator was that within the intervention group alone the change was significant.

Further analysis of demographics and comparisons among the groups at Time 1 and Time 2 was completed. Due to the small size of several variable responses and the overall low number in the respondent group, if the total variable responses were less than 5 numerically, it was not considered of actual clinical significance. Comparison of the groups did demonstrate a difference in the Age and Number of years smoking at Time 1. These differences would account for the Pack years significance between the groups which was quite clinically significant at $p=0.015$ for the group of 60 subjects. Yet this significance was not repeated in the respondent comparison of 24 subjects, $p=0.233$, at Time 2. Self-reported diagnosis history related to smoking demonstrated a significant difference, $p=0.03$, comparing the 60 subjects, but this too waned in the respondent group to non-significant number, $p = 0.572$.

Subject responses of benefit of Personal health demonstrated a possible clinical difference in the Time 1 assessment. However in Time 2 analysis there was no difference. Interestingly the intervention and control respondents at Time 2 all included Personal health as a benefit. Rather than related to readiness impact, this 100% similarity may be reflective of the respondent's willingness to

complete the follow up. At Time 2 subject analysis there was significance noted in the variable of Personal reward as a barrier toward cessation $p=0.017$. Responses in this category were only 3 subjects, all in the control group. It is difficult to apply a clinical significance here though it is possible that Personal reward may hold some factor of resistance toward readiness. There are limited studies found to support this. Bruijnzeel (2017) discusses reward associated with smoking cessation in relation to neurotransmitter release and withdrawal. Nicotine withdraw results in an impairment within the brains' reward function. This neurological impairment leads to the continuation of tobacco use. No subjects in the intervention group had reported Personal reward of smoking as a barrier to quit. The subject's verbalization of the term Reward and the relationship to the neurological reward system within the brain is a bit of a leap. Subjects may have been simply referring to behavior patterns. However these behaviors may be linked to managing a nicotine craving after some activity or work. More detailed studies would be needed. With regards to utilization of the resources, none of the 24 responders at Time 2 reported any actions of downloading texting application, calling the quit line or discussing cessation with friends or family.

The subjects resided in 7 West Virginia north central counties. Two of the subjects did not reside in WV. One county was the primary residence of 45% of the combined group of 60 and the same county reflected 58% of the 24 responders. The higher percentage of one county of residence corresponded to the location where the majority of the subjects were recruited. Most subjects residing in the local areas of the health care sites was an expected outcome.

The number of subjects responding at Time 2 overall, is rather low and it is difficult to apply data that is based on such a limited response number, toward conclusions. Essentially all demographics, smoking use, as well as benefits and barriers were not clinically significant differences at the Time 2 comparison. This shows that the characteristics of the groups as equal.

Thus conclusion can be made that the improvement in readiness within the intervention group, is due to the intervention itself. Homogeneity of these two groups provides a strong support for the benefit of the intervention within the intervention group itself. In addition to having clinically significant change in readiness, the intervention group data demonstrated that change in behavior did occur in cutting back on cigarette smoking as an Action taken toward cessation.

Project Evaluation

The purpose of this project was to conduct a feasibility study that would provide evidence based support for a practice change in urgent care and low acuity emergency room settings; to incorporate medical provider delivered smoking cessation counseling for each smoking adult patient, thereby improving readiness to quit. The two outcome goals of the project were to improve subject readiness to quit smoking at one month and provide evidence based support for the practice change. Both outcome goals were met based on the analysis.

Traditionally primary care physicians have the responsibility to address smoking cessation measures utilizing the 5 A's, and 5 R's with motivational counseling. Additionally evidence based studies show that incorporation of technology applications into smoking cessation interventions benefit the outcome and do impact readiness. This project demonstrated that the practice of smoking cessation counseling can be applied to urgent care and low acuity emergency room settings. It is effective in improving readiness in persons who smoke and begin changes toward cessation such as reducing number of cigarettes smoked.

The PICOT question for this project was: In adult rural patients between the ages of 18 and 65, what is the initial efficacy of a tobacco education intervention program, on readiness to quit smoking, presented by a medical provider in urgent care and low acuity emergency room settings, as assessed initially and evaluated at four weeks after receiving the education program. The answer to

the PICOT question is that readiness was improved within groups of persons who received the intervention at a clinically significant level when assessed at Time 2, one month after intervention. Whereas in the control group, readiness was not impacted in a clinically significant way, statistically. The demographic and characteristics collected on the subjects for the intervention and control at Time 2 were not clinically statistically different. There are 2 findings that are significant in the results. Readiness improved within the intervention group and did not in the control group. The action taken toward cessation of reducing number of cigarettes per day is significant when compared to the control group at Time 2. Thus the intervention had impact toward change in a positive way on the person's readiness to quit smoking based on the Assessment of Motivation: Readiness to Quit Ladder score and the action toward change. Nicotine replacement or other forms of medications as actions taken were not significant to the results between responders at Time 2.

Evaluation of Theory Basis

The Transtheoretical theory was an appropriate choice for this project for organization change and to promote a practice change. Stages of change are utilized for behavior, and though this could be applied to a smoking cessation program, on a larger scale it was used as a model to promote routine cessation counseling and intervention toward readiness to quit smoking. Improvement in organizational change and change up levels are impacted when groups have support to change (Prochaska & Velicer, 1997). This project provides evidence for such support to occur.

The current phase of change for this project is the Preparation stage and where the project is at present. Here the feasibility study is completed successfully and analysis demonstrated a positive move toward readiness within the intervention group. The next step in the Preparation phase is to present findings in a presentation to the stakeholders and decision makers. Action stage occurs as the facility begins adoption to promote smoking cessation counseling in urgent care and low acuity emergency room settings. It may be a more natural transition for this to be adopted in only urgent

care settings within the facility system initially. This would allow for some further analysis of time tracking and reimbursement benefit. The facility system has several urgent care centers. One established in the urgent care setting alone, the processes and EMR can be tweaked and modified while adoption toward smoking cessation counseling beings in the lower acuity emergency room patients. The ongoing monitoring supports the Maintenance phase-in the theory. Here the perfecting of the EMR and education of staff on motivational counseling can be merged. EMR use can provide triggers to discussion points such as benefits and barriers which provoke thinking and reflection in patients. Thus this was a key part of the intervention and education of staff could be seen itself as a barrier. However with EMR use and templates a simple process can be follow for even the inexperienced provider.

Observations

General observations about the project included the overwhelming interest and support of the staff and leadership at the sites where the project was conducted. Urgent care and emergency room staff see patients on a spontaneous basis and have little ability to follow up on smoking counseling efforts, or suggestions toward cessation. Taking the approach that a 3 minute conversation can generate thought and action toward smoking cessation was found to be a welcomed idea from the facility staff. This rang true for patients as well. Many patients seemed to enjoy the dialog when completing the questionnaire and responded in a thoughtful nature to questions about barriers and benefits of smoking cessation. During the conversation with subjects, on several occasions the subject voiced they not heard of the quit line number or the possibility of being eligible for free nicotine replacement patches. Though this was not tracked the lack of awareness supports the need for providers to include this content in the motivational discussion.

Subject comments at Time 2. During the survey completion at Time 2 the respondents were asked if they had other comments. Also comments made during the Time 2 phone conversation

that were deemed to be of interest were noted. Of the 3 that quit comments included “I have not smoked again since we spoke. I just decided not to smoke anymore.” “I had a DOT physical; lung test poor: and again advised to quit. I have had no cigarettes for 1 week.” “Quit cold turkey 12/31/17.” Comments of other subjects at Time 2 referred to the holiday season, being busy, having no interest to change and getting ready to change after New Years or 6 months. Subject recruitment was conducted in November and December. This may have been a deterring factor in actions taken toward cessation since smoking is used as a stress management tool and reward device for smokers.

Provider Evaluation of Intervention

At completion of the intervention Provider Evaluation Tool, Appendix G was completed, given thoughtful consideration and the following comments provided. See Appendix G. The intervention was conducted by a single investigator. The smoking education and counseling intervention was easy to conduct in the urgent care and low acuity emergency room settings. The interaction time with the patients was approximately 3-15 minutes. Those who received the intervention were typically involved in approximately 10 minutes of discussion time. Time was not tracked during the intervention, but was a noted consideration due to the nature of the setting as being fast paced clinical service area. Based on the results of the intervention provider counseling and intervention with video education does improve readiness to quit. Documentation for billing would be facilitated by integration within electronic medical record template. A provider could use click boxes and check counseling time, noted content of counseling and if referral to follow up for cessation counseling discussed. Centers for Medicaid and Medicare encourage medical provider counseling for tobacco cessation via reimbursement codes and payment for services. Comprehensive medical insurance plans have similar coverage. This is a reimbursable service, with yearly limits based on individual plans. The benefit to the patient to improve readiness and obtain additional reimbursement for having a conversation would be cost effective.

Limitations

The most noted project limitation was the low number of responders at Time 2 for the analysis. Response rates for telephone surveys conducting information from individuals was 52.7% (Baruch, Y., & Holtom, 2008). This project had a 40% response rate. Secondly more subjects would be needed in future readiness studies to further evaluate or replicate the impact of readiness change within an intervention group. Limited prior research studies on readiness to quit smoking in rural populations was noted. Asking questions of both the control group and the intervention group may have blurred the lines of motivation counseling in this study, and affected the lack of significance when comparing change between groups. Thus the survey questions themselves need to be evaluated to be less impactful toward counseling questions to better restrict what is asked of intervention groups. Additionally conducting the intervention during holiday months may have impeded impact or effectiveness of the intervention and the follow up. Finally a limitation was the duration of follow up. A four to six month follow up may have yielded interesting results in both groups. The incorporation of a longer intervention program with this longer follow up may impact readiness more significantly.

Implications for Future

The Doctor of Nursing practice role is one of a leader and change agent. The next steps in this practice adoption include a facility system, wide spread health policy initiative for medical providers working in urgent care settings and with patient populations of low acuity emergency room settings, to routinely address smoking cessation, benefits and barriers, and to encourage patients toward adopting change. This can be facilitated via an electronic medical record section prompted section for providers to complete if the patient is triaged as a smoker.

Motivational counseling techniques are an area of further study considering that discussions with both groups included many of these features and may have impacted results. Economics studies on reimbursement for smoking counseling in urgent care and low acuity emergency room settings would prove beneficial and may provide strong support for this practice change. Future feasibility projects on readiness should include a larger number of subjects and diverse populations, perhaps exploring more urban metropolitan areas. Additionally a focus toward improving readiness in primary care offices would be a beneficial feasibility project. Other settings to consider as appropriate and perhaps lack a focus on improving smoking cessation readiness are outpatient clinics and behavioral medicine facilities.

Techniques that may impact actions toward cutting back on cigarettes should be explored. Lowering number of allowed cigarettes per day or times between cigarettes; times in which a cigarette can be smoked are techniques that can be taught and used in counseling's. Studies should be explored as to the level of effectiveness of these techniques and others that may be developed toward reduction in the number of cigarettes per day. Additionally future research to target reported barriers specifically are needed.

Attainment of DNP Essentials

Essentials I. Scientific Underpinnings for Practice

This project integrated nursing practice sciences toward an intervention on smoking cessation readiness to the behavioral and bio physical sciences. Based on the Transtheoretical theory organization change was applied to the adoption of practice change in urgent care and low acuity emergency room settings.

Essential II. Organizational and Systems Leadership for Quality Improvement and Systems Thinking

Utilizing leadership and communication skills the project was able to be approved was obtain through departments, nursing research leadership and the facility institutional review board. Economic considerations to smoking and possible future reimbursements to smoking cessation counseling were evaluated in the background to this project. During the project budgetary consideration were conducted. It was determined future that minimal cost would be incurred by the facility to adopt this practice change, and may be beneficial fiscally, though noted this would need further study and was not a focus of this project.

Essential III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice

Analytical methods were used in the literature background search and evaluation of evidence based practice for smoking cessation readiness in rural populations. There is a small body of research on this topic of readiness and even less on this component of change in the rural setting. The study design and results analysis demonstrated appropriate analytical methodology. The results support evidence based findings that provider counseling impacts change in smoking and more specially supports readiness to change. This project demonstrated the application of clinical scholarship skills and analytical methods.

Essential IV. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care

Information systems and technology were evaluated as a background to the future implementation of this project. The current facility system has the ability for template creation for smoking cessation counseling that could easily be adopted as an add-in feature for future use. Further this project required substantial learning and knowledge of the SPSS IBM statistical analysis software and consultations with a statistician.

Essential V. Health Care Policy for Advocacy in Health Care

Practice change support and the promotion of policy change for smoking cessation discussion to occur in non-primary care, urgent care settings was demonstrated in this project. Further advocating for persons who utilize low acuity and more spontaneous settings for medical services may at times lack traditional primary care services and insurance support. Rural populations have higher rates of economic and education disparities. This project demonstrates advocacy for the population focus.

Essential VI. Interprofessional Collaboration for Improving Patient and Population Health Outcomes

During this project it was necessary to communicate and collaborate with several disciplines including physicians, hospital legal counsel for approval at one site in addition to IRB ethics and committee members. Additionally on site during subject recruitment and the intervention, collaboration with nursing staff, administrative personnel and varying disciplines of providers, nurse practitioners, physician assistants, and physicians.

Essential VII. Clinical Prevention and Population Health for Improving the Nation's Health

Conceptual strategies utilized in the project include motivational counseling during the intervention component to influence a person's readiness to quit smoking. Future the trans-theoretical model of change was apply to the organization for practice change and moving the health system toward action in adopting the practice.

Essential VIII. Advanced Nursing Practice

This project exemplified advance nursing practice, through design and implementation of a research study to impact population health toward being ready to quit smoking. Advanced leadership and communication skills were demonstrated in the development, approval and implementation process of the intervention study. Practice linkages with the rural population, the

facility operational systems for project approval, and implementation, including the actual intervention being conducted demonstrated advance nursing practice skills and expertise. The analytical skills were further demonstrated through statistical analysis and interpretation of study results. Overall, in reflection of project application to the DNP essentials the project has contributed toward and generated significant growth and competency in advance practice nursing for this provider.

Summary

In summary, smoking is strong negative factor in the health of West Virginians and essentially all peoples. The Ready to Quit feasibility study provided clinically significant evidence for the practice change for providers to conduct smoking cessation counseling and improve readiness to quit in urgent care and low acuity emergency room settings. Utilizing evidence based intervention techniques including provider face to face motivational counseling, video education, and resources such as internet sites of education, readiness can be impacted significantly. Readiness affects cigarette smoking cessation attempts. Readiness moves individuals toward action. This feasibility study brought awareness to the facility and organization. Practice adoption would benefit patient health and reimbursement. Further the project fosters support for a practice change among providers to include smoking cessation counseling at each visit for smokers.

The supporting facility has a commitment to improve health of WV citizens and patients who seek medical care at these facilities. Opportunity to improve readiness in health care consumers is being missed at point of care services for urgent care and low acuity emergency room patients. The Ready to Quit feasibility DNP project brings support for a practice change in urgent care and low acuity emergency room patient care setting.

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Appendix A
Intervention Flow

Time 1

I. Items for the subject to complete

- 1) Consent
- 2) Demographic Sheet
- 3) Cigarette Use Survey
- 4) Assessment of Motivation: Readiness to Quit Ladder

II. Intervention Components (intervention group only)

Incorporate the 5 A assessment throughout intervention dialog.

- a. Ask if smokes (utilize the demographic and smoker pattern surveys)
- b. Assess (Assessment of Motivation: Readiness to Quit Ladder)
- c. Advise (Video resource education and Interactive resource site)
- d. Assist (Provide resource sheet to follow up with nicotine replacement)
- e. Arrange (Suggest patient contact /seek primary care provider for follow up)

III. Items for the subject keep (intervention and control group)

- 1) Consent- copy (both groups)
- 2) Quit Ladder Tool (both groups)
- 3) Resource sheet (intervention group only)

Time 2

I. At 1 month (intervention and control group)

- 1) One Month Follow survey

Appendix B

Assessment of Motivation: Readiness to Quit Ladder

Instructions:

Below are some thoughts that smokers have about quitting.

On the ladder, circle **the one number** that shows what you think about quitting.

Please read each sentence carefully before deciding.

10	I have quit smoking.
9	I have quit smoking, but I still worry about slipping back, so I need to keep working on living smoke free.
8	I still smoke, but I have begun to change, like cutting back on the number of cigarettes I smoke. I am ready to set a quit date.
7	I definitely plan to quit smoking in the next 30 days.
6	I definitely plan to quit smoking in the next 6 months.
5	I often think about quitting smoking, but I have no plans to quit.
4	I sometimes think about quitting smoking, but I have no plans to quit.
3	I rarely think about quitting smoking, and I have no plans to quit.
2	I never think about quitting smoking, and I have no plans to quit.
1	I have decided not to quit smoking for my lifetime. I have no interest in quitting.

Subject ID number _____ Date _____ Location _____

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Appendix C

Demographic Sheet

Subject number _____

1. Age _____ 2. Zip Code _____ 3. County _____ 4. State _____

5. Phone number _____ Alt _____

6. Email _____

7). Chronic diseases/ diagnoses

a) lung b) heart c) circulation d) cancer

comments _____

8. History of MI

a) yes b) no

9. History of stroke or TIA

a) yes b) no

10. Education

a) some high school a) high school/GED b) some college c) Associate. d) Bachelors e) MS/PHD

11. Height _____

12. Weight _____ lbs

13. Is your visit here to today impacted by cigarette smoking

a) yes b) no

12. Quit Ladder Tool response _____

13. What would you say are barriers that keep you from quitting?

14. Would there be any benefits to quitting?

Appendix D

Cigarette Use Survey

Subject number _____

1. Age when started smoking _____

2. Did one or more of parents/ guardians smoke? a) yes both b) mother c) father d) none

3. Smoking packs per day

a) less than 1 b) 1 pk c) 2 pks 3) more than 2 packs

4. Brand preferred

a) _____ b) does not matter

5. Menthol?

a) yes b) no

6. Self rolled?

a) yes b) no

7. Filter?

a) yes b) no

8. "Lights" version?

a) yes b) no

10. Flavored cigarette?

a) yes. type _____ b) no

11) E cigarette use currently?

a) yes b) no c) in past only

12) Previous quit attempts?

a) yes how many _____ b) no

13) Nicotine replacement use if previous attempt?

a) yes. type _____ b) no

14) Does your spouse/ significant other and/or close friends smoke?

a) yes spouse/ mate b) yes close friend/s c) no none

Appendix E

Intervention Group Resource Sheet

Thank you for your attention during this smoking readiness intervention today. Please be encouraged that **you can do this!** Below are some resources that we viewed and discussed today.

Check them out and download the apps you like and that will help you best.

Please also follow up with your primary care provider soon and to make an appointment for nicotine replacement, if you want to explore those options.

1. CDC Tips to Quit Videos

<https://www.cdc.gov/tobacco/campaign/tips/stories/index.html>

FREE help is available for those who want to quit.

Call **1-800-QUIT-NOW** or explore **I'm Ready to Quit!**

*Spanish speakers can call 1-855-DÉJELO-YA or explore ¡Estoy listo para dejar de fumar!
Asian-language quitlines: Mandarin and Cantonese: 1-800-838-8917 Korean: 1-800-556-5564
Vietnamese: 1-800-778-8440*

2. Interactive Web Site <https://smokefree.gov>

On this site you'll find support, tips, tools, and expert advice to help you or someone you love quit smoking. There are 4 texting apps to help encourage you and help you quit.

3. WV Quit Line Fact Sheet

You have received a copy of this. Please check it out for services in our state from this resource.

<http://www.dhhr.wv.gov/wvdt/cessation/Quitline/Documents/Quitline%20Factsheet.pdf>

Appendix F

One Month Follow Up

Subject number _____ **Date of intervention** _____

Date of text if applicable _____ **Date of phone follow up** _____

Number of attempts to reach _____ **Email use attempted** _____

Quit Ladder Tool Response _____

Describe any motivation impact from participating in the study.

Comments

I) Have you taken any measures to reduce or quit smoking?

- 1) Downloaded apps for cessation
 - i. yes b) no
- 2) Called the Quitline
 - a. yes b) no
- 3) Reduced number of cigarettes
 - a. yes b) no
- 4) Sought nicotine replacement
 - a. yes b) no
- 5) Quit smoking
 - a. yes b) no
- 6) Other measures

II) Have you discussed quitting with your spouse/ significant other or close friend?

- a. yes b) no

Comments

III) Has your spouse /significant other or close friend had any movement toward reducing smoking or quitting?

- a. yes b) no

IV Do you have any final comments on participating in this study?

Comments

Appendix G

Provider Evaluation Tool

Circle the answer.

1) Was the smoking education and counseling easy to provide in these setting/s?

Yes No

Comments _____

2) Was the smoking education and counseling time consuming?

Yes No

Comments _____

3) Approximately how much time on the smoking education and counseling was spend per patient?

3- 10 minutes >10 minutes

Comments _____

4) Do you think smoking education and counseling provided in urgent care will improve patient readiness to quit?

Yes No

Comments _____

5) Would documenting such counseling be cumbersome for this setting?

Yes No

Comments _____

6) Considered a billable provider service, would it be fiscally beneficial to provide smoking counseling in urgent care?

Yes No

Comments _____

Appendix H

Guilford Publications Permission

Dear Melody,

One-time non-exclusive world rights in the English language for print and electronic formats are granted for your requested use of the selections below in a study as part of your capstone project at WVU.

Permission fee due: No Charge

This permission is subject to the following conditions:

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Angela Whalen
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From: Melody Lehosit <mblehosit@mix.wvu.edu>
To: GP Permissions <Permissions@guilford.com>
Date: 06/27/2017 05:35 PM
Subject: Re: Permission verification

Appendix I

Emergency Department Approval

WVUMedicine

WVUMedicine.org

Ian B.K. Martin, M.D., M.B.A., FACEP
 Professor and Chairman
 Department of Emergency Medicine
 Professor
 Department of Medicine
 West Virginia University School of Medicine

Department of Emergency Medicine
 PO Box 9149
 Health Sciences Center South
 Morgantown, WV 26506
 Email /ian.martin@hsc.wvu.edu
 Phone /304-293-0295
 Fax /304-293-6702

Physician-in-Chief
 Emergency Medicine Academic and Community Practices
 WVU Medicine

20 July 2017

Melody Lehosit, MSN/Ed, APRN, FNP – BC
 Department of Emergency Medicine
 West Virginia University
 PO Box 9149
 7th Floor HSC – South
 Morgantown, WV 26506

Re: Letter of approval for smoking cessation readiness intervention at WVU Urgent Care and Emergency Department sites

Dear Ms. Lehosit,

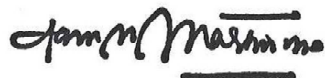
This letter is to serve as my approval for you to conduct the “Ready to Quit” feasibility study at the following sites:

- WVU Medicine United Hospital Center Emergency Department;
- WVU Medicine St. Joseph’s Hospital Prompt Care; and
- WVU Urgent Care at Suncrest.

It is with my understanding that this study, pending Institutional Review Board (IRB) approval, will assist you in your Capstone project as part of the Doctor of Nursing Practice program at WVU School of Nursing.

Thank you, and please let me know if you require additional information.

Respectfully submitted,



Ian B.K. Martin, M.D., M.B.A., FACEP
 Professor and Chairman

Appendix J

Nursing Research Council Approval

September 18, 2017

Melody Lehosit, APRN, MSN, FNP-BC

WVU School of Nursing Morgantown, WV
26506

To the WVU Institutional Review Board

The WVU Research and Evidence-Based Practice Council supports the research project undertaken by Melody Lehosit on “Ready to Quit: A Feasibility Study Proposal for Practice Change in Smoking Cessation Readiness. . This is a very important project as it has implications that will help to improve patient care. All necessary resources will be provided to them as they undertake this project.

The Research and Evidence-Based Practice Council at WVU grants you permission to complete your project with the following stipulations:

- 1) Permission is granted based on the project being carried out precisely as defined in your methodology
- 2) Permission is granted contingent upon approval and/or recommendations of the WVU Institutional Review Board
- 3) At the mid-point and at the completion of the study, you are requested to share your findings with the Research and Evidence-Based Council

Please forward me the WVU IRB approval letter for our files.

Best wishes to you in this endeavor!

Cordially,

Lya M. Stroupe

Lya M. Stroupe DNP, APRN, CPNP, NEA-BC

Manager of Nursing Research and Professional Development/Magnet® Program Director/Transition to Practice Program Director

Nursing Administration/WVU Medicine

One Medical Center Drive /PO Box 8227

Morgantown, WV 26506-8227

304.598.4385 304.598.4000, x77708 stroupel@wvumedicine.org

Appendix K

West Virginia University IRB Approval



Approval of Human Research Protocol

11/02/2017

To: Laurie Theeke**From:** WVU Office of Research Integrity & Compliance**Protocol Type:** Expedited**Approval Date:** 11/02/2017**Submission Type:** Initial**Expiration Date:** 11/01/2018**Funding:** N/A**WVU Protocol #:** 1706644270**Protocol Title:** Ready to Quit: A Feasibility Study Proposal for Practice Change in Smoking Cessation Readiness

The West Virginia University Institutional Review Board has reviewed and granted your request for approval of Expedited protocol 1706644270, in accordance with the Federal regulations 45 CFR 46, 21 CFR 50, and 21 CFR 56 (when applicable). Additional details concerning the review are below:

- Category 5. Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).
- Category 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. [NOTE: Some research in this category may be exempt from the DHHS regulations for the protection of human subjects. See Exempt Categories and 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.]

The following documents were reviewed and approved for use as part of this submission. Only the documents listed below may be used in the research. Please access and print the files in the Notes & Attachments section of your approved protocol.

- Revised Consent 1019 OMR with HIPAA Lehosit Ready to quit.pdf
- Revised 1016 Ready to Quit Study Poster.docx
- 1016 RC w IRB Fall Lehosit Final Readiness DNP Proposal.docx
- 1016 Response to Specific Minor Revisions Request.docx
- 1020 Response to Specific Minor Revisions Request.pdf
- Approval Letter- MLehosit 7.20.17.pdf
- Research Approval Letter-Lehosit Approval Letter.pdf
- 1020 IT response.pdf

WVU IRB approval of protocol 1706644270 will expire on 11/01/2018.

If any study related activities are to continue beyond the expiration date, a renewal application should be submitted no later than four (4) weeks prior to the expiration date. It is your responsibility to submit your protocol for continuing review.

Once you begin your human subjects research, the following regulations apply:

1. Unanticipated or serious adverse events and/or side effects encountered in this research study must be reported to the IRB within five (5) days using the Notify IRB action in the electronic protocol.
2. Any modifications to the study protocol or informed consent form must be reviewed and approved by the IRB prior to implementation. These modifications should be submitted as an amendment.
3. You may not use a modified informed consent form until it has been reviewed and approved by the WVU IRB. **Only consent forms with the WVU+kc watermark may be used to obtain informed consent from participants.**

The Office of Research Integrity and Compliance will be glad to provide assistance to you throughout the research process. Please feel free to contact us by phone, at 304.293.7073 or by email at IRB@mail.wvu.edu.

Sincerely,

Jonathan M. Herczyk
IRB Administrator

Protocol #: 1706644270 Phone: 304-293-7073
FWA: 00005078 Fax: 304-293-3098
IORG: 0000194 Email: IRB@mail.wvu.edu