

TOBACCO CESSATION: A QUALITY IMPROVEMENT PROJECT  
IN AN EAR, NOSE, AND THROAT CLINIC

by

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## ABSTRACT

**Background:** Due to the correlation of head and neck cancers with tobacco use, tobacco cessation conversations are crucial. Healthcare professionals play a vital role in consistently identifying and documenting the smoking status of their patients.

**Problem Statement:** While the clinic nurses at one Montana ear, nose, and throat (ENT) clinic are aware of the cancer risks involved with tobacco use, they were not screening 100% of their patients or providing tobacco users with educational materials to assist in cessation.

**Methods:** During a six-week project, the Replicating Effective Programs (REP) quality improvement model was used. Data was evaluated using descriptive statistics.

**Interventions:** Three nursing interventions were initiated: new ENT adult patients were screened for tobacco use (intervention 1), tobacco users were offered a Montana Quitline educational brochure (intervention 2) and referral (intervention 3).

**Results:** The screening rate increased from 63% during the pre-implementation phase to 100% during the fourth week of the implementation phase. During the implementation phase, 16% of the tobacco users identified were agreeable to a Montana Quitline brochure and 5% were agreeable to a referral to the Montana Quitline.

**Conclusion:** The project did increase nurses' rates of tobacco screening. However, the implications of time constraint on the nurses and a patient's readiness to quit proved to minimally impact the accepted number of brochures and referrals.

## REVIEW OF LITERATURE

### Background

While the use of tobacco has declined by 8.4% since 2005, 12.5% of the American population is still smoking cigarettes (CDC, 2022b). Among tobacco users, 86.7% smoke combustible tobacco products and 19.0% use more than two tobacco products (i.e. cigarettes, cigars, cigarillos, electronic cigarettes or smokeless tobacco) with cigarettes reported in 2017 as the most commonly used (Wang et al., 2018). In addition, the prevalence of tobacco use is higher among males than females and adults less than 65 years of age. While no tobacco use is considered safe, combustible products that burn tobacco are known to be the most harmful to the user's health (FDA, 2022). Cigarettes are composed of a mix of over 7,000 toxic chemicals that when inhaled, can cause a multitude of disease and illness (FDA, 2022).

Carcinogens within tobacco lead to disease, compromise most vital organs, weaken the immune system, and set off a mutagenic pathway that can result in 12 different types of cancer including: acute myeloid leukemia, bladder, lung, cervix, colon and rectum, esophagus, kidney, liver, pancreas, stomach, mouth and throat (oral cavity and pharynx), and voice box (larynx) (FDA, 2022; CDC, 2020). In fact, one in every three cancer deaths in the U.S. is linked to smoking (FDA, 2022).

### Head and Neck Cancer

One of the many cancers strongly associated with tobacco use is head and neck cancer (Jethwa & Khariwala, 2017). Head and neck cancer is a devastating disease that often results in death and/or debilitating disfigurement from the intensive treatment that is required. The risk for

developing head and neck cancer is ten times more likely for smokers when compared to never-smokers, and over 70% of new head and neck cancer diagnoses are related to alcohol and tobacco use (Jethwa & Khariwala, 2017). It is the sixth most common type of cancer in which 550,000 people are diagnosed with and 380,000 people die from worldwide annually (Jethwa & Khariwala, 2017). Head and neck cancers specifically relates to tumors of the oral cavity, nasopharynx, oropharynx, hypopharynx, and larynx. Smoking cessation is one of the best ways a person can improve their health, regardless of their age or how long they have been smoking (CDC, 2020). Yet, there is still an estimated 30.8 million people who use tobacco that can result in an exorbitant amount of healthcare costs (CDC, 2020).

### The Financial Effects of Tobacco Use

The financial effects of tobacco on the user, the healthcare system, and society are significant. Approximately 249 billion cigarettes were sold in the United States in 2017 (CDC, 2022a). One pack of cigarettes in Montana in 2022 costs approximately \$7.77 and 44.3% of the retail price is excised for federal and state taxes (CDC, 2022a). According to the CDC (2022a), individual states acquire billions of dollars each year from the taxes placed on tobacco products and money from lawsuits against cigarette companies, with this money being available for smoking prevention and cessation resources. As of 2022 though, the individual states only use a small amount of that money towards the prevention and cessation of tobacco use. For example, in 2020 states collected \$27.2 billion from tobacco taxes and settlements in court, but only \$740 million (2.7%) was spent on cessation and prevention programs. In fact, not a single state out of 50 funds the programs at a level the CDC recommends. In 2018, cigarette smoking cost the United States more than \$600 billion in which more than \$240 billion of that amount was spent

on healthcare costs (CDC, 2022a). In the state of Montana alone, \$440 million is spent on healthcare costs and \$81 million in Medicaid costs annually as a direct result of smoking (Montana DPHHS, 2021).

### Objectives

Since the risk for head and neck cancer is greater in smokers, the healthcare professionals in the ENT clinic have a responsibility to encourage smoking cessation. Therefore, it is imperative that every new patient presenting to an ENT clinic in Montana be screened for tobacco use and advised to quit, which is not current practice. This literature review aims to synthesize the research evidence of tobacco screening by nurses and then counsel patients that screen positive on cessation.

### Methods

#### Search Strategies

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement guidelines were used to prepare this review. A systematic search for the peer-reviewed literature was conducted in September and October of 2022 in which four databases were accessed from the Montana State University Library including PubMed; Cumulative Index to Nursing and Allied Health Literature; Cochrane Library; and PsycInfo. These databases were used to search for relevant studies worldwide but published in English. The terms used to search for the evidence included the following: “screening for tobacco use,” “tobacco cessation counseling,” and “printed educational materials for tobacco cessation.”

### Eligibility– Inclusion and Exclusion Criteria

Studies were included if they met each of the following conditions, which closely reflected the setting and population of focus including: participants aged 15 years or older, non-pregnant adults, strategies for tobacco cessation, effectiveness of printed materials, the effects of tobacco use, the effectiveness of quitlines, and the need for healthcare professional training in screening, and counseling patients for tobacco use and cessation.

Because there is a lack of evidence pertaining to tobacco use screening in outpatient otolaryngology clinics, studies were included that were conducted in all clinic settings. Due to the limited amount of data within the last five years regarding this topic, studies were not excluded based on their published dates to provide a more comprehensive summary of tobacco use screening performed by nurses in outpatient clinics and recommendations for cessation.

### Study Selection

The electronic search resulted in 890 references in which 316 duplicates were removed, resulting in 574 articles further reviewed for inclusion eligibility. A total of 559 articles were removed based on the established criteria for inclusion, yielding nine articles to include in the review.

### Quality Assessment

The Joanna Briggs Institute (JBI) quality assessment tool was used to assess the methodological rigor of studies included in the literature review. There were four types of study designs employed in the articles reviewed including: one randomized control trial; four cross-

sectional studies; two systematic reviews; and two qualitative studies. No studies were excluded based on the quality assessment due to the limited specific evidence that was required for this literature review. In addition, a best practice user guide from the CDC (2014) was employed, as well as recommendations from the Montana Quitline.

### Results: Overview of Studies

#### Screening and Cessation Recommendations

The first cross-sectional study by Jamal et al. (2015) was conducted to assess the prevalence, correlating factors, and trends of tobacco use screening and cessation assistance offered to U.S. adults during their hospital outpatient clinic visits. Data was obtained from the 2005-2010 Hospital Ambulatory Medical Care Survey among patients that were aged 18 years or older (n=148,727). The results demonstrated that tobacco use screening was reported in 63% of hospital outpatient visits, and cessation assistance was reported in 24.5% of visits among current tobacco users. The authors discussed the important role that healthcare professionals play in consistently identifying and documenting their patients' tobacco status through screening. They also discussed how healthcare professionals should consistently be providing their patients with appropriate tobacco cessation assistance. When identifying patients for tobacco use, the Agency for Healthcare Research and Quality (AHRQ) (2012) recommends five major steps of intervention for tobacco cessation for healthcare professionals. This begins with identifying users via screening and then determining the appropriate interventions based on the patient's willingness to quit. The five major steps include: ask, advise, assess, assist, and arrange. The Montana Quitline (2022) follows the AHRQ recommendations with adaptation to "2 A's and a

R.” This abbreviated three-step intervention is an evidenced-based method for healthcare professionals to utilize. This intervention recommends that every patient be:

- asked if they use tobacco at every visit.
- advised to quit if they are a user.
- referred to the Quitline or another cessation resource.

“2 A’s and an R” recommends phrasing the question of tobacco use in a way that provokes a “yes” or “no” answer. This can include questions such as: “Do you use tobacco?” “Have you ever used tobacco?” or “Does anyone in your house use tobacco?” Step two requires that the healthcare professional advise all tobacco users to quit by providing a clear message about quitting that is supportive and positive. The third step of this intervention involves referring those that are ready to quit, to a quitline (Montana Tobacco Quitline, 2022).

According to Ahluwalia et al. (2021), a cross-sectional study, an estimated 176.8 million adults from 31 countries attempted to quit tobacco within 12 months of their data being collected and most did so without assistance from a healthcare provider. In the countries that were assessed, the majority of those who smoked tobacco and made an attempt to quit, did so without contacting a quitline. They report this is partially due to the fact that quitlines were not available in some countries. However, they did note that in countries with resource-limited settings, quitlines can play a greater role in assisting people to quit smoking. The state of Montana has a tobacco quitline available to tobacco users that is funded by the public health department (Montana Tobacco Quitline, 2022). It is a free program operated by the National Jewish Health that assists a tobacco user in cessation. The program offers self-paced, customized plans that include the use of a quit coach and cessation medications.

A qualitative study by Eaves et al. (2016) discussed the usefulness of patient provided printed educational materials in tobacco cessation counseling. The impact of targeted tobacco cessation printed educational materials use, along with a training designed for chiropractors, acupuncturists, and masseurs were evaluated through qualitative interviews with 53 practitioners and 38 patients. Materials were found to legitimize tobacco-related knowledge and conversations between the practitioners and patients. With educational prompts of the handout, practitioners' increased their willingness to approach the topic of tobacco cessation with patients while creating an effective way to communicate tobacco-related information. Lastly, the printed educational resources were given to patients that were not willing to engage in direct discussion of tobacco cessation with the practitioners. The benefit of providing education allows for patient self-empowerment if the patient chooses future tobacco cessation. Lindson et al. (2021) concur with the idea that providing patients with printed materials can increase the likelihood of tobacco cessation. In the meta-analysis, the authors focused on the effectiveness of healthcare provider strategies to increase the success of smoking cessation interventions in primary care settings, and if these interventions effected smoking cessation . This analysis included 81 randomized control trials, which included 112,159 adult participants. The addition of tailored printed materials to standard smoking cessation treatment increased the number of people who had successfully remained abstinent from smoking at six months or more.

### Cessation Counseling Documentation

The CDC (2014) provides user guides to help staff implement evidence-based best practices that focuses on programs and interventions for tobacco cessation counseling. According to the CDC's (2014) user guide, the documentation of tobacco use and cessation treatment allows for the sharing of results with providers and staff as part of quality improvement initiatives. An electronic health record (EHR) is useful in: the documentation of tobacco use status; advising users to quit; offering cessation counseling; and creating a follow-up plan with the user. The documentation of such steps is crucial for a patient's plan of care to allow for the identification of tobacco users and the tracking of their cessation journey among fellow providers.

### Healthcare Staff Role

The third cross-sectional study by Al-Jdani et al. (2018) discussed the level of knowledge, attitude, and practices of smoking cessation counseling of primary healthcare providers in Saudi Arabia. The study was conducted from June 2016 through March 2017 in five primary healthcare centers in which the participants consisted of staff physicians, family medicine doctors, and dentists. They deduced that primary care physicians have poor knowledge of counseling on the cessation of smoking and their practices are unsatisfactory despite their positive attitude toward this role. Findings indicate workshops and training sessions are necessary to assist in understanding the significant role primary care providers play in smoking cessation counseling. A qualitative study by Rodgers-Melnick & Hooper (2020) was performed to explore the perceptions of tobacco cessation for patients, the perceived role that oncology providers play in addressing patients' tobacco use, the facilitators and barriers to providing

cessation services, and the perceptions and use of tobacco cessation resources. The researchers conducted 24 qualitative interviews with oncology providers at the National Cancer Institute-Designated Comprehensive Cancer Center in Cleveland, Ohio. The interviewed providers perceived tobacco cessation as low priority relative to providing direct cancer treatment and addressing acute complications. However, the findings did support provider training to increase delivery of evidence-based cessation advice and facilitate engagement from the patients by providing them with more resources early in their cancer treatment.

According to the American Nurses Association (2020), nurses should follow established guidelines that require the screening and counseling of all patients using tobacco, exposure to secondhand smoke, and referring youth to the appropriate follow-up care. Nursing is responsible for the design of the care delivery system that addresses the determinants of health associated with tobacco use. They also are responsible in providing evidenced-based cessation counseling that is effective and appropriate. To be proactive, tobacco cessation screening and education is imperative for nurses working with high-risk smoking populations, such as those seen in an ENT clinic.

### Hospital and Post-Operative Impact

A cross-sectional study by Hatcher et al. (2016) assessed self-reported tobacco use status and recent tobacco exposure via urinary cotinine, a metabolite of nicotine, on surgery day for head and neck cancer to determine the effects of tobacco use on postoperative outcomes. The outcomes measured included hospital length of stay and complications. The results demonstrated that most participants (n=89) were current (32.6%) or former (52.8%) tobacco users in which complications occurred in 41.6%. The mean hospital length of stay was 4.0 days in low acuity

procedures and 8.8 days in high acuity procedures. Former and current smokers were over six times more likely to experience post-operative complications than never smokers and length of stay in the hospital was increased by 4.4 days for current smokers and 2.3 days for former smokers. The researchers drew the conclusion that tobacco use was associated with postoperative complications such as higher rates of infection, hemorrhage, fistula formation and free flap necrosis. In addition, findings suggested that pre-operative screening may assist in identifying at-risk patients, which is crucial for ENT clinics as their interventions are often surgical.

### Discussion

This literature review provides a critical appraisal of studies on tobacco screening and cessation counseling among adults aged 15 years or older in 33 different countries. There was a great variability in study design, setting, and sample population investigated. The literature recommended screening patients for tobacco use to identify those that are at an increased risk of developing poor health outcomes and post-operative complications related to tobacco use. Proactive efforts require that healthcare professionals become more attune to the prevalence of tobacco use and ensure that tobacco cessation counseling is being offered to their patients. Comprehensive smoking cessation efforts require healthcare professionals consistently identify and document tobacco use status by screening the patients that present to outpatient clinics (Jamal et al., 2015). Patients visiting their primary care provider (PCP) have a higher prevalence of receiving cessation counseling and treatment, as PCPs have more focus on preventative care compared to specialty clinics. This is also true as tobacco cessation counseling can be included as part of a wellness or preventive care visit. In addition, advice on the cessation of tobacco use

has a significant effect on patients' motivation and ability to quit when provided by a healthcare professional (Rodgers-Melnick & Hooper, 2020).

### Implications for Practice

The literature review findings support screening all new patients for tobacco use at an ENT clinic in Montana, providing written education on tobacco cessation and referring them to the Montana Quitline. Through screening patients for tobacco use, patients who may be at higher risk of developing head and neck cancer, as well as other health conditions that tobacco use is known to cause, are proactively identified and counseled. The Montana Quitline (2022) recommends screening patients with the "2 A's and an R" intervention including a referral for positive screens to the Quitline for cessation resources. A benefit of using the Montana Quitline is free on-line staff training and printed patient materials for providers to use during assessment and counseling.

## PROJECT PROPOSAL

### Introduction and Problem

The use of tobacco can lead to disease and compromise almost every organ of the body due to carcinogens impact on weakening the immune system and possibly creating cancer (CDC, 2020). Head and neck cancer is one of 12 types of cancer caused by chemicals in tobacco products (CDC, 2020). Globally, head and neck cancers are the sixth most common type of cancer in which annually 550,000 people are diagnosed and 380,000 people die from head and neck cancers, making the need for tobacco cessation conversations much more important (Jethwa & Khariwala, 2017). Through screening, healthcare professionals play a vital role in consistently identifying and documenting the smoking status of their patients (Jamal et al., 2015). Positive tobacco use screenings require healthcare professionals to consistently provide smokers with appropriate cessation assistance.

### Problem Statement

While the healthcare professionals at the ENT clinic are aware of the risks involved with tobacco use, they are still not screening 100% of their patients or providing tobacco users with educational materials or resources to assist in cessation. This problem is significant given they are seeing patients with tobacco related head and neck cancer weekly. This quality improvement project aims to screen for tobacco use in all new patients that present to the ENT clinic. When those that screen positive are agreeable, they will be provided with educational resources from the Montana Quitline and be referred to the Montana Quitline to assist them in their journey of smoking cessation.

### Organizational Microsystem Assessment

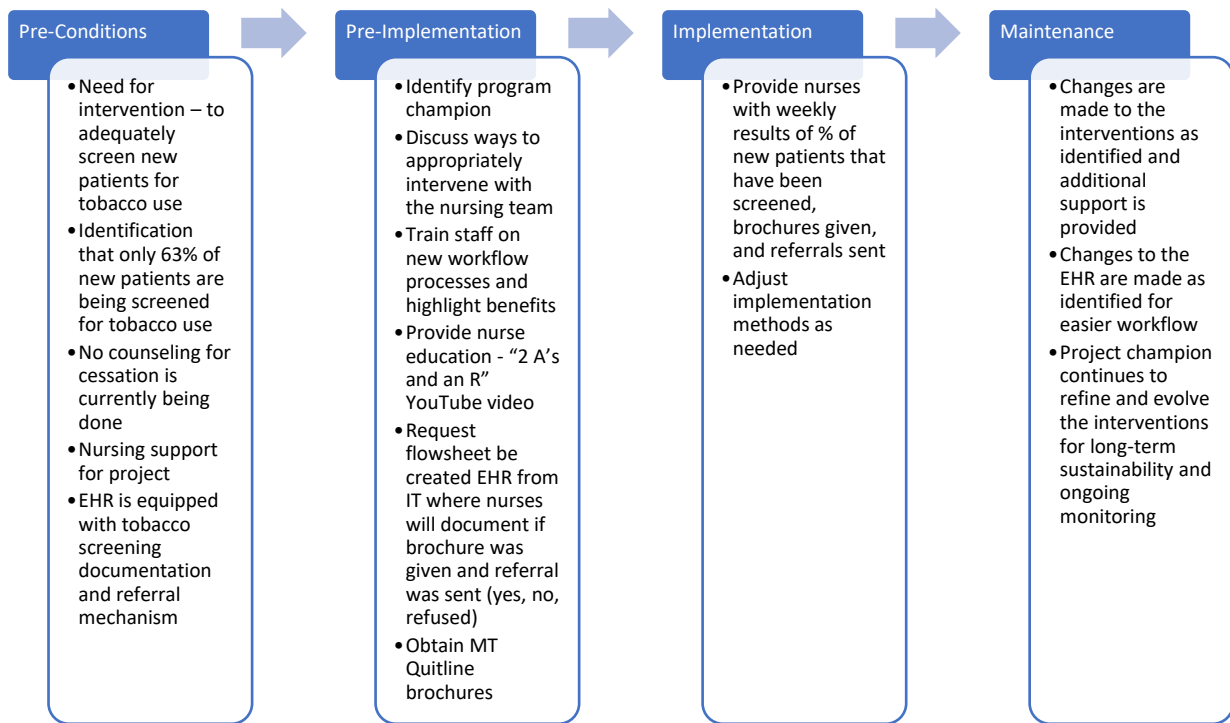
Via in-person communication, potential quality improvement (QI) topics were reviewed, and the ENT nursing team collectively identified a lack of sufficient tobacco screening and cessation efforts as necessary. To substantiate the nursing team's perception, a report was obtained from the EHR that demonstrated only 63% of new patients seen within the last six months at the ENT clinic were screened for tobacco use. This rate is insufficient given that the current organizational policy is that 100% of new patients are screened for tobacco use at all primary care and specialty clinics. In addition, there are 50 patients seen at the ENT clinic annually that have head and neck cancer as a present or past diagnosis, further substantiating the need for improved screening rates of tobacco use. Because of the strong correlation between tobacco users and head and neck cancers, ENT providers and nurses are crucial in educating patients about the health risks of using tobacco and in providing effective cessation resources for their patients (Jamal et al., 2015).

### Rationale

The QI framework chosen to guide this project is Replicating Effective Programs (REP). This conceptual framework is well-suited for implementing healthcare interventions by specifying the steps needed to maximize reliability while allowing opportunities for improvement throughout the project to ensure clinical transferability is achieved (Kilbourne et al., 2007). The REP framework allows for changes to be made throughout the project so long-term goals are more achievable after the completion of the project. There are four phases that comprise the REP framework including: pre-conditions (e.g., identifying the need, the target

population, and appropriate interventions); pre-implementation (e.g., intervention packaging and community input); implementation (e.g., dissemination of packaging, training, technical assistance, and evaluation); and maintenance or evolution (e.g., preparing the intervention for sustainability). Each phase of the chosen framework is demonstrated below, along with its relation to the project.

Figure 1. REP Framework.



Specific Aims

As of 2021, 16.4% of Montana’s adult population smoked cigarettes making the need for this project crucial to the health and well-being of the Montana population (America’s Health Ranking, 2021). With these purposeful efforts, the future aim is a reduction in tobacco related cancers, especially head and neck cancers, seen at the project site.

Pre-implementation of the project occurred from August through December 2022 and included chart review, stakeholder discussion, documentation assessment, and determination of screening and referral resources. The implementation for this QI project will begin on January 9, 2023. The short-term goals will include within two weeks of implementation, January 23, 2023, 100% of new patients over the age of 18 who present to the ENT clinic will be screened for tobacco use. By January 23, 2023, the nurses will be providing 50% of the patients who screen positive for tobacco use with educational resources provided by the Montana Quitline. In addition, within two weeks the nurses will send an electronic referral to the Montana Quitline on 50% of the patients that screen positive for tobacco. The intermediate-term goals include by the proposed project completion date of February 17, 2023, 75% of the patients that screen positive for tobacco use will be provided with educational resources from the Montana Quitline. In addition, by the proposed project completion date, the nurses will send an electronic referral to the Montana Quitline on 75% of the patients that screen positive for tobacco use. While the goal for screening patients is 100%, providing patients with brochures and sending referrals is not to account for the patient's right for refusal. The long-term goal for this project is by January 2024 the ENT clinic nurses will continue standardized tobacco cessation screening on 100% of new patients over the age of 18.

### Context

The project site is an outpatient ENT clinic affiliated with a non-profit healthcare organization in Montana. The clinic is located on the main hospital campus. There are two providers in the clinic who see patients Monday-Friday: one physician and one nurse practitioner. The physician sees patients on Mondays, Wednesdays, and Fridays in the clinic and

then is in the operating room on Tuesdays and Thursdays. The nurse practitioner sees patients Monday-Thursday. The clinic sees, on average, 300 patients per month. The patient population consists of a vast array of patient ages ranging from newborns through the aging adult. The intervention of screening patients for tobacco use will include all new patients over the age of 18 that present to the clinic during the six-week project timeline.

This QI project will include a team of key stakeholders to help facilitate the success of the project. The stakeholders include the four nurses employed at the ENT clinic, as well as the two providers. In addition, the clinic manager will aid in obtaining EHR data and supporting sustainability.

### Intervention and Implementation

The DNP project will be implemented and assessed over a six-week period beginning January 9, 2023 and ending on February 17, 2023. To effectively implement this QI project, there are several interventions required to achieve the SMART goals discussed above. In the project pre-implementation stage, the four clinic nurses will watch a YouTube video that demonstrates the most effective way to screen a patient for tobacco use, according to the Montana Quitline called “2A’s and a R” which is a supported assessment strategy. This brief three-step intervention recommends that every patient be asked if they use tobacco, advised to quit if they are a user, and referred to the quitline or to another cessation resource. Watching this evidence-based video will provide the nurses with the tools and information to successfully communicate and educate patients regarding tobacco use. The pre-implementation stage will further include development of a flowsheet by the DNP student and informational technology (IT) within the EHR. This flowsheet will be used for the nurses to document if a brochure was

given to the patient and if a referral was sent or if the patient refused either option (yes, no, refuse). This idea was generated after discussion among stakeholders with the goal of wanting to offer patients opportunities based on the patient's motivation for tobacco cessation. As of now, this flowsheet has been requested to be created by the IT department so there is no figure yet available. In the implementation stage, the nurses will begin screening new patients who present to the ENT clinic for tobacco use by documenting the status of a patient's use within the EHR. New patients are already identified in the EHR appointment notes which are visible to all nurses. The nursing screening form is also already created in the EHR and the nurses are familiar with its location.

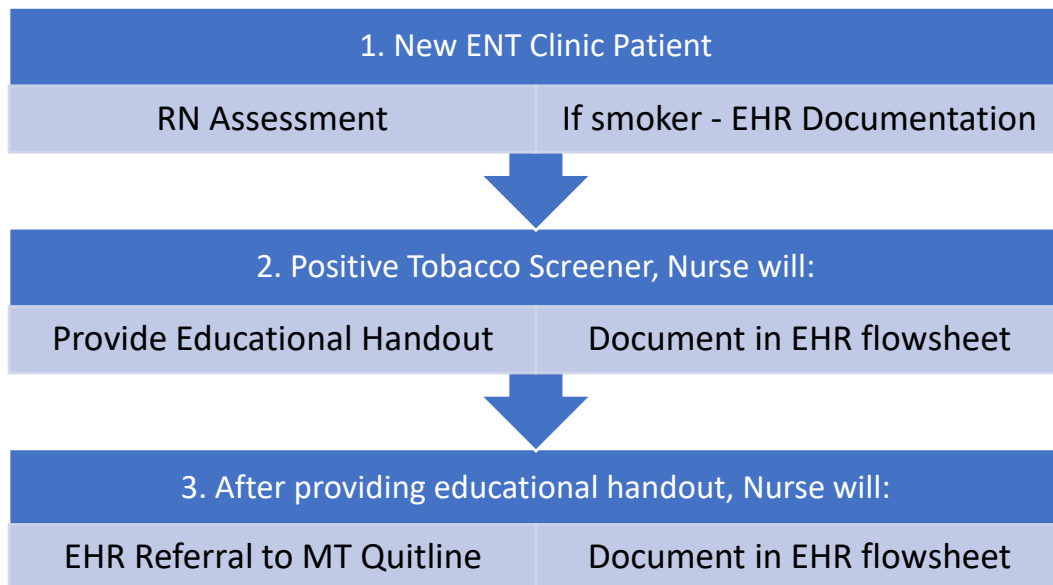
Figure 2. Tobacco Screening in EHR.

The screenshot shows a digital form titled "Substance Use" with a purple header. Below the header, there is a section for "Tobacco" with a dropdown arrow. Underneath, there are two sub-sections: "Smoking" and "Smokeless". The "Smoking" section contains five buttons: "Never" (highlighted in blue), "Former", "Every Day", "Some Days", and "Unknown". To the right of these buttons is a "Passive exposure:" label followed by three buttons: "Never", "Past", and "Current". The "Smokeless" section contains four buttons: "Never" (highlighted in blue), "Former", "Current", and "Unknown". Below these is a "Cessation" section with a label "Counseling given:" followed by "Yes" and "No" buttons. At the bottom, there is a "Comments" section with a rich text editor toolbar containing icons for undo, redo, bold, italic, link, unlink, and a "100%" zoom level. Below the toolbar is a large empty text box for entering comments.

If a patient screens positive, the nurses will provide the patient, if agreeable, with an educational resource (see Appendix A). The smoking cessation resource is a free brochure, obtained in the

project pre-implementation stage, from the Montana Quitline. The nurses will also send an electronic referral to the Montana Quitline to assist those interested in their cessation journey. Figure 3 (see below) will be posted in the exam rooms as a visual reminder of the new nursing process. The Montana Quitline is an excellent resource for tobacco users and for healthcare professionals educating their patients on the effects of tobacco use as an array of printed patient materials are available to order at no cost. Therefore, there is a \$0 cost requirement to implement and execute this project, as the free printed education materials will be the only resource that is not already available to the clinic nurses by the organization. The DNP student is volunteering at minimum 270 hours at an average nursing salary of \$36.65 per hour. This equates to \$9,895.50 of site savings for project implementation and completion.

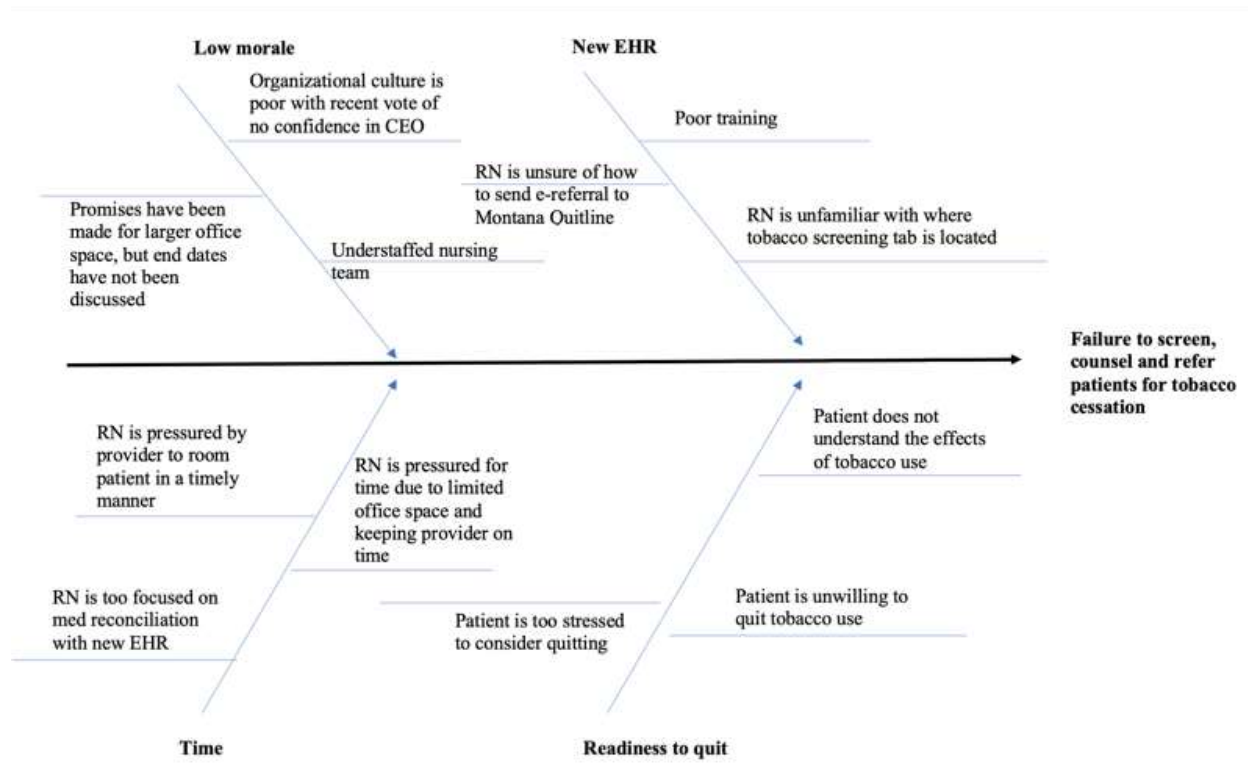
Figure 3. Process Flowchart.



Although the site stakeholders are supportive of the project and there is no cost associated with implementation, a multitude of site-specific barriers may present throughout the project.

The larger organization, with which the ENT clinic is affiliated, began using a new EHR during pre-implementation. This practice change altered the pre-condition stage of this project. The organization previously documented through an Epic managed platform and during pre-implementation developed an Epic platform of their own. This transition has been difficult for the ENT clinic nurses, as several workflow changes occurred without nursing being informed. This also causes a barrier of time constraint on the nurses as they are learning the new EHR and may not have the mental capacity to add an additional process change. In addition, morale in the clinic and hospital system due to changing organizational culture and uncertain leadership. Currently, systemwide clinics are understaffed and promises for larger office spaces have no end date in sight. An additional potential barrier to the long-term goal of decreasing tobacco use in the community is a patient's lack of readiness to quit smoking. Some patients may not understand the effects of tobacco use or are too stressed and unwilling to consider cessation at time of appointment. These barriers will be addressed prior to implementation and throughout the project by stakeholder discussion and data analysis. It is expected that workflow changes will be needed after ongoing in-person communication with the nursing staff. The staff will be supported by this DNP student's weekly presence and will receive education prior to implementation on how to execute each step and intervention of this process change.

Figure 4. Fishbone Diagram for Project Barriers.



Evaluation

While the cessation of tobacco can be difficult, screening for tobacco use, counseling on cessation and providing education with quitline referrals are attainable interventions that aid in decreasing the rates of tobacco use (Eaves et al., 2016). The second intervention, after identifying a patient as a tobacco user via screening, will be to provide the patient with a brochure from the Montana Quitline. Each nurse is responsible for documenting that a brochure has been given in the EHR flowsheet. The third intervention is to refer the patient to the Montana Quitline via the EHR. When the nurse records that a brochure was given to a particular patient in the EHR flowsheet, she will also document if a referral was sent. The EHR flowsheet will

include both the documentation of brochures given and referrals made and will have options for the nurse to choose from including “yes,” “no,” or “refused.” Two reports will be obtained from the data in the EHR and compared to each other. The first report will be the number of new patients that were screened for tobacco use. The second report will include the flowsheet data that consists of whether a brochure was given, and if a referral made. These interventions will be reviewed on a weekly basis and data will be compared from the screening report and the flowsheet report. The data will be shared with the clinic nurses via run charts by the DNP student at the in-person weekly nurses’ meeting to determine if adjustments in the workflow need to be considered. In pre-implementation, this DNP project was submitted for expedited review to the Montana State University IRB. No PHI will be accessed as data analyzed is in raw numbers and percentages evaluating the nursing process.

Table 1. SMART Goal #1

<b>SMART Goal #1:</b> Within two weeks of implementation, by January 23, 2023, 100% of new patients over the age of 18 who present to the ENT clinic will be screened for tobacco use.		
Pre-implementation:		
<ul style="list-style-type: none"> <li>The four nurses employed at the ENT clinic will watch a YouTube video, “2A’s and a R,” that demonstrates how to effectively screen patients for tobacco use.</li> <li>The DNP student will confirm that the nurses know where to chart the tobacco screening results within the EHR.</li> </ul>		
Implementation:		
<ul style="list-style-type: none"> <li>The patients will be screened for tobacco use after they have been properly identified and roomed by the clinic nurses in the exam rooms.</li> </ul>		
<b>Data to be collected</b>	<b>Method of Collection and who is responsible</b>	<b>Planned data analysis</b>
<ol style="list-style-type: none"> <li>Numerator = total # of new patients screened for tobacco</li> <li>Denominator = total # of new patients</li> </ol>	The clinic manager will obtain a report from the EHR that lists the new patients screened for tobacco use.	The DNP student will: <ul style="list-style-type: none"> <li>Share the % results via a run chart of the report at the weekly nurses meeting to determine if adjustments in the workflow need to be considered.</li> <li>Record recommended changes.</li> <li>Adapt process flow for the next week.</li> </ul>

Table 2. SMART Goal #2

<b>SMART Goal #2:</b> Within two weeks of implementation, by January 23, 2023, the nurses will be providing 50% of the patients who screen positive for tobacco use with a printed brochure from the Montana Quitline.		
Pre-implementation:		
<ul style="list-style-type: none"> <li>The DNP student will:           <ul style="list-style-type: none"> <li>-Order 60 brochures from the Montana Quitline and place 20 in each of the three exam rooms for nurse access.</li> <li>-Confirm that IT has created a flowsheet within the EHR for nurses to document if brochure was given to patient.</li> <li>-Confirm the nurses know where to document if a brochure was given to a patient in the flowsheet in the EHR.</li> </ul> </li> </ul>		
Implementation:		
<ul style="list-style-type: none"> <li>The nurses will:           <ul style="list-style-type: none"> <li>-Provide the patients with a brochure if they screened positive.</li> <li>-Document in the EHR that brochure was given to patient.</li> </ul> </li> </ul>		
<b>Data to be collected</b>	<b>Method of Collection and who is responsible</b>	<b>Planned data analysis</b>
1. Numerator = total # of positive tobacco screening patients given the MT Quitline tobacco cessation brochure	The nurses will document if a patient received a brochure in the flowsheet in the EHR.	The DNP student will: <ul style="list-style-type: none"> <li>- Share how many patients were given a tobacco cessation brochure via a run chart at the weekly nurses meeting.</li> </ul>
2. Denominator = total # of positive tobacco screening patients		<ul style="list-style-type: none"> <li>- Record recommended changes.</li> <li>- Adapt process flow for the next week.</li> </ul>

Table 3. SMART Goal #3.

<b>SMART Goal #3:</b> Within two weeks of implementation, by January 23, 2023, the nurses will send an electronic referral to the Montana Quitline on 50% of the patients that screen positive for tobacco use.		
Pre-implementation:		
<ul style="list-style-type: none"> <li>The DNP student will:           <ul style="list-style-type: none"> <li>-Contact the Montana Quitline to review requirements for sending an electronic referral to them via the EHR.</li> <li>-Demonstrate how to send an electronic referral to the Montana Quitline for positive tobacco use screening.</li> <li>-Confirm that IT has created a flowsheet within the EHR for nurses to document if referral was sent.</li> <li>-Confirm the nurses know where to document if referral was sent in the flowsheet in the EHR.</li> </ul> </li> </ul>		
Implementation:		
<ul style="list-style-type: none"> <li>The nurses will:           <ul style="list-style-type: none"> <li>- Send an electronic referral.</li> <li>- Document in the flowsheet if a referral was sent to the MT Quitline.</li> </ul> </li> </ul>		

Table 3. SMART Goal #3 continued.

Data to be collected	Method of Collection and who is responsible	Planned data analysis
1. Numerator = total # of positive tobacco screening patients that a referral was sent to the MT Quitline 2. Denominator = total # of positive tobacco screening patients	The nurses will document if a referral was sent to the MT Quitline in the EHR.	The DNP student will: <ul style="list-style-type: none"> <li>- Share how many patients had a referral sent via a run chart at the weekly nurses meeting.</li> <li>- Record recommended changes.</li> <li>- Adapt process flow for the next week.</li> </ul>

Table 4. SMART Goal #4.

<b>SMART Goal #4:</b> By six-week project completion, February 17, 2023, 75% of the patients that screen positive for tobacco use will be provided with a tobacco cessation brochure from the Montana Quitline.		
Implementation:		
<ul style="list-style-type: none"> <li>• The clinic manager will obtain a report from the EHR that displays how many new patients were screened for tobacco use.</li> <li>• The DNP student will:               <ul style="list-style-type: none"> <li>-Compare the report to the flowsheet to determine how many patients that screened positive for tobacco use were given a brochure.</li> <li>-Make final adaptation to process flow for maintenance phase</li> </ul> </li> </ul>		
Data to be collected	Method of Collection and who is responsible	Planned data analysis
1. Numerator = total # of positive tobacco screening patients given the MT Quitline tobacco cessation brochure 2. Denominator = total # of positive tobacco screening patients	The nurses will document if a patient received a brochure in the flowsheet in the EHR.	The DNP student will: <ul style="list-style-type: none"> <li>- Share how many patients were given a tobacco cessation brochure via a run chart at the weekly nurses meeting.</li> <li>- Record recommended changes.</li> <li>- Adapt process flow for maintenance phase.</li> </ul>

Table 5, SMART Goal #5.

<b>SMART Goal #5:</b> By six-week project completion, the nurses will send an electronic referral to the Montana Quitline on 75% of the patients that screen positive for tobacco use.		
Implementation:		
<ul style="list-style-type: none"> <li>The clinic manager will obtain a report from the EHR that displays how many new patients were screened for tobacco use.</li> <li>The DNP student will:               <ul style="list-style-type: none"> <li>-Compare the report to the flowsheet to determine how many patients that screened positive for tobacco use were sent a referral to the MT Quitline.</li> <li>-Make final adaptation to process flow for maintenance phase.</li> </ul> </li> </ul>		
<b>Data to be collected</b>	<b>Method of Collection and who is responsible</b>	<b>Planned data analysis</b>
1. Numerator = total # of positive tobacco screening patients given the MT Quitline tobacco cessation brochure	The nurses will document if a referral was sent to the MT Quitline in the EHR.	The DNP student will: <ul style="list-style-type: none"> <li>- Share how many patients had a referral sent via a run chart at the weekly nurses meeting.</li> </ul>
2. Denominator = total # of positive tobacco screening patients		<ul style="list-style-type: none"> <li>- Record recommended changes.</li> <li>- Adapt process flow for maintenance phase.</li> </ul>

Table 6. SMART Goal #6.

<b>SMART Goal #6:</b> By January 2024 the ENT clinic nurses will continue standardized tobacco cessation screening on 100% of new patients over the age of 18.		
Maintenance:		
<ul style="list-style-type: none"> <li>The clinic manager will obtain a report from the EHR that displays how many new patients were screened for tobacco use on a quarterly basis.</li> </ul>		
<b>Data to be collected</b>	<b>Method of Collection and who is responsible</b>	<b>Planned data analysis</b>
The number of new patients that were screened for tobacco use when presenting to the ENT clinic.	The nurse manager will run a report from the electronic health record on a quarterly basis.	The clinic manager will share these results with the nursing team in January 2024.

## QUALITY IMPROVEMENT MANUSCRIPT

Background

While the use of tobacco has declined by 8.4% since 2005, 12.5% of the American population is still smoking cigarettes (CDC, 2022a). Among tobacco users, 86.7% smoke combustible tobacco products and 19.0% use more than two tobacco products (i.e. cigarettes, cigars, cigarillos, electronic cigarettes or smokeless tobacco) with cigarettes reported in 2017 as the most commonly used (Wang et al., 2018). While no tobacco use is considered safe, combustible products that burn tobacco are known to be the most harmful to the user's health (FDA, 2022). Cigarettes are composed of a mix of over 7,000 toxic chemicals that when inhaled, can cause a multitude of disease and illness (FDA, 2022).

Carcinogens within tobacco lead to disease, compromise most vital organs, weaken the immune system, and set off a mutagenic pathway that can result in 12 different types of cancer including: acute myeloid leukemia, bladder, lung, cervix, colon and rectum, esophagus, kidney, liver, pancreas, stomach, mouth and throat (oral cavity and pharynx), and voice box (larynx) (FDA, 2022; CDC, 2020). In fact, one in every three cancer deaths in the U.S. is linked to smoking (FDA, 2022).

Head and Neck Cancer

One of the many cancers strongly associated with tobacco use is head and neck cancer (Jethwa & Khariwala, 2017). Head and neck cancer is a devastating disease that often results in death and/or debilitating disfigurement from the intensive treatment required. The risk for developing head and neck cancer is ten times more likely for smokers when compared to never-

smokers, and over 70% of new head and neck cancer diagnoses are related to alcohol and tobacco use (Jethwa & Khariwala, 2017). It is the sixth most common type of cancer in which annually 550,000 people are diagnosed with and 380,000 people die from worldwide (Jethwa & Khariwala, 2017). This specifically relates to tumors of the oral cavity, nasopharynx, oropharynx, hypopharynx, and larynx. Smoking cessation is one of the best ways a person can improve their health, regardless of their age or how long they have been smoking (CDC, 2020). Yet, there is still an estimated 30.8 million people who use tobacco that can result in an exorbitant amount of healthcare costs (CDC, 2020).

## Review of Literature

### Screening and Cessation Recommendations

Jamal et al. (2015) conducted a cross-sectional study to assess the prevalence, correlating factors, and trends of tobacco use screening and cessation assistance offered to U.S. adults during their hospital outpatient clinic visits. The results demonstrated tobacco use screening was reported in 63% of hospital outpatient visits, and cessation assistance was reported in 24.5% of visits among current tobacco users. Jamal et al. (2015) discussed the important role healthcare professionals play in consistently identifying and documenting their patients' tobacco status through screening. They also discussed how healthcare professionals should consistently be providing their patients with appropriate tobacco cessation assistance. When identifying patients for tobacco use, the Agency for Healthcare Research and Quality (AHRQ, 2012) recommends to healthcare professionals five major steps of intervention for tobacco cessation. Cessation efforts begin with identifying tobacco users via screening and then determining the appropriate interventions based on the patient's willingness to quit. The five major steps include: ask, advise,

assess, assist, and arrange. The Montana Quitline (2022) follows the AHRQ recommendations with adaptation to “2 A’s and an R.” This abbreviated three-step intervention is an evidenced-based method for healthcare professionals to utilize. This intervention recommends that every patient be:

- asked if they use tobacco at every visit.
- advised to quit if they are a user.
- referred to the Quitline or another cessation resource.

“2 A’s and an R” instructional video recommends phrasing the question of tobacco use in a way that provokes a “yes” or “no” answer. This can include questions such as: “Do you use tobacco?” “Have you ever used tobacco?” or “Does anyone in your house use tobacco?” Step two requires that the healthcare professional advise all tobacco users to quit by providing a clear message about quitting that is supportive and positive. The third step of this intervention involves referring those that are ready to quit, to a quitline (Montana Tobacco Quitline, 2022).

A qualitative study by Eaves et al. (2016) discussed the usefulness of patient provided printed educational materials in tobacco cessation counseling. Materials were found to legitimize tobacco-related knowledge and conversations between the healthcare practitioners and patients. With educational prompts of the handout, practitioners’ increased their willingness to approach the topic of tobacco cessation with patients while creating an effective way to communicate tobacco-related information.

#### Cessation Counseling Documentation

According to the CDC (2014), an electronic health record (EHR) is useful in the documentation of: tobacco use status; advising users to quit; offering cessation counseling; and

creating a follow-up plan with the user. The documentation of such steps is crucial for a patient's plan of care to allow for the identification of tobacco users and the tracking of their cessation journey among fellow providers caring for the patient.

### Healthcare Staff Role

According to the American Nurses Association (2020), nurses should follow established guidelines including screening and counseling of all patients using tobacco. Nursing is responsible for the design of the care delivery system that addresses the determinants of health associated with tobacco use. Nurses are also responsible in providing evidenced-based cessation counseling that is effective and appropriate. Thus, tobacco cessation screening and education is imperative for nurses working with high-risk smoking populations, such as those seen in an ENT clinic, to be proactive.

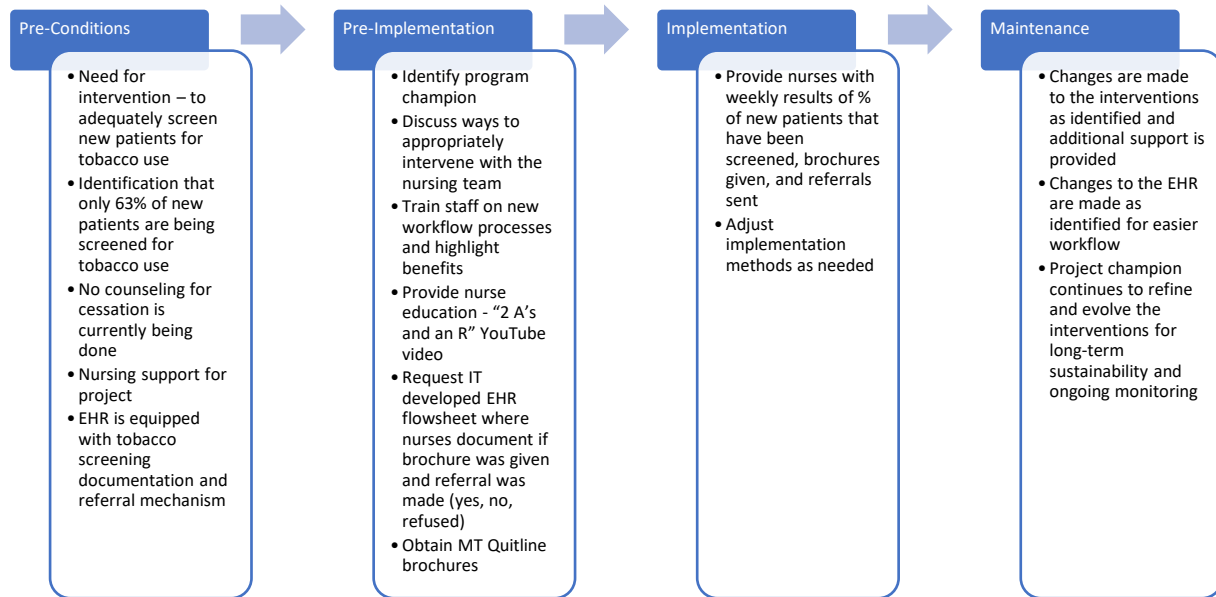
### Problem Statement

The clinic nurses at a Montana ENT clinic were aware of the risks associated with tobacco use but were not screening 100% of their patients or providing tobacco users with educational materials to assist in cessation. This problem is significant given they were weekly seeing patients with tobacco related head and neck cancer. This quality improvement project aimed to screen for tobacco use in all new patients who presented to the ENT clinic. When those who screened positive were agreeable, they were provided with educational resources from the Montana Quitline and referred to the Montana Quitline to assist them in their smoking cessation journey.

## Methods

The quality improvement framework chosen to guide the project was Replicating Effective Programs (REP). This conceptual framework was well-suited for implementing healthcare interventions by specifying the steps needed to maximize reliability, while allowing opportunities for improvement throughout the project to ensure clinical transferability is achieved (Kilbourne et al., 2007). The REP framework allowed for changes to be made throughout the project so long-term goals were more achievable after the completion of the project. Four phases comprise the REP framework including: pre-conditions (e.g., identifying the need, the target population, and appropriate interventions); pre-implementation (e.g., intervention packaging and community input); implementation (e.g., dissemination of packaging, training, technical assistance, and evaluation); and maintenance or evolution (e.g., preparing the intervention for sustainability). Each phase of the chosen framework is demonstrated below, along with its relation to the project.

Figure 1. REP Framework.



### Participants and Setting

Via in-person communication, potential quality improvement (QI) topics were reviewed, and the ENT nursing team collectively identified a lack of sufficient tobacco screening and cessation efforts as necessary. To substantiate this need, a report was obtained from the EHR that demonstrated only 63% of new patients seen at the ENT clinic between March 2022 through August 2022 were screened for tobacco use. This rate was insufficient given the current organizational policy expects 100% of new patients be screened for tobacco use. The ENT clinic saw approximately 60-70 patients per week, including new and established patients. In addition, there were 50 patients seen at the ENT clinic annually who had head and neck cancer as a present or past diagnosis, further substantiating the need for 100% screening rates of tobacco use. Because of the strong correlation between tobacco users and head and neck cancers, ENT

providers and nurses remain crucial in educating patients about the health risks of using tobacco and in providing effective cessation resources for their patients (Jamal et al., 2015).

Patient confidentiality was maintained throughout this project as there were no patient identifiers extracted from the EHR. Prior to implementation, this project was IRB approved and the site leadership accepted without further review required. Although screening patients was a job expectation of the nurses, offering educational materials and ordering referrals was voluntary and a new process.

### Specific Aims

As of 2021, 16.4% of Montana's adult population smoked cigarettes making the need for this project crucial to the health and well-being of the Montana population (American's Health Ranking, 2021). With these purposeful efforts, the future aim was to increase tobacco screening and provide a connection to cessation resources for patients.

Pre-implementation of the project occurred from August through December 2022 and included chart review, stakeholder discussion, documentation assessment, and determination of screening and referral resources. The implementation for this QI project began on January 16, 2023. The short-term goals included within two weeks of implementation, 100% of new patients over the age of 18 that presented to the ENT clinic would be screened for tobacco use. By January 30, 2023, the nurses would provide 50% of patients who screened positive for tobacco use a Montana Quitline brochure and order a referral. The intermediate-term goals included by the project completion date of February 24, 2023, 75% of the patients who screened positive for tobacco use would be provided with an educational resource from the Montana Quitline and have a referral ordered. While the goal for screening patients was 100%, providing patients with

brochures and ordering referrals was not set this high to account for the patient's right for refusal. The long-term goal for this project is by January 2024 the ENT clinic nurses would continue standardized tobacco cessation screening on 100% of new patients over the age of 18.

### Intervention

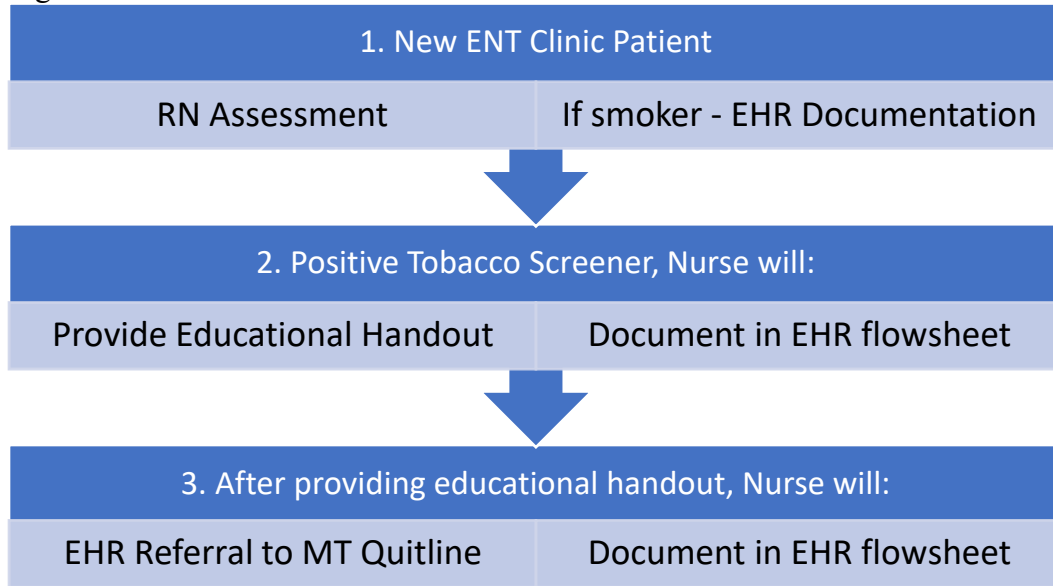
The DNP project was implemented and assessed over a six-week period. To effectively implement this QI project, there were several interventions required to achieve the specific aims discussed above. In the project pre-implementation stage, the four clinic nurses watched a YouTube video that demonstrated the most effective way to screen a patient for tobacco use, according to the Montana Quitline, called "2A's and an R". Watching this evidence-based video provided the nurses with the tools and information to successfully communicate and educate patients regarding tobacco use. The pre-implementation stage further included development of an EHR flowsheet by the DNP student with information technology (IT). This flowsheet was used for the nurses to document if a brochure was given to the patient and if a referral was sent, or if the patient refused either option (yes, no, refuse). This idea was generated after discussion among stakeholders who wanted to offer patients opportunities based on the patient's motivation for tobacco cessation. In the implementation stage, the nurses began screening new patients over the age of 18 that presented to the ENT clinic for tobacco use by documenting the status of a patient's use within the EHR (see Figure 2). New patients were already identified in the appointment notes within the EHR, which were visible to all nurses prior to the initiation of the appointment. The nursing screening form was already created in the EHR and the nurses were familiar with its location, thus documentation location supported established process.

Figure 2. Tobacco Screening in EHR

The screenshot displays the 'Substance Use' section of an EHR. Under the 'Tobacco' heading, there are three main categories: 'Smoking', 'Smokeless', and 'Cessation'.  
 - 'Smoking' includes buttons for 'Never', 'Former', 'Every Day', 'Some Days', and 'Unknown'. To the right, 'Passive exposure' has buttons for 'Never', 'Past', and 'Current'.  
 - 'Smokeless' includes buttons for 'Never', 'Former', 'Current', and 'Unknown'.  
 - 'Cessation' includes a 'Counseling given:' label with 'Yes' and 'No' buttons.  
 Below these is a 'Comments' section with a rich text editor toolbar containing icons for undo, redo, bold, italic, link, unlink, and a '100%' zoom level. A text input field is located below the toolbar.

If a patient screened positive and were agreeable, the nurses provided the patient with an educational resource (see Appendix A). The smoking cessation resource was a free brochure, obtained in the project pre-implementation stage, from the Montana Quitline. The nurses also ordered a referral to the Montana Quitline to assist those interested in their cessation journey. Figure 3 (see below) was posted in the exam rooms as a visual reminder of the new nursing process. The Montana Quitline was an excellent resource for tobacco users and healthcare professionals as it provided an array of printed patient materials available to order at no cost. Therefore, there was a \$0 cost requirement to implement and execute this project, as the printed education materials were the only resource that was not already available to the clinic nurses. The DNP student volunteered a minimum 270 hours at an average nursing salary of \$36.65 per hour. This equated to \$9,895.50 of site savings for project implementation and completion.

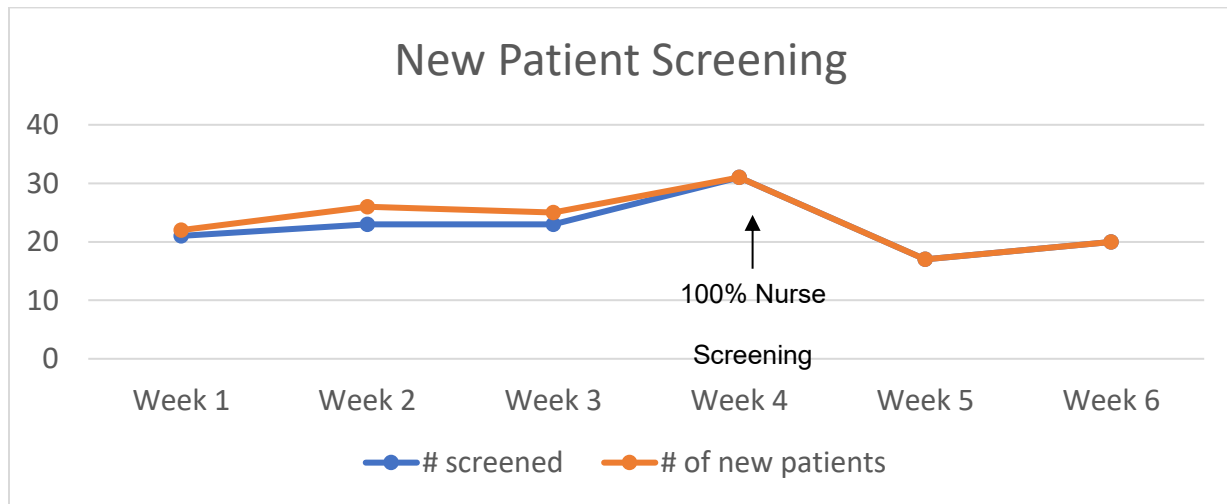
Figure 1. REP Framework.



### Results

The screening rate did increase from 63% during the pre-implementation phase to 100% during the fourth week of the implementation phase (see Figure 5). In total, there were 142 new patients who presented to the clinic throughout the 6-week implementation phase. In addition, during the implementation phase 16% (n=3) of the tobacco users identified were agreeable to receiving a Montana Quitline brochure and 5% (n=1) were agreeable to a referral to the Montana Quitline. Prior to project implementation, there were zero patients who received education on tobacco cessation as it was not available or offered to them.

Figure 5. New Patient Screening.



### Discussion

Each week, the project champion met with the nurses as a group to discuss the previous week's data. As noted in the results section, screening did not occur in 100% of the new patients until week four due to a new nurse who started employment one week prior to project implementation. Each week, the project champion reminded the new nurse when and where to document the screening. By the fourth week, the new nurse had developed more independence and confidence in practice, with closer attention paid to the screening process.

### Limitations

Several barriers influenced implementation including low morale organization-wide, time constraints on the nurses, simultaneously to project implementation was the development and introduction of a new EHR, and a patient's readiness to quit. Each barrier was addressed during this project. Morale within the ENT clinic improved after hiring a new clinic nurse, which offset nursing duties and included a total of four nurses participating in the project. However, the nurse

started her employment in the clinic the week prior to project implementation, which resulted in a limited amount of time for training on tobacco screening. While there was strong project buy-in from the nursing staff, there is still a limited amount of time a nurse can spend on tobacco cessation education during the rooming process of a patient. In addition, during the pre-implementation phase, the project champion requested a report be generated within the EHR from IT for data to be easily accessed on tobacco screening, brochures given, and referrals ordered. Due to the correlation of the new EHR introduction and the project timeline, IT was unable to generate the requested report. The hope of an automated report resulted in the project implementation date being delayed by one week to give IT more time to generate the report, which ultimately could not be completed. For sustainability of this project, it is recommended that a report be generated by IT so the project champion can continue to monitor the data.

Following implementation, nurses noted the largest influence on education and referral receptivity was the patient's readiness to quit. Furthermore, while the nurses appreciated watching the "2 A's and an R" YouTube video to provide them with the appropriate scripting, they found most patients were not interested in quitting tobacco or learning more about the harmful effects of tobacco. The nurses anecdotally mentioned that some patients had previously tried using the Montana Quitline and were not interested in attempting to quit at that time. The literature review did not provide rates of refusal or receptiveness to anticipate on the patient's behalf.

### Conclusion

This quality improvement project did increase nurses' rates of tobacco screening for new patients over the age of 18 who presented to the ENT clinic. However, the implications of time

constraint on the nurses and the patients' readiness to quit proved to decrease the amount of Montana Quitline brochures given and referrals ordered. While the specific aims were not met for this QI project, education regarding tobacco cessation was provided to more patients in the ENT clinic than ever before, as this was a new process. Nursing education on tobacco cessation and offering Montana Quitline referrals yielding increased topic awareness and discussion amongst the nurses and allowed for a change in nursing practice. To achieve the long-term goal, the project champion will continue to work with IT in generating a report that allows for easy extraction of the monitoring data. The nurses will continue to screen 100% of the new patients who present to the ENT clinic and educating users on cessation with the hope of decreasing the amount of tobacco users and head and neck cancer in the community.

## DNP ESSENTIALS REFLECTION

DNP Essential I Reflection – Scientific  
Underpinnings for Practice

During the spring semester of 2020 in Evidence Based Practice NRS604, I worked in collaboration with team members to develop a PICOT question relevant to current practices. Our PICOT question was as follows: “Are individuals visiting their PCP who have formal PHQ-9 administration compared to those with no suicide screening at a decreased risk for suicidal ideation within 30 days of visiting their PCP?” This assignment required our group to analyze Joiner’s Interpersonal Theory of Suicide which allowed us to focus on “the patterning of human behavior in interaction with the environment in normal life events and critical life situation” (AACN, 2006, p. 9). This assignment also encouraged our use of science-based theories to determine the significance of health care delivery phenomena and evaluate the effectiveness of the PHQ-9 screening form in preventing suicide. Working as a group during this project allowed us each to take on tasks that further progressed our skills to becoming an APRN and leader.

DNP Essential II Reflection – Organizational  
and Systems Leadership for Quality  
Improvement and Systems Thinking

In the course NRS611, Program, Planning and Evaluation, I was assigned to a group in which we completed the process of assessing, planning, implementation, and evaluation of outcomes and effectiveness for a quality improvement project. We chose to implement a process in which each patient seen within a primary care clinic were screened for suicide. This assignment met DNP Essential II which focuses on leadership and organizational skills. As an

APRN, I will be expected to be a leader of change within our healthcare system. This includes the ability to mold models of care to distinct practice settings, evaluate change in terms of outcomes and quality improvement, and sustain change through leadership, all of which are central features of successful quality improvement (AACN, 2006). This project provided me the opportunity to utilize the knowledge I had gained, tools I had been introduced to, and thereby, evaluate the success of our evidence-based intervention.

The NRS 611 assignment also enhanced my skills using the PDSA cycles to improve quality of care for patients by accepting that multiple cycles are typically required in order to develop a stronger project with more resilient outcomes. By augmenting these skills, this assignment met DNP Essential II as organizational and systems leadership are critical for DNP graduates to improve patient and healthcare outcomes. Doctoral level knowledge and skills in these areas are consistent with nursing and healthcare goals to eradicate health disparities while promoting patient safety and excellence in practice within our communities.

DNP Essential III Reflection – Clinical Scholarship  
and Analytic Methods for Evidence-Based Practice

The third DNP Essential was demonstrated in my work throughout completion of NRS 675 scholarly project. My project focused on tobacco cessation in an ENT clinic by screening 100% of the new patients that presented to the clinic over the age of 18 and providing tobacco users with cessation education. This project allowed me to “design, direct, and evaluate quality improvement methodologies to promote safe, timely, effective, efficient, equitable, patient-centered care” (AACN, 2006, p. 12). By completing this project, I was able to determine the steps to translate research into practice through review of literature and implementation of

quality improvement processes discussed in Essential II. I also defended my work to my fellow colleagues and staff for dissemination and generated an executive summary, detailing the process and future recommendations for the project site's leadership team.

DNP Essential IV Reflection - Information Systems/  
Technology and Patient Care Technology for the  
Improvement and Transformation of Healthcare

In Health Care Informatics, NRS610, I completed an assignment that involved a clinical practice program and management plan. This assignment operationalized what I learned in Healthcare Informatics into real patient care by creating a management plan for a hypothetical practice program involving pre-diabetic patients. My assigned group received descriptive data on measures identified and we were required to interpret the data, then make recommendations using a management plan. Our group chose to implement an exercise program for our identified pre-diabetic patients and monitor their progress through the patient portal. DNP graduates are distinguished by their abilities to use information systems/technology to support and improve patient care in healthcare systems and provide leadership within healthcare systems and educational settings (AACN, 2006). Because information systems and technology have become such a large aspect of providing patient care, I found this assignment especially useful in brainstorming ways the role of technology can play for clinicians while providing care. This assignment was beneficial and met DNP Essential IV by providing our group an opportunity to create a management plan for pre-diabetic patients, while also using our creativity and the potentials of technology to provide care for this at-risk patient group. For example, our management plan provided fitness trackers to the patients identified, which uploaded their activity to the patient portal system for the team to access and assess their progress for reaching

the goal of 30 minutes of vigorous exercise three times per week. DNP graduates must be proficient in the use of information systems/technology resources in order to fully understand its potential, implement quality improvements initiatives and support practice and administrative decision-making. Throughout this class, we also learned the ways that technology can cause negative effects related to ethical, regulatory, and legal issues making me confident in my abilities to successfully integrate the use of technology into my patient care plans. This assignment and class increased my confidence as it provided me with a significant amount of insight into what is required to feel comfortable in the utilization of information systems/technology when providing care to my future patients. I also feel confident in educating my patients to empower them to use patient portals and technology to their advantage and becoming more involved with their plan of care, while also having easier access to their healthcare professionals.

DNP Essential V Reflection – Healthcare  
Policy for Advocacy in Healthcare

The fifth DNP essential acknowledges policy development is vital to meeting the needs of a health care system. Throughout my Ethics, Law, and Policy course, NRS 612, I was able to develop my skills to become an active member in health care policy reform in order to adequately advocate for my patients and the public. Advocacy requires political activism and the ability to become a leader on behalf of my community and the nursing profession. I completed an assignment titled “Health Policy Issue Analysis” in which I was asked to choose a policy I was passionate about and write a paper addressing said policy using the format of the Nursing Process. This assignment, which was on the topic of vaccination requirements for children in

public and private schools, allowed me to prepare for necessary requirements to begin developing policy reform as it requires significant amounts of research, knowledge, statistics, and reflection of the current policy. I also learned through this assignment which level of government I would need to act on regarding different forms of policies and advocacy. In addition, I was required to critically analyze both the intended and unintended consequences of the policy change I was hoping to make in order to create a well-rounded view of what the future of the policy change would hold. Advocacy in health care requires influence on policy makers through active participation and this assignment provided me with the knowledge that I can make a difference in policy reform and development. Furthermore, if I am truly passionate about a topic/policy, I need to become involved in committees, boards, or task forces at the institutional, local, state, and/or international level to be an effective and successful DNP.

DNP Essential VI Reflection – Interprofessional  
Collaboration for Improving Patient  
and Population Health Outcomes

The sixth DNP essential recognizes a DNP graduate must effectively communicate and collaborate with other health care professionals, lead interprofessional teams, and employ consultative and leadership skills. In my Advanced Leadership course, NRS609, I was able to further develop my leadership and collaborative skills by participating in multiple group projects. Throughout this course I worked closely with a group of five of my cohorts during which we were effectively able to complete several group assignments and presentations. This was extremely beneficial in developing relationships with my fellow cohorts and allowed for practicing and utilizing our leadership and followership skills. Throughout the semester, each team member was assigned to the leadership role for approximately 2-3 weeks in which we

organized group meetings, updated each other on due dates, and if needed submitted assignments on the group's behalf. At the end of each week, we would submit peer evaluations for each team member in order to communicate the strengths and weaknesses of the group for that week. This not only benefitted our group's progress, but also our individual skills in ensuring we are effective and respectful communicators as we grow into our leadership DNP roles. At the end of the semester, we were assigned a more comprehensive peer evaluation form in which we were required to complete one on another student and receive one. To do so, we had to utilize our communication and collaborative skills, while also displaying leadership skills for complex practices and issues. Through evaluations given to me, I learned that I am a strong leader who takes initiative and utilizes clear communication strategies, such as informing the group of upcoming due dates. In addition, one of the presentations we were asked to complete was a leadership style case study in which we were assigned a global crisis, drought due to global warming, to demonstrate how we would lead our community or country through such situations with effective communication and leadership styles.

#### DNP Essential VII Reflection – Clinical Prevention and Population Health for Improving the Nation's Health

Throughout my DNP program, there have been multiple assignments and clinical hours completed to ensure I have been adequately prepared for Essential VII. In the fall of 2021, I completed the Vulnerability and Healthcare in Diverse Communications class, NRS614, which required me to work in a group and present a windshield survey, which is an in-depth community observation and assessment, focused on the vulnerable population of the elderly. This assignment allowed us to observe and research topics such as house and zoning, parks and

areas of recreation, transportation, communication, service centers, protective services, health, and morbidity in relation to the elderly population. By doing so, we were able to determine several economic determinants of health to the elderly population including minimal or decreased income, lack of adequate insurance to cover medical needs, and increased costs of life sustaining medications.

DNP Essential VIII Reflection –  
Advanced Nursing Practice

In the remaining four semesters of my doctoral program, I completed 675 clinical hours in various settings where I was able to learn new advanced practice skills appropriate to doctoral inquiry and clinical practice of expertise from multiple preceptors. Each clinical placement was crucial in ensuring I felt adequately prepared to become an APRN. I learned how to conduct a comprehensive and systematic health assessment, design therapeutic plans of care, and educate patients and families across the lifespan on disease processes and health promotion (AACN, 2006, p. 16-17).

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APPENDIX


Figure A.1. Montana Quitline Pamphlet (Front)

**People who use  
Montana's Tobacco  
Quit Line are 7 to 10  
TIMES MORE LIKELY  
to quit than those who  
try on their own.**

**The Quit Line makes a  
difference – let it make  
the difference for you.**




**1-800-QUIT-NOW**  
(1-800-784-8669)  
QuitNowMontana.com



**FREE**  
for All Montanans

**The Quit Line  
Works**  
SMOKING • CHEW • VAPING



MONTANA TOBACCO  
**QUIT LINE**  
1-800-QUIT-NOW

**1-800-QUIT-NOW**  
(1-800-784-8669)  
QuitNowMontana.com

Figure A.2. Montana Quitline Pamphlet (Back)

## Quit Your Way

### Everyone's quit journey is different.

From the reason you want to quit, to your triggers, to what type of coaching you prefer, we respect you as an individual. That's why we customize your quitting process to fit you best. Choices include:

- Smoking, Chew, Vaping or Multi-Use Quitting
- Quit by Online Chat, Phone, or Web-Only Program
- Set Your Quit Date
- Create Your Plan
- Pregnant? Get Cash Incentives and a Female Coach.
- American Indian? Receive Native-Specific Service
- Age 18-25? Receive coaching via text. Text "Coach" to 36072 to get started.

### The Quit Line provides:

- **FREE** Quit Coaching Through Online Chat, Phone or Text.\*
  - **FREE** Phone- or Web-based Tobacco Cessation
  - **FREE** Enrollment--by Phone or Online
  - **FREE** Personalized Quit Plan
  - **FREE** Nicotine Replacement Therapy (NRTs) - Patches, Gum or Lozenges
  - **FREE** or **Reduced-Cost** Cessation Medications
  - **FREE** Educational Materials for Friends & Family Members
  - Healthcare providers can also call for **FREE** information or assistance helping patients quit
- \*texting for those under the age of 25.

### American Indian Commercial Tobacco Quit Line

The American Indian Commercial Tobacco Program offers American Indians free access to dedicated American Indian Quit Coaches, online tools, support from other commercial tobacco users and other information to help you achieve harmony and balance.



### Why You Should Quit

#### Tobacco puts you at risk for:

- Heart Disease
- Stroke
- Emphysema
- COPD (chronic obstructive pulmonary disease)
- Many Cancers
- Asthma
- Diabetes
- High Blood Pressure
- Increased Anxiety

#### Quitting allows you to:

- Live a longer, healthier life
- Save money--smokers average \$5,000 per year on cigarettes; \$2,000 per year for chew
- Receive instant health rewards that keep improving the longer you stay quit

#### Visit [QuitNowMontana.com](http://QuitNowMontana.com) for more:

- Smoking Calculator
- Minute-by-Minute, Week-by-Week Quit Benefits
- Success Stories from Real Montanans



Connect with a  
**Montana Tobacco Quit  
Line Coach Today, by  
Phone or Online Chat**

Monday-Sunday 5:00am-11:00pm (MST)

We have 24-hour voicemail--so  
please leave us a message.  
We will call you back.

100% FREE so YOU can be

MONTANA TOBACCO

**QUIT  
LINE**  
1-800-QUIT-NOW

**1-800-QUIT-NOW**  
(1-800-784-8669)

[QuitNowMontana.com](http://QuitNowMontana.com)

