A FORMALIZED APPROACH TO REMEDY TOBACCO ADDICTION: E-REFERRALS AND THE ABILITY OF DOCUMENTATION TO INFLUENCE OPPORTUNITIES THROUGH MOTIVATIONAL INTERVIEWING

by

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ABSTRACT

It is an understatement to report that there is an inconsistent approach for tobacco cessation therapy (TCT) techniques, and this is negatively affecting those with the desire to pursue cessation. Therefore, it is long overdue to better address and incentivize a more consistent quality improvement process to remedy the multifaceted dynamic of tobacco cessation (TC). According to the World Health Organization (WHO) tobacco globally affects 1.2 billion people, and annually imposes an economic damage of $500 billion worldwide (Caponnetto et al., 2019; Epku & Brown, 2015; Gonzales et al., 2020).

With attention to detail in the foreground of billing, coding, and documentation, it is anticipated that increased opportunities for a more formalized approach to remedy tobacco addictions through motivational interviewing (MI) have been encouraged. Ultimately, this project guided a synergistic effect between the financial integrity of the medical clinic and the health of the rural Montana population that it serves. In a small rural family medicine clinic and over a six-week timeframe, a provider instituted basic MI techniques to enroll patients interested in TCT via an electronic (e-Referral) to the Montana Tobacco Quit Line (MTQL) to remedy tobacco addiction.

Data collection was facilitated and contained within the EPIC EHR system, monitoring the number of known tobacco users, ready to quit statuses, and those both currently and newly enrolled for counseling with an e-Referral to the MTQL. Prior to the project's implementation, a total 23 patients were known as tobacco users at this clinic, two of which were being counseled; three new e-Referrals submitted increase the total to five. Nonetheless, there are now 51 patients that are newly known tobacco users after this project's screening and documentation. The thematic underpinnings that surfaced include a lack of healthcare engagement with documenting tobacco users and the need for continued pursuit of TCT. The generalization that this data infers is that the rural population at this clinic is asking for help, but the health system is not responding adequately.

BACKGROUND AND SIGNIFICANCE OF PROPOSED PROJECT

A FORMALIZED APPROACH TO REMEDY TOBACCO ADDICTION: E-REFERRALS AND THE ABILITY OF DOCUMENTATION TO INFLUENCE OPPORTUNITIES THROUGH MOTIVATIONAL INTERVIEWING

Problem Identification – Introductory Statement

In terms of discerning care for tobacco cessation treatment, providers are faced with an unfortunate lack of clinical practice standards when patients present with cessation needs, and this uncertainty may lead to missed billing opportunities (Fu et al., 2015; Nicoletti, 2016). The inconsistent approaches of tobacco cessation (TC) techniques are negatively affecting those with the desire to possibly pursue TC; it is long overdue to better address and incentivize a more consistent quality improvement process to remedy the multifaceted dynamic of TC.

Background and Significance of the Problem

It is an understatement to report that tobacco use is a multi-layered concern, and the addictive qualities of nicotine are very complex hurdles to overcome, even in those who have a strong desire to quit (Caponnetto et al., 2019). In recent clinical rotation experiences, it has been revealed that providers consistently implement diverse approaches with TC counseling; too often this habit is awkwardly or mutually perceived as "just a choice". Fu et al. (2015) conveys that this substance abuse routine may be one of the most preventable causes of morbidity and mortality in the United States (U.S.). The overwhelming implications extend beyond the U.S; it is estimated that tobacco use globally affects 1.2 billion people and the World Health

Organization (WHO) estimates that smoking-related costs inflict an annual economic damage of $500 billion worldwide (Caponnetto et al., 2019; Epku & Brown, 2015; Gonzales et al., 2020).

Each year there are more than one billion patient interactions, and "There is an enormous unrealized capacity for health-care systems to have an effect on this problem" (Leone et al., 2016, p. 568). It is responsible for around 480,000 annual deaths and concurrently another 16 million that are living with tobacco-related serious illnesses (Buettner-Schmidt et al., 2019). Therefore, tobacco and second-hand smoke exposure remain the leading causes of preventable disease, mortality, and disability in the U.S. (Buettner-Schmidt et al., 2019). It is staggering to acknowledge that a preventable habit is often denied comprehensive treatment because of the related billing and documentation apprehensions (Leone et al., 2016). This simply raises the question of, who is actually practicing medicine? The current healthcare system is appallingly opaque, with specific regards to billing and coding, and this directly compromises access to quality care, thus making it more difficult to discern medical needs for those who seek tobacco cessation therapy (TCT) (Hoffman, 2020).

Bloom et al. (2018) and Leone et al. (2016) illustrate that the billing practices are the most commonly reported reasons as to why longitudinal TCT is not pursued. Freeman (2014) elaborates on the concept of not overlooking coding opportunities for routine services and it is further disclosed that clinicians fail to bill for 10-12% of reimbursement they are entitled to; consequently, addressing commonly missed billing opportunities could compositely lead to an estimated $100,000 annually, depending on the volume of the practice (Freeman, 2014). Unfortunately, it is evident that there is an established gradient of missed opportunity, negatively affecting both the patients and the providers.

Scope of Problem

Moran et al. (2016) clearly suggests that a project's scope must encompass all of the anticipated work that needs to be accomplished in order to fulfill the project's goals and achieve the deliverables. It is understood that educating providers specifically on the consideration of their time for counseling commitments, and an increase in overall statuses of TC of patients through motivational interviewing (MI), are the primary goals of this quality improvement project. These goals suggest that establishing consistent rapports with patients who use tobacco most importantly prompts an opportunity for the clinician to immerse themselves into the patient's daily struggles with TC. This is where an opportunity for a deepened understanding can be fostered, encouraging potential for the most communicatively transparent and synergistic relationships, which will then support consistent documentation habits from the providers and longitudinally assist patients with staying motivated to pursue the arduous journey of a tobacco-free lifestyle.

Many of the rural settings are sparsely located in the western regions of the United States, and even though there are a variety of definitions classifying rurality, it is generally defined as fewer than 2,500 people (United States Department of Agriculture, 2019). Boulder is rurally located in western Montana. With just over 1,200 residents, community settings of this nature are often left behind, and recently the public health arena has focused its discussions on these unfavorable trends of tobacco-related disparities in frontier settings (Buettner-Schmidt et al., 2019; City-data, 2020). According to the National Survey on Drug Use and Health between 2007 to 2014, adult cigarette use reported percentages were noted at 27.3% in rural and 21.3% in urban regions, while the use of smokeless tobacco was reported at twice the rate in rural areas

(Buettner-Schmidt et al., 2019). As urban tobacco use recently has declined, its use in rural settings has not (Buettner-Schmidt et al., 2019). Montana in general is considered a rural state, thus increasing the likelihood for health disparities and issues with access to healthcare, all of which contribute to the unfavorable rates of tobacco use (Montana DPHHS, 2019).

The Montana State Health Assessment: A Report on the Heath of Montana was released by the Montana Department of Health and Human Services (DPHHS) and it has been reported in 2016 that one in four adults (26%) were current tobacco users (Montana DPHHS, 2019). It is understood that rates of chronic comorbidities, specific to heart disease and chronic obstructive pulmonary disease, are the highest in rural counties (Buettner-Schmidt et al., 2019). It is further elaborated that, "Rural residents were heavier smokers than the nonrural population (ALA, 2012), with smokers living in rural areas more likely to smoke 15 or more cigarettes per day than smokers living in urban areas" (Buettner-Schmidt et al., 2019, p. 1187). Levinson et al. (2015) discusses how pertinent it is to acknowledge that a majority of smokers in the U.S. are socioeconomically disadvantaged; therefore, it is critical to initiate a pragmatic approach that will remedy the issue of TC in rural populations.

Consequences of the Problem

Standardized clinical practice cessation counseling routines do not firmly exist for providers, and this lack of guidance does not make it easier for patients who may desire to quit using tobacco products (Fu et al., 2015; Odorico et al., 2019). It is explained that there are some known key barriers to pursuing the journey of a tobacco-free lifestyle, and these barriers consist in a lack of, "Expertise and training, time, and not believing that cessation counseling is a high priority during clinical encounters. As a result, most tobacco users do not receive comprehensive,

state-of-the science tobacco cessation treatment (e.g., behavioral counseling and pharmacotherapy)" (Fu et al., 2015, p. 61). The Montana DPHHS health assessment reports that each year 1,600 Montanans die of tobacco-related diseases (Montana DPHHS, 2019). This highlights where the issue of tobacco cessation exists, along with a commitment to treating patients with this need.

Additionally, Nicoletti (2016) discusses commonly missed opportunities for billing and documentation related to TC. It is emphasized that, "Although the work RVUs and payment are small (about $14 for 3 minutes to 10 minutes of counseling), this represents work being given away for free" (Nicoletti, 2016, p. 34). There are higher charges for completing and documenting TC counseling for greater than 10 minutes, specific to $27.93 (Oliverez, 2020). Not only does this increase the incentivization to even pursue TC counseling for patients, but there is an added emphasis of a monetary value that encourages diligent documentation by the provider for the TC services they are providing (Oliverez, 2020). Grasping a furthered understanding of this billing and coding etiquette will prospectively lead to a more consistent TCT plan, increased accuracy of billing, and hopefully increased results of TC for patients.

Proposed Project/Evidence-based Intervention

The implemented practice change focused on educating the providers of diligent TC documentation and billing, garnering a more longitudinal income for the Boulder Medical Clinic and more importantly, increased opportunities to implement sustainable TC techniques for this rural community. At the Boulder Medical Clinic, current "dot phrases" do exist in EPIC to facilitate quicker and more consistently detailed TCT documentation; however, they are not being routinely implemented, even when cessation counseling is being provided. Furthermore,

the use of standardized MI techniques was adopted and simultaneously applied at this medical office, and each eligible patient received individually tailored, complimentary follow-up sessions as needed for cessation therapy (Odorico et al., 2019; Polinski et al., 2016). With attention to detail in the foreground of billing, coding, and documentation, it is anticipated that increased opportunities for a more formalized approach to remedy tobacco addictions through MI have been encouraged. Ultimately, this guided a synergistic effect between the financial integrity of the Boulder Medical Clinic and the health of the rural Montana population that it serves.

Congruence of DNP Project to Selected Organization's Mission, Values, and Goals

The Boulder Medical Clinic's mission is to improve the health of the people and surrounding communities through a faith-based framework, especially to those whom are poor and vulnerable (SCL Health, 2020). This vision aligned well with the project's intentions to improve standardized TC counseling techniques to better serve the vulnerable population of Boulder, MT (SCL Health, 2020). It is a fact that TC is a significant need that has to be met in this country, and specifically in rural communities. There are two particular reasons that emphasize the need to increase TC: 1.) the overall need for increased rural TC rates, and 2.) provider education, specific to increasing both the billing and coding accuracy to effectively acknowledge the clinic's financial hygiene, while also potentially enhancing the provider's RVU statuses as well. Consistent and thorough documentation throughout TCT encourages a sharper awareness from the providers, and not only is this of financial benefit to the clinic, but this also fostered a more consistent routine toward TCT techniques in general. TCT should be a high priority, and the health and well-being of the Boulder community depends on it.

LITERATURE REVIEW

Introduction

In this section, current literature on MI as a non-pharmacological intervention is thoroughly reviewed to further understand how MI can be best integrated into practice to assist with TCT. The purpose of synthesizing this literature primarily revolves around the idea of further discerning and evolving evidenced-based support to improve TC rates and encourage this evidence to influence TCT improvements. The concepts that provide a framework for this quality improvement project stem from the currently unclear clinical practice cessation standards and inconsistent documentation commitments that lead to both missed billing and treatment opportunities. Nonetheless, these problems present an opportunity to infuse MI, a remedy that longitudinally acknowledges the multi-faceted concerns of TCT, and prospectively could improve the TC rates in frontier communities (Fu et al., 2015).

Search Methods, Terms, and Databases

A thorough examination and analysis of the literature was conducted using multiple academic databases. The following databases were primarily utilized: CINAHL, Web of Science, and ScienceDirect. Within the included literature, two were systematic reviews, four randomized controlled trials, and multiple observational studies, ultimately averaging the accumulated evidence to a considerable level three. The overall limitations included articles within the years of 2015-2020; however, a few of the articles were slightly older and this was acknowledged, as they were considered classical and foundational. Additionally, the articles were peer-reviewed and kept within the English language. A total of 45 articles were analyzed and 24 of them were

included, specific to the relevance of MI, rural TCT disparities, and sustainment opportunities through RVU and billing code statuses. The following search terms facilitated the investigation of evidence: tobacco, cessation, smoking, MI, rural, frontier, billing, coding, and missed opportunities.

Synthesis of Strengths and Limitations

A majority of the literature illuminated the following three crucial themes: 1.) tobacco use has devastatingly impactful costs and health implications, particularly in vulnerable rural populations, 2.) documentation opportunities may be an incentivization to improve tobacco cessation rates and fiscal hygiene, and 3.) MI provides long-standing opportunities for increased cessation. After analyzing the current literature, a variety of quantitative studies were reviewed, including Odorico et al. (2019) and Ekpu and Brown's (2015) systematic reviews, Shields et al.'s (2016) National Comprehensive Care Network (NCCN) clinical practice guideline universal assessment, and additional randomized controlled trials. Also, multiple surveys revealed promising results associated with MI and the combined therapies to remedy tobacco use.

Moran et al. (2017) suggests that the review of literature is the opportunity to identify where additional inquiry is needed both theoretically and pragmatically. Most importantly, it is emphasized that, "A good proposal represents all viewpoints and should articulate how the student's project is unique and separate from previous work described in the literature" (Moran et al., 2017, p. 258). Specific to rural communities and their tobacco-related disparities, the literature does not address how the gap between missed billing opportunities and TCT can be fused through MI techniques.

Rural Disparities

The Western Journal of Nursing Research features insightful tobacco-related disparity literature (Buettner-Schmidt et al., 2019). Buettner-Schmidt et al. (2019) highlights the fact that frontier communities are not being included in the forward momentum when it comes to the decrease in TC trends, "Rural populations are among those being left behind in the recent declining smoking rates and have become a focus of discussions on tobacco-related disparities" (p. 1184). There are many perspectives discussing why this is occurring, most of which are framed around the environment, including the following reasons: legal, economic, social, and political (Buettner-Schmidt et al., 2019). The larger and more synthesized theme within the cessation literature suggests that health disparities are related to social injustices, and since rural TC rates are already behind the urban curve, it is important to influence the future allocation of resources into rural settings as there is currently an unequal distribution of healthcare resources (Buettner-Schmidt et al., 2019; Levinson et al., 2015; Roberts et al., 2016).

The discrepancy between urban and rural dynamics is clear, as rural areas around the U.S. contain higher habit rates of cigarette, smokeless tobacco, and secondhand smoke exposure (Roberts et al., 2016). Furthermore, Buettner-Schmidt et al. (2019) bluntly conveys that the economical motive from the tobacco industry essentially targets disparity ridden places because this market is "Bound up in corporate accountability, economic systems, and public health advocacy" (p. 1184). Roberts et al. (2016) is one of the few pieces of literature surveying 136,147 participants, comparing rural and urban tobacco use, and it was conveyed that the use of tobacco products were significantly more prevalent rurally when compared to urban settings.

Missed Billing and Coding Opportunities

The economic billing data captured in recent literature clearly supports the need for a reinvigoration of global attention driven toward clinician-oriented TC counseling education (Freeman, 2014; Leone et al, 2016). This amplified awareness of documentation can enhance confidence and adjust the clinician's perspective toward garnering financial revenue, and this is critical because currently there is earning potential being lost through missed medical record coding opportunities (Ekpu & Brown, 2015; Freeman, 2014; Leone et al, 2016; Nicoletti, 2016; Nishi et al., 2019; Oliverez, 2020). According to Peterson et al. (2015), MI has been an efficacious behavioral strategy in, "Helping people abstain from negative behaviors by resolving ambivalence about behavior and increasing internal motivation" (p. 2). Studies support providers on integrating MI to facilitate consistent TCT, as it has shown to increase TC when compared to other brief counseling strategies or routine care (Peterson et al., 2015; Shields et al., 2016).

The qualitative literature, particularly relating to Bloom et al. (2018) and Leone et al. (2016), alludes to how clinicians disclose concerns with initiating and sustaining reimbursement, reporting that TC is potentially a waste of time and should be absorbed by their employer. However, the intervention of MI is cheap, and it can establish a routine that will garner sustainable revenue for the organization, while most importantly reducing tobacco use in disparity-ridden communities. It is overwhelmingly clear that there is an increased attention that needs to be delegated toward TCT, and a reliable approach is indeed alluded to within this examination of evidence. The possibility of financially incentivizing providers should not be ill-advised, and according to the literature, it should rather be considered as a feasible option that warrants investigation and encourages extended research interests (Singer et al., 2019).

According to the American Lung Association (n.d.), the Affordable Care Act systematically stimulated momentum for preventative TC quality improvement reimbursement. It is fair to make the conclusion that the provider's focus could be further stimulated through a reimbursement process, specific to the improved quantity and quality of TCT techniques (American Lung Association, n.d.). Singer et al. (2019) successfully experimented with incentivizing residents to perform TC counseling, and this quality improvement initiative could pave the way for a new TCT standard. Bloom et al. (2018), Freeman (2014), Leone et al. (2016), and Nicoletti (2016) emphasize the fact that missed billing opportunities are a pivotal means to further justifying why TCT can be synergistically efficacious for the outcomes of both the organization and the patients. The data provided in the literature abundantly supports that billing routines are inexcusably obscure, directly relating to cumulatively missed opportunities and amounts of money spent on preventable tobacco related health concerns (Gonzales et al., 2020); therefore, "Clarity regarding coding and documentation requirements relevant to the problem are a necessary prerequisite to full adoption" (Leone et al., 2016, p. 574). There is a connection to be made relating to missed opportunities for TCT, and it speaks to the need for an improved focus on TC reimbursement processes (Leone et al., 2016).

MI Efficacy

The results of the included MI literature overarchingly emphasize a concept of "complex simplicity," specific to supporting the implementation of MI as an intervention for TC. The tone of the literature supports that the undermining impression of why providers are dissuaded from assisting patients with TC and TCT are primarily because the treatment process is not a quick fix. Simple fixes are the cornerstone approach of the American culture, and this why tobacco use

is the problem that it is today. MI undoubtedly has the ability to improve and curb tobacco use with even those who express a low motivation to quit (Auer et al., 2016; Odorico et al., 2019; Shields et al., 2016). Most importantly, through the establishment of consistent rapports with patients who currently use tobacco, a structured approach through MI prompts clinicians to further extend their reach to patients, and this creates a more favorable gradient in which TCT opportunities can be best nurtured (Auer et al., 2016; Odorico et al., 2019; Shields et al., 2016). A deepened understanding can be fostered with MI, because it encourages potential for a more collaborative relationship that will assist patients with staying motivated while pursuing the journey of a tobacco-free lifestyle. Since MI is already known as influential with TC, the facet of telehealth can additionally become instrumental to support the unique needs of each patient throughout this strenuous process (Odorico et al., 2019; Polinski et al., 2016).

The most recent literature on MI, in conjunction with combination therapies, suggests that primary care providers (PCP) need to be better acquainted on the techniques of MI, because it has shown promising results with TC efficacy (Auer et al., 2016; Caponnetto et al., 2019; Fu et al., 2015). This highlights the need to improve consistent PCP training to enhance TC, specifically related to the technique of MI (Auer et al., 2016; Fu et al., 2015). Moreover, Odorico et al.'s (2019) systematic review identified 910 guidelines, which recommended that patients quit smoking and encouraged healthcare professionals to advise this; however, only two guidelines provided specific recommendations and the others failed to provide precise implementation strategies (Odorico et al., 2019). The lack of commitment is unacceptable. This is where a behavioral based strategy can raise awareness for not only the patients but for the clinicians as

well, encouraging more responsibility delegated toward these continuous behavioral strategies that will promote change and prevent relapse (Odorico et al., 2019).

The commonly implemented conceptual framework that guided TCT, particular to Auer et al. (2016) and Singer et al.'s (2019) work, was the 5A's Framework. Auer et al.'s (2016) 12 month before and after comparison in two academic hospitals permitted a sharp increase in the number of patients assessed for TC needs; the study compared two additional control hospitals, revealing systematic TC success via MI in hospitalized patients with acute coronary syndrome when compared to the standard reactive approach to TCT (Auer et al., 2016). The process outcomes of Auer et al. (2016) discuss that at the control site hospitals 22% received intensive TC counseling, and 87% received TCT counseling at the intervention hospitals. Eventually, it was discovered that 12 months of smoking abstinence rates increased from 43% to 51% in the intervention phase (Auer et al., 2016). It is diligently reported that, "Our findings challenge the recommendation of allocating high intensity counselling only to those 'willing to make a quit attempt' recommended in smoking cessation" (Auer et al., 2016, p. 7). This means that providers and counselors need to pursue TCT even with those who are reluctant to the idea at first, and this can be performed through basic MI techniques, as the data to support this practice change is favorable (Auer et al., 2016; Fu et al., 2015).

The settings in which these trends have been studied is internationally diverse. These larger number studies convey that MI is an avenue of treatment that is worth pursuing, because the complexities of nicotine are not going to be holistically treated at comprehensive annual exams. Furthermore, Fu et al.'s (2015) randomized control trial emphasizes that MI training can be effectively learned by providers, as evidence by the 7% greater improvement in MI

knowledge scores for high intensity group ($p = 0.0482$) and a 0.4-point greater increase in the MI confidence score ($p = 0.0078$). This connected well with the fact that moderate or high intensity MI training can be learned by providers (Fu et al., 2015). It is anticipated that MI can be connected with the influence of Shields et al.'s (2016) large-scale NCCN clinical practice guidelines universal assessment. This analysis, which included 28 studies and 101,804 participants, heavily focused on statistically efficacious combination therapies in the oncological arena (Shields et al., 2016). Shields et al. (2016) deems that 30% of all cancer deaths are related to tobacco use causes. Therefore, a "Meta-analysis of 10 randomized trials in 3,760 patients with cancer found quit rates to be comparable when comparing abrupt cessation versus gradual smoking reduction" (Shields et al., 2016, p.1452). It is heavily encouraged throughout the examination of this evidence that providers need to persistently reassess readiness to quit and engage in a MI guided dialog (Odorico et al., 2019; Papini et al., 2020; Shields et al., 2016).

Additionally, Singer et al. (2019) pioneered a quality improvement initiative incentivizing providers to institute TC counseling. Prior to the implementation of the initiative protocol, 4% of patients were assessed upon their readiness to quit, and after the implementation, the rate at which the patient's readiness to quit increased to 67% (Singer et al., 2019). Singer et al. (2019) illustrates that:

> In this study, patients expressed a readiness to quit at 43% of consults, which highlights the need for effective TC programs. In another study involving patients with lung cancer, 88% reported a readiness to quit, which further supports a desire and need for TC interventions. (p. 384)

The bottom line is that patients are asking for cessation support and the data accentuates it; this situation may not be presenting itself in an arrangement that providers are currently comfortable

with counseling, documenting, or coding properly, and this is where the efficacy of MI can challenge this barrier of uncertainty (Singer et al., 2019).

Gaps Regarding Investigated Constructs

The encouraging aspect of tobacco use is that these habits have been shown to be recoverable from if the correct TCT approaches are pursued. However, it is clearly forecasted that there are gaps and limitations observed in the literature specific to MI. The most basic hurdle to grasping the concept of implementing a dialogue guided by MI is that it simply takes multiple counseling sessions, averaging 20 minutes or greater (Peterson et al., 2015). This is why an extension of the telehealth resource has been highlighted, as it could be a facet of this care dynamic that could support the success of MI in a more durable manner. There is no other research that directly discusses the connection between TC quality improvement projects and monetary incentivization for providers, specific to addressing associated missed coding or billing opportunities. Singer et al. (2019) is one of the first documented studies to incentivize providers in a monetary form via a quality improvement initiative, to assess readiness of TC in patients. The issues of rural tobacco use encourage new quality improvement protocols, creating extended opportunities for future research.

According to the majority of the literature, the rigor regarding the designs and methods shows that there is room for skepticism. Since a majority of the literature is qualitative, additional controlled studies are needed for higher-quality evidence support. More studies need to institute biochemical surveillance to verify abstinence rates, via expired breath carbon monoxide monitoring, and not simply rely on self-reports, as this creates room for compromised validity (Gonzales et al., 2020). Furthermore, with regard to the population, one could argue that

there was minimal diversity explored in samples throughout the literature and this could lead to confirmation bias. Larger and further multi-center prospective studies with enhanced rigor are warranted.

Summary/Discussion of Why Practice Change is Appropriate

Tobacco related health concerns are not a new concept and the rural tobacco use trends are not improving (Buettner-Schmidt et al., 2019). After dissecting and further understanding the holistic implications of the literature, it is clear that tobacco related illnesses are avoidable and overwhelmingly one of the leading causes of preventable disease, mortality, and disability in the U.S. (Buettner-Schmidt et al., 2019; Fu et al., 2015). Nicotine is a powerful substance; however, it is time to give the power back to the providers and patients, specifically through clearer TCT coding, billing, and MI techniques, which will better fertilize the framework for improvement opportunities. MI can encourage opportunities to improve quality care gap standards, increase revenue through the reimbursement process, and emphasize the organization's commitment to interceding for poor and vulnerable populations.

An abundance of the current healthcare system's time and energy is gravitating toward how to forecast preventable diseases. The latest comprehensive healthcare systems CDC guide with suggestions to practically and holistically conduct TCT is from 2006, and it does not discuss in detail the strategy and implications of MI (CDC, 2006). Therefore, this intervention of MI, and diligent attention to trending the associated billing-coding opportunities, would significantly increase the organization's chances of averting missed billing opportunities. As the possibility of improved provider compensation increases through RVU statuses, along with an increase in the quality improvement of TC care gaps, this could employ a proactive routine to encourage

tackling tobacco use and its related comorbidities (Singer et al., 2019). The following illustrates why this type of finesse and attention to detail is important, because "Identifying, managing, and/or mitigating potential risks gives an organization a financial advantage and a competitive edge" (Anderson et al., 2014, p. 65). Along with this, TCT could be trended and improved; with an additional focus on quality versus quantity, a large contributor to an organization's financial well-being is reimbursement, and the improved evidence of patient and provider satisfaction connects well to the sustainable profitability of this investment for the organization (Lavin et al., 2015; Schooley et al., 2016).

Polinski et al. (2016) discusses how patient satisfaction could also influence the revival of TCT standards, specifically relating to the opportunities of telehealth. Multiple studies have proven to be efficacious with imposing the technique of MI to longitudinally assist with improving cessation results (Odorico et al., 2019; Peterson et al., 2015). Overall, this investment would minimize the margin for missed TCT opportunities, avert fragmented care, and improve patient-provider satisfaction scores, which is critical because over the lifetime of a practice, dissatisfaction has proven to result in the loss of approximately $200,000 in revenue (Hoffman, 2020; Prakash, 2010; Vink et al., 2019). Amidst the global pandemic the aspect of satisfaction is being newly challenged, and in order to reassure counseling consistency, MI telehealth visits could seamlessly be conducted for TCT.

The valuable aspect of behavioral based techniques is that they can be reasonably integrated into any clinician's current practice. Additionally, with having the ability to educate providers and implement MI within the realm of any medical practice arena, the technique of MI can alleviate the desire to continue with substance abuse behaviors and effectively encourage

change. Patients can become equipped over time with an arsenal of behavioral based tools to fend off the desire to continue tobacco use (Peterson et al., 2015). The patient and their family members are the most underutilized resource within the healthcare team, and MI techniques can foster a relationship that assists them in reobtaining control to successfully reach a tobacco-free lifestyle.

SETTINGS AND METHODS

QI Framework

This project was guided by the "Plan-Do-Study-Act" (PDSA) quality improvement (QI) model, and this particular framework was implemented because of its quick but yet powerful nature for accelerating improvement at multiple intervals of a project (IHI, 2020; Moran et al., 2017). Furthermore, the fundamentals of the PDSA model revolve around high-functioning communicatively focused rapports, which is absolutely essential for seamless and consistently improved quality, patient-centered care; the staff at this facility highly prioritize communication to discern care. The core principles of communication are importantly conveyed, "*Communication* is defined in business as a crucial process by which participants come to a mutual understanding through the exchange of ideas, emotions, and information, and in doing so both share meaning and create meaning" (White et al., 2021, p. 179). Prioritizing the concept of communication resonates very well with this QI model, and more importantly the greater concept of TC, because it holistically connects well to both the intervention of MI and the submission of communicatively closed-loop e-Referrals to the MTQL (Adsit et al., 2014).

The four-stage PDSA model served as the framework to improve the process of MI and the submission of e-Referrals (Moran et al., 2017). Moreover, communication is a pivotal component of TCT, specific to obtaining an understanding of the patient's cessation desirability status, and it was essential to systematically implementing communicative transparency to foster successfully repeated PDSA cycles weekly. The Institute for Healthcare Improvement (IHI) (2020) emphasizes the PDSA's ability to accelerate improvement, and the detailed following steps assisted in facilitating the process: 1.) Plan: The problem of tobacco use has been

described; MI techniques have been found successful, along with the process improvement of submitting e-Referrals to the MTQL (Adsit et al., 2014); a team has been recruited, which includes a clinic administrative assistant, RN, one PA, EPIC informatics specialist, QI RN, and MTQL; the implementation of basic MI and e-Referrals for interested tobacco users took place over a 6-week period (11/23/20-01/04/21) after successful project defense and IRB clearance, and an analysis on the number consults; data was kept in the EPIC charting system and trended by the QI metrics, 2.) Do: Education of basic MI techniques and e-Referral submissions was completed; the process of e-Referrals and data capturing was monitored in the EPIC quality metrics system, 3.) Study: Complete analysis of the data, specific to comparing the data to the practice's prior MTQL referral submissions and patient inquiries; summarize and reflect what was learned, 4.) Act: Refine the process of e-Referrals, MI, determine necessary changes, and impose weekly modifications through MI and e-Referrals as needed (IHI, 2020).

The e-Referral process was continuously revised each week, specific to deciding whether or not the provider, nurse, or administrative staff were the one to submit this, and this tenure of consistent interpersonal evolvement contributed to the project's relevance and sustainability (Moran et al., 2017). Also, this process was trended by the agency's QI department and MTQL staff. Communication is the backbone for seamless and consistently improved quality, patient-centered care. The explosion of technological advancements in healthcare is astonishing, and it is critical that the basic fundamentals of caring for patients is the priority, and the QI method of PDSA cycles guided sustainable communicative improvement opportunities with specific regards to implementing MI and the submission of closed-loop e-Referrals for TCT (IHI, 2020; Moran et al., 2017).

Agency Description

Setting

The project was implemented at a small, four-room primary care medical clinic, that is affiliated with a larger medical group hospital system. It serves all ages in a rural area. The practice is known for being autonomous and maneuverable to meet the diverse needs of rural populations, with support and guidance from its larger affiliate healthcare system. The staff routinely collaborate to carve out time in the daily schedule to meet each patient's diverse needs; therefore, the opportunities to discuss the TCT process improvements was feasible. Within this practice, it is an understatement to report that many of the patients use tobacco, and there were opportunities to practice MI and encourage the implementation of e-Referrals to encourage TCT.

Target Population

The population targeted for this project consisted of patients of any age who use any form of tobacco, which included the following: cigarettes, cigars, vaping products, chew, and snuff. At the daily morning huddle, which includes the PA, RN, and front desk assistant, the front desk assistant flagged any tobacco user known to be seen for that day and let the staff know at this meeting, so the interventions were anticipated for each tobacco using patient. Each patient was asked about tobacco use upon arrival if it was not flagged in EPIC. Furthermore, sampling of the data was obtained by contacting the QI department representative who leads the tracking of data, and this was facilitated through follow up phone calls and email exchanges. The sample was specific to the primary care clinic, which is an extended affiliate that belongs to a larger medical group, and this is important because it creates an opportunity to compare this project's data to the rest of the healthcare system for future implications.

Description of Stakeholders

Moran et al. (2017) and Boaz et al. (2018) elaborate on the importance of building a cohesive team, along with the understanding that all who may have a direct interest within the organization have the potential to influence the project's implementation. The specific stakeholders included the following: patients, administrative front desk assistant, clinic RN, PA, MTQL, clinic, medical group, QI specialist nurse, and EPIC informatics charting system liaison. Each of these stakeholders played a pivotal role in this project; furthermore, it has been emphasized by Moran et al. (2017) that in order to reassure the project's success and that each team member is appropriately invested, "The manager should be cognizant of the team's development stages" (p. 217). In this case, the "managerial" leader was assumed by the QI nurse to assist with orchestrating consistency and follow-through of the project.

Moreover, the EPIC informatics specialist assisted with not only educating the providers on how to submit e-Referrals but also trended the referrals and patient counseling statuses from the MTQL. The larger affiliate medical group centers their philosophy of care around collaborative teamwork to serve those who are vulnerable, while emphasizing "That a caring smile or kind word contribute to our success as much as the job itself" (SCL Health, 2020). The front desk assistant, whom has an involved and well-rounded rapport with patients, was instrumental in beginning the process of asking if tobacco products were used upon the patient's arrival; this prepared the staff to perform the project's tasks. The patients who used tobacco products were major stakeholders in pursuing this project, as they were potentially motivated to pursue counseling at the office and eventual agreement to an e-Referral. The MTQL is operated by the National Jewish Health system and uses clinically proven methods that assist nearly 450 people per day in their journey to quit tobacco use (MTQL, 2020). Lastly, the PA at the clinic,

who is the only full-time provider, was arguably the most instrumental stakeholder in the project's momentum and success.

Site-Specific Facilitators and Barriers to Implementation

It is clear that there was both opportunities and barriers to the implementation of MI and MTQL referrals. Nonetheless, it is advantageous that this process is already established within this organization and the stakeholders are familiar with an e-Referral for TCT to the MTQL. Please refer to Appendix B-Table B1 for a document that has been provided by the EPIC informatics specialist, as this guided the team and narrated the process of submitting and documenting e-Referrals within EPIC. Additionally, Appendix B-Table B1 provided the coding details, particular to "Page 1-Tobacco Cessation Codes," and the medical group's standardized TC e-Referral letter template.

The following included the particular process within EPIC: tobacco user flagged upon interview or in the patient's chart as a "care gap," patient agreed to MTQL e-Referral through assistance of MI, PA filled out e-Referral letter, it was then sent to the administrative assistant in the "Work-Q" tab of EPIC for verification of the receiving entity, and the e-Referral was then sent to the MTQL via the EHR. Notifications via fax were sent to clinic from MTQL updating clinic staff. The PA's understanding on MI was evaluated before and after the project's implementation. Refer to Appendix A to view the SWOT analysis, as this further elaborates on the specific elements regarding the facilitators and barriers to implementation. The MTQL provides TCT counseling coaches who are available via phone, email, text, or instant message to follow their patients through the counseling process (MTQL, 2020). Furthermore, the participants were coached to prepare a quit plan, set a date, comprehend tobacco triggers,

manage cravings, and address relapses, all of which were supported by coaches that were available Monday-Sunday between the times of 5am and 11pm (MTQL, 2020).

Project Design – Quality Improvement Project

Re-stated Purpose

The purpose of the project was to implement basic MI techniques within a 6-week timeframe, and it was anticipated that this would foster an increased number of patients to pursue evidenced-based counseling as a means to encourage an e-Referral to the MTQL for a more closed-loop approach on the multi-faceted dynamic of TCT (Adsit et al., 2014; Fiore et al., 2019). It is articulately disclosed that, "EHRs can be used to identify patients who use tobacco and to securely and electronically link these patients to external telephone-based TCT, with services provided electronically transmitted back to the referred patient's EHR" (Adsit et al., 2014, p. 324). This systematic change was utilized as a means to achieve the goal of an increased rate, 100%, of readiness to pursue TCT and establish more of a synergistically closed-loop platform for the clinic and MTQL (Adsit et al., 2014; Fiore et al., 2019; Ray et al., 2014).

This was an educational project that assessed the use of MI as a gateway to facilitate improved TCT counseling and billing opportunity rates through the e-Referral submission template within the EHR (Adsit et al., 2014). This project was guided by weekly PDSA cycles, otherwise known as rapid cycle changes (McQuillan et al., 2016).

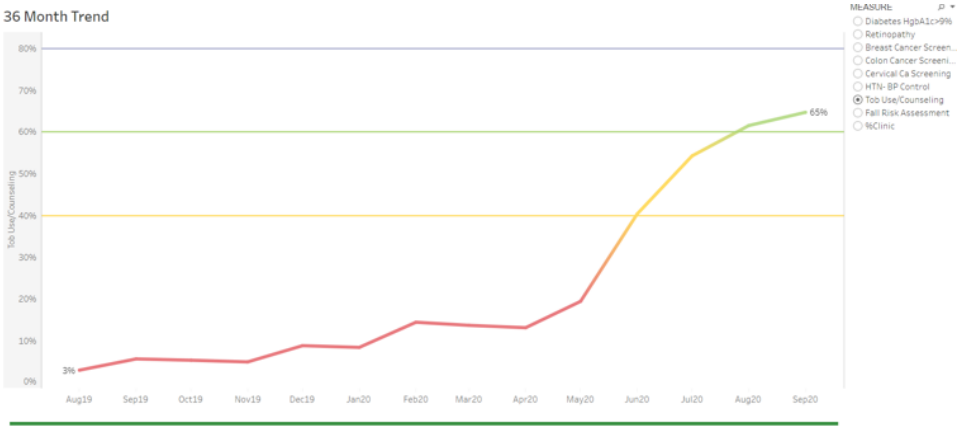
SMART Goals – Short/Mid/Long-Term Goals

Moran et al. (2017) highlights that developing and communicating objectives will ensure that a timeframe is well-designed and that goals are achievable. Transparent development of

objectives is critical because, “Objectives are the measurable actions that result in goal achievement” (Moran et al., 2017, p. 239). The SMART acronym format assists with the objective development, and this has guided the following goals (Moran et al., 2017):

Specific Many are tobacco users at this practice, and according to recent data this care gap is in need of a revival, as the 36-month clinic trend illustrates that TCT performance was less than 66% and only 8.6% of known patients were being counseled. It is necessary to analyze current technological opportunities in this practice, specific to the education of MI techniques and referral opportunities; the efficacious process of e-Referral technology is available at the clinic and not currently being employed (Adsit et al., 2014; Fiore et al., 2019). 100% TCT counseling was the goal to achieve.

Figure 1 - Care Gap TCT 36-Month Trend (SCL Health, 2020)



Measurable Practicing basic MI techniques and creating a routine for e-Referrals to the MTQL allowed for tangible trending and tracking of patient’s desirability to quit through the EMR, further assessing if the objective of increased referral inquiries was being pursued to seek

counseling. Guidance from the QI specialist and EPIC informatics liaison assisted with analyzing the automatically captured data within EPIC's quality metrics system (Moran et al., 2017). MI fidelity was also evaluated of the PA with an evidenced-based scale.

Achievable Analyzing this trackable implementation within a six-week timeframe was feasible.

Relevant The resources for submitting e-Referrals were within the EMR and an educational period within the first week was imposed to make sure the team was accustomed to this process change. NP student, EPIC liaison, and RN quality metric coordinator were available by phone and email at any time. Daily, the PA sees an average of 8-12 patients, most of which are primarily of the adult and elderly population.

Timely The objective was to educate the team in the first one-week time period after successful project defense, and a detailed educational session occurred with the staff at the clinic's daily morning huddle on November 16th, 2020; therefore, the educational trial implementation of basic MI techniques and the e-Referral submission process was implemented on November 23rd, 2020, and the live implementation of the project began on this date and was carried out for six weeks, ending on January 4th, 2021. The quantity of e-Referrals was assessed each week. Every third Thursday of the month there is a system-wide provider staff meeting, and the project's findings were conveyed at this venue on April 15th, 2021.

The short/mid/long-term goals were previously alluded to in the above SMART acronym; nonetheless, the short-term goals consisted of successful project defense on November 12th, 2020, educating the team shortly thereafter pending MSU IRB approval, and the project began as

soon as approval was received. Mid-term goals consisted of successful implementation of e-Referrals and substantial number of referrals sent to the MTQL by December 13th, 2020, along with an enhanced provider confidence in MI. Long-term goals and sustainment consisted of assessing increased number of referrals, trending both RVUs and TCT billing code statuses, while it is anticipated that the RVU cycle and increased billing data may be available by April of 2021. Weekly PDSA cycles assisted with revealing issues in the e-Referral process and MI fidelity. Additionally, simultaneous fax notifications were sent to the clinic staff from the MTQL, disclosing each of the patient's statuses with the TC journey by January 4th, or longer if needed, as it was disclosed that data gathering was to be obtained by January.

Project Methods

Description of Project/Evidence-based Intervention

This QI project originated from an inconsistency observed in clinical practice standards, with specific regards to TCT counseling processes observed throughout clinical rotations. The idea of extending cessation therapy support began with a literature search engineered toward MI interviewing and its efficacy with TCT counseling; however, the search was next extended to e-Referrals and this concept was then infused to the project to assist with conceptualizing how well MI encourages patients for referral. The design of the project was educational, with a focus on MI techniques and the process of submitting e-Referrals for eligible and interested patients, ultimately assessing the quantity of TCT inquiries. Moreover, MI techniques and e-Referrals are both evidenced-based processes that were the substantive matter of the project (Adsit et al., 2014; Auer et al., 2016; Báez et al., 2020; Caponnetto et al., 2019; Fiore et al., 2019; Fu et al., 2015).

To further support the evidenced-based nature of this project, an extensive literature review was performed, and the literature supports the implementation of basic MI techniques to persistently encourage patients to pursue TCT. This commitment of enhanced TCT extends beyond the standard of care. Quality, patient-centered improvement, was carried out through this electronic platform to facilitate closed-loop e-Referrals to the MTQL services, as this has been proven to be effective in healthcare systems (Adsit et al., 2014; Auer et al., 2016; Báez et al., 2020; Caponnetto et al., 2019; Fiore et al., 2019; Fu et al., 2015). Another important aspect to consider is the longitudinal revenue this process improvement could garner for the clinic, specific to increasing RVU statuses, and prospectively improving the overall health statuses of tobacco users, all of which connects to the imposed synergy from EHR-based e-Referrals (Adsit et al., 2014; Fiore et al., 2019; Singer et al., 2019).

Human Subjects Protection

Upon successful defense of the scholarly proposal, an exempt review protocol was requested and verified by the Institutional Review Board (IRB) of Montana State University. The project was considered an "Exempt Review" because of the following: 1.) the project involved normal educational practices, specific to instructional strategies through classroom management methods, 2.) it was specific to MI and data was collected on the number of e-Referrals, both of which were interventions that already exist, 3.) and also involved the collection of existing data, specific to current number of smokers at the practice and referrals that have been made, and extending to the number of those that were made throughout the project. To protect the rights of human subjects and ethical conduct, specific patient identifier information was not included anywhere throughout the project.

Measures and Instruments – Including Validity and Reliability Data

Moran et al. (2017) illustrates how vital it is that the data collection method is congruent with the study's design and overall purpose of the project, thus, the key objectives that were measured included: MI and referrals. Even though MI is empirically implemented and supported, assessing the validity and reliability of MI competency is complex and this has led to the creation of many instruments (Gill et al., 2020). Gill et al. (2020) comprehensively assessed the competence in health professionals with MI through a systematic analysis of training and supervision tools, acknowledging that tools have been historically rigid and need to be more pragmatically considered for clinicians (Pérula et al., 2012). Fu et al. (2015) and Gill et al.'s (2020) work guided the evaluation of the PA's understanding of MI through the Motivational Interviewing Target Integrity (MITI) proficiency measures, one of the most popular and well-respected scales; the fidelity is widely accepted and well-tested in the supporting literature regarding validity, reliability, and generalizability (Gill et al., 2020; Lundahl et al., 2019).

Gill et al. (2020) and Moyers et al. (2016) extensively elaborate on the coding descriptions utilized by the MITI scale, and this guides the rationale, reliability, and validity to support its efficacy. Additionally, Lundahl et al. (2019) analyzed 28 adherence measures and included 407 specific MI adherence codes, disclosing that the most common four themes accounted for 72% of all codes, emerging as the following: OARS, MI spirit, evoking motivation, and MI-inconsistent behaviors. The MITI scale was implemented to assess the PA's understanding pre- and post-QI project. The MITI scale measures on a 5-point Likert scale and specifically contains a, "14-item rating system of clinician behaviors, including 4 global scales and 10 specific behavioral counts. Focus on MI consistent and inconsistent behaviors, divided across a global rating and specific behavioral codes" (Lundahl et al., 2019, p. 2151). This

measurement tool's ease of use was instrumental in assessing the PA's understanding of basic MI techniques. Refer to Appendix B, Tables B2-B5, to view the scale and its components.

Lundahl et al. (2019) disclosed that considerable variances exist in assessing MI, including its nuances, behaviors, and psychometric characteristics. Most importantly, the scale focuses on assessing the counselor's behavior and understanding of MI (Lundahl et al., 2019). Gill et al. (2020) highlights that the tool's fidelity contains inter-rater reliability, test-retest reliability, and internal consistency, while also having been utilized in more than 50 studies and cited more than 260 times in scientific literature (Moyers et al., 2016). The key advantages of the MITI tool is its widespread usage in multiple populations, substantial psychometric assessment, and its friendliness to raters whom are not experts in MI, specific to both researchers and clinicians (Gill et al., 2020; Moyers et al., 2016); limitations consist of the following: administrative burden, not all data is applicable to the most recent version of the tool, self-reported limitations revolve around its suitability for a simple approach, and possible failure to determine whether or not the clinician actually implemented the MI skills (Gill et al., 2020).

MITI has been psychometrically tested in multiple studies, and specific to the inter–rater reliability, the original study reported intraclass correlation coefficients of 0.52 to 0.92, which are considered fair to excellent (Gill et al., 2020). Furthermore, Gill et al. (2020) includes that upon specific assessment of the MITI tool, test-retest reliability was found to be 0.70 to 0.98, which are considered good to excellent, and the internal consistency has been evaluated through Pearson correlations, with elaborates that most of the correlations are in the anticipated direction despite redundancy. Moreover, two studies within Gill et al.'s (2020) analysis assessed convergent validity, discovering positive correlations between the MITI scales for assessing

empathic communication; therefore, divergent validity was assessed by another study, “By comparing MITI scores of MI and non-MI therapists, as well as before and after training, but only found significant differences between three items” (Gill et al., 2020, p. 479). The theoretical foundation of the MITI tool is specific to the variable results from the factor analyses, and in two additional studies predictive validity has been explored, and correlations have been discovered between several MITI items and their respective outcomes (Gill et al., 2020).

It is important to understand that the number of e-Referrals obtained throughout the project does not directly correlate with the efficacy of the MI; however, making the correlation between MI and the number of e-Referrals will help determine the generalized efficacy of MI. This was the ultimate process change that was made and another avenue in which MI competency can be indirectly assessed. Ongoing, unbiased, and automatic data was constantly captured by the EPIC quality metrics system. A line chart was constructed to assess the weekly number of patients being submitted with e-Referrals, compared to the set goal of 100% referral submission for patients; this allowed for the tracking of actual referrals over the six-week timeframe.

The Community Care of North Carolina’s (2012) guide was used, equipping the provider through a mnemonic technique known as “OARS” to guide the MI process: O-open-ended questions, A-Affirmations, R-Reflective Listening, S-Summaries (Lundahl et al., 2019). See attached Appendix B, Table B2, for OARS tool (Peterson, 2019). To further elaborate on this project’s phenomenon of interest and to enhance the validity, the e-Referral templates in fact measured what they intended to measure, the number of referrals sent to the MTQL (Moran et al., 2017). It is important to take this one step further as Moran et al. (2017) states, “The DNP

student will want to choose a tool that captures the essence of the phenomenon and produces consistent, stable results over time" (p. 262). This point of emphasis extended to enhance the validity of this template, because after the e-Referral was submitted in the EMR it completed the "care gap" for that patient, while also being captured in the clinician's care gap data monitored by the QI metric system; this emphasizes that this referral template is measuring what it is supposed to be measuring and meeting the need of addressing TC for eligible patients (Moran et al., 2017).

A critical aspect of reliability within an instrument includes interrater-reliability, and this means that each patient who showed interest in TCT was guided through the process (Moran et al., 2017). Please refer to the Appendix B, Table B1, for a detailed copy of the TCT practice documentation guideline handout that has already been disseminated to all providers; the TCT templates already were established within the system but were not being used. The second document contains three pages and is a templated letter that was sent via e-Referral to the MTQL after being filled out by the provider and verified by the front desk assistant. These were the documents that guided the team with this change and the current framework that supported sustainable data collection (Moran et al., 2017).

Procedures/Implementation Plan

General Description – Data Analysis and Collection Plan A line chart was constructed to assess the total number of patients seeking cessation and was then compared to the set goal of 100% referral submission rates for patients. Descriptive statistics were utilized to analyze percentages, frequency distributions, means, and medians related to the cessation inquiries; this prompted a detail-oriented examination and trending of referrals over a six-week timeframe. It

was anticipated that a smaller sample size may be attained throughout this quality improvement project, minimizing the generalizability; however, it serves as a stable framework for future practice quality improvements related to tobacco cessation.

At the start of the project, patient data was automatically de-identified within the EPIC system and housed within the quality metrics database, while specifically assigned to the PA as a numerical value. Electronic data was locked within the EPIC server and under password protection; accessibility was only available to the EPIC informatics liaison and QI RN specialist through verified electronic password entry. The e-Referral data was kept locked in the EHR system until May of 2021. Data was not destroyed because it contains no patient health information, precisely because the data obtained was of numeric value submitted in an e-Referral status, along with TC care gaps, and MITI scores that have no affiliation to patient health information.

Full Details as Table in Appendix The full implementation plan is attached in Appendix C, initially guided by the construction of a Gantt chart and is currently templated in timeframe tables within Appendix C. The plan to implement, collect data, and analyze it was specifically conveyed within the timeframes of 10/20/2020-11/30/2020 and 11/30/2020-1/11/2021. These were subject to change and tentatively detailed timelines regarding procedural implementations. Appendix D contains the official IRB Approval from Montana State University, along with the applicable consent form.

Include Resources Needed – Personal/Technology The resources needed for this QI project were addressed, particular to each of the previously disclosed stakeholders. The personnel needed for this project consisted of the patients, PA, front desk assistant, clinic RN,

quality RN, informatics specialist liaison, and MTQL. The team used its EPIC charting resources and currently established quality metrics system to contain and trend the cessation inquiries through e-Referrals sent to the MTQL; additionally, the MTQL staff facilitated the TCT coaching via an online or telephone platform to pursue counseling via text, email, or instant messaging, through an included membership to an online support community (MTQL, 2020). As previously disclosed, the MITI scale was performed pre- and post-to assess the PA's understanding and progression with MI.

Feasibility and Plan for Sustainability TC counseling is too often alluded to by providers as a "waste of time". Nonetheless, the intervention of MI is synergistically efficacious, and it can establish a routine that will foster sustainable revenue for the organization, while most importantly assisting in the reduction of tobacco use rates in disparity ridden communities. According to the literature, financial incentivization for healthcare providers should not be ill-advised, as it inspires a much-needed closure in the care gap of tobacco use through TCT guided by MI dialogue, and it should rather be considered as a feasible option that warrants investigation and encourages extended research interests (Singer et al., 2019). Overall, this project's sustainment was fostered primarily by the clinic's tobacco cessation trended billing/coding data and overall RVU statuses that were associated with this PA. This specific attention allocated toward the concept of fiscal hygiene is critical to garnering revenue longitudinally, and it is anticipated to be obtained by the April 2021 billing cycle.

RESULTS

It is not newly understood that there is a clear lack of clinical practice standards when providers are presented opportunities to assist patients with potential TCT needs. This QI project was framed around the implementation of basic MI techniques, the submission of e-Referrals to the MTQL, and most importantly creating a medium for consistent clinical staff engagement towards the commitment of persistent TCT. The demographic information is specific to tobacco users only, and due to having only one provider implementing the MI in this project, along with a total of only three patients engaged in e-Referrals through the project, further demographic information has been omitted to preserve anonymity. Weekly PDSA cycles were implemented to reveal issues within the e-Referral implementation process, and to assess the PA's basic fidelity of MI, the MITI scale was implemented pre-and-post QI project.

SMART Goals Addressed

The SMART goals guided the successful implementation of this QI project; however, the goal of specifically submitting e-Referrals for 100% of the tobacco users that presented at the clinic was not met; a total of three e-Referrals were submitted to the MTQL and have been conveyed below in Figure one, while also conveyed by EPIC's objective quality metrics system in Figures three and four. Regarding relevancy, 23 patients at this practice were identified as tobacco users prior to the project, and after the QI project implementation, this increased to 74 patients that are now documented as tobacco users; this data is shown below in Figures three and four from the clinic's quality supervisor, presenting an increase of 51 documented tobacco users. Specifically, in Figure three – Data Post QI Implementation, the second line of data that is

highlighted with the arrow, reports the PA's data that was included in this QI project. The timeframe of the project was seven weeks total, as the first week was educational; the project was successfully completed shortly after the target date of December 28th, and it officially concluded on January 4th, 2021 as this was the interval of the six-week implementation plan.

The short/mid-term goals were discussed in Chapter 3, which included the following: a successful pass of the proposal defense on November 12th, 2020, receiving MSU IRB approval thereafter, a substantial number of e-Referrals submitted to the MTQL by December 13th, and an enhanced confidence from the provider about MI. The long-term goals and sustainment consist of assessing RVU and TCT billing codes statuses in the next billing cycle. It is the medical professional's practice commitment to make sure the tobacco using population has resources, and personnel are persistently probing to offer cessation assistance. This project hoisted a re-invigoration of this responsibility for healthcare members regarding TCT.

Figure 2 – Line/Run Chart

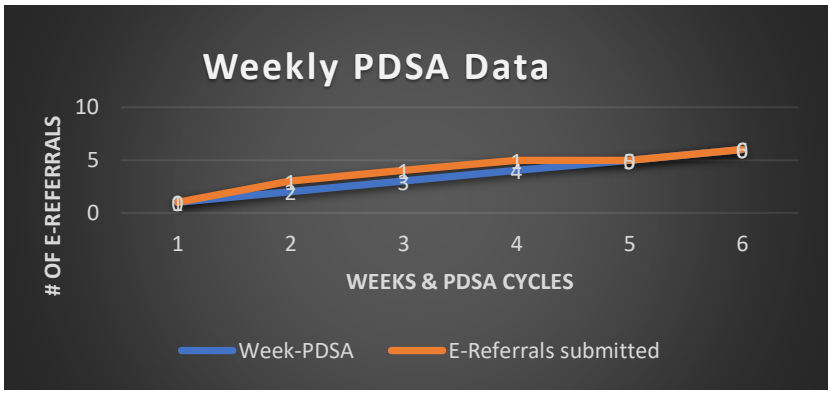


Figure 3 – Data Post QI Implementation 1/27/2021

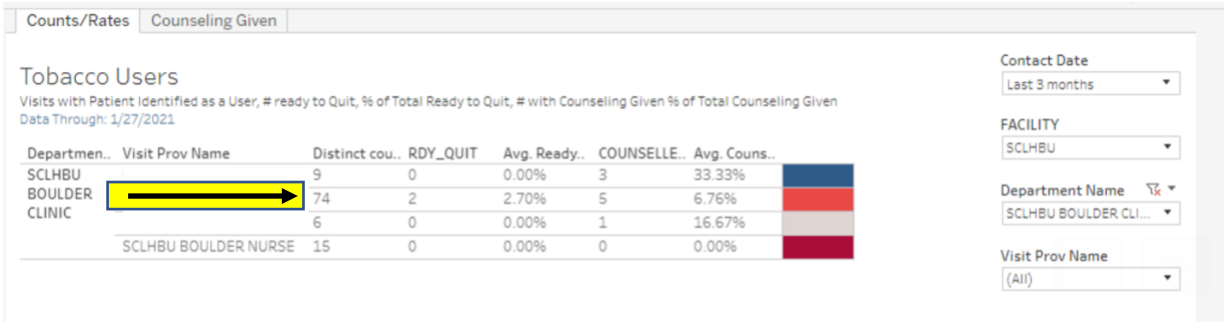
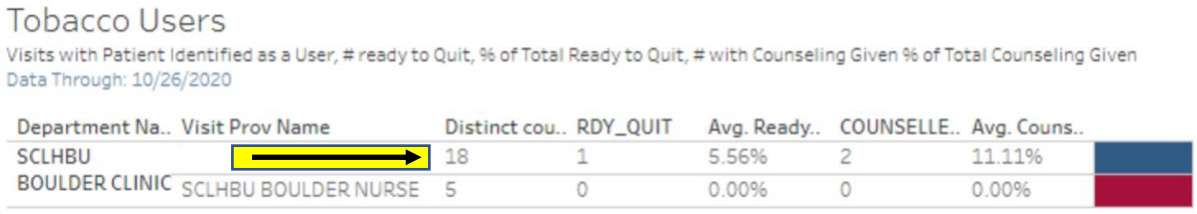


Figure 4 – Data Preceding QI Implementation 10/26/2020



Structure and Process Measures

The process of submitting e-Referrals to the MTQL was revived and established as the intervention that was presented to the clinic manager, PA, and QI specialist RN in October of 2020. Changes to the intake process of patients who use tobacco was completed by November 20th, 2020. These changes consisted of consent forms being filled out, alerting the PA of an opportunity to implement basic MI techniques, and submitting an e-Referral to the MTQL for further TCT. 51 newly documented tobacco using patients presented to the clinic and were given the opportunity for counseling via MTQL referral, and three of them were submitted by January 4th, 2021. Table 1's Line/Run Chart guided the direction for overall process improvement; it conveyed data specifically related to each weekly PDSA cycle, the number of referrals submitted, and specifically that week's two, three, and four each contained one e-Referral.

Descriptive and Inferential Statistics

The number of employees that primarily participated in the project consisted of four; the administrative front desk assistant, clinic RN, PA, and MTQL staff. As alluded to above, the number of patients being counseled for tobacco cessation increased from two to five, and the number of patients that were deemed as "ready to quit" increased by one. The Figure 2 – Line Chart describes the data as it was objectively received, starting at week one and ending at week six, synchronously including weekly PDSA cycles. Each week serves as a single point in time measurement, conveying categorical data. If the statistical evidence is based upon the 23 patients that were initially being counted as tobacco users, as disclosed in Figure four above, the two patients being counseled prior to this QI project would quantify for a total of 8.6% rate of counseling; moreover, the three new e-Referrals increase the total to five, increasing the rate of counseling at this practice to 21.8%. Nonetheless, as disclosed in Figure three, there are now 51 patients that are newly known tobacco users after this project's screening and documentation has occurred. This needs to be taken into consideration when evaluating the inference of the statistics.

To assess the PA's understanding pre- and post-QI project, the two-part MITI scale was implemented. The ease of use associated with this measurement tool assisted in assessing the PA's understanding of basic MI techniques, and the global pre-score was 15/20 and the behavior counts score was 9/10; the post-scores were 18/20 and 10/10. Since MI contains considerable variations, it historically has been difficult to analyze, and because this scale's fidelity is widely accepted and well-tested, the MITI scale's ease of use was instrumental in assessing the PA's understanding of basic MI concepts (Gill et al., 2020; Lundahl et al., 2019; Moyers et al. 2016).

Summary

The main findings of this six-week QI project conveyed one message. It is critical to reorient and reengage the clinic staff's perspective toward the importance of consistent perseverance of quality improved, patient-centered care, specifically related to TCT. Even though this is an area of future concentration and need, two particular themes emerged as the six PDSA cycles were completed over the course of this project. The themes included the following: lack of healthcare engagement with documenting tobacco users and the need for continued pursuit of TCT. Overall, this process assisted with revealing more patients who are tobacco users. The PDSA cycles allowed for concerns to be addressed, goals to be achieved, and opportunities to be created for process improvements within real time, with hopes of establishing a more concrete process for increased future screening and counseling standards at this clinic.

DISCUSSION

This chapter will elaborate upon the project's logistical challenges, interpret both strengths and weaknesses, and it will also convey how the results can be pragmatically utilized to encourage a longitudinal sustainment of its implications. The project's main findings revealed that there are many undocumented tobacco users at this clinic, and more importantly how disengaged the clinic staff was with the pursuit of obtaining this data to assist with TCT. There is a clear connection between the results and aim of the project.

Relevance to Literature and QI Framework

The scope of the problem and aim of the project revolves around the need for a deepened understanding of why there is a lack of clinical practice standards for providers regarding TCT. There is an inconsistent rapport with cessation documentation from providers, and this needs to be improved in order to provide longitudinally focused TCT support options for patients. Therefore, the intervention implemented was basic MI techniques to engage both the patients and the provider through TCT processes, with a specific intention toward submitting an e-Referral to the MTQL for further specialized TCT counseling.

In this short six-week time period, the results revealed that there were many more tobacco users at this rural clinic than previously understood, specifically 51; the MTQL is an already existing free first-time service to remedy tobacco use, and during this project's implementation, three patients agreed to counseling through an e-Referral submission to the MTQL and one more committed to a complete "Ready to Quit" tobacco status. Overall, the key findings support the aim of the project, not only promoting an enhanced engagement with the

patients regarding the process of TCT, but also encouraging an internalized commitment and enhanced consistency within the clinic staff through the e-Referral process. If dedication and time are afforded to the process of TCT, the data supports a synergistic effect between the patients and clinic staff for improved patient-centered outcomes.

Tobacco use is a multi-faceted concern and the relentless addictive properties of nicotine make cessation incredibly difficult, even for those who have a strong desire to quit (Caponnetto et al., 2019). Therefore, the dynamic QI framework, known as the PDSA model, was utilized because of its rapid and powerful nature to accelerate changes at multiple intervals of a project, and these cycles were instituted at weekly intervals to consistently encourage fundamental support and facilitate high functioning communication that fostered quality improved, patient-centered care (White et al., 2021). While the project was being implemented, a weekly journal was utilized to document the dialogue and trend the impact of the each weekly PDSA cycle; after analysis, the emerging themes consisted of the following: collaborative communication is imperative for TCT, MTQL e-Referrals are feasible, and the PDSAs facilitated productive process changes. After week four, further process changes were not needed with the PDSA cycles, as the process became more seamless with consents, MI, and it was discovered that e-Referrals submissions were sent quickest by the clinic RN, rather than by the anticipated administrative front desk assistant.

According to Figure 2 from Chapter 4, the most data obtained regarding e-Referrals was in weeks two through four, for a total of three; moreover, Tables 2 and 3 explain the QI project's data pre-and-post implementation, and this is where "Patients Identified as Users" in the EPIC quality metrics charting system revealed the large increase of 23 to 74 users. The number of

patients being counseled increased from two to five, along with the number of "Ready to Quit" increased by one; the generalization that this data infers is that the rural population at this clinic is asking for help, but the health system is not responding adequately.

Adsit et al. (2014) and Fiore et al. (2019) pioneered the idea of using e-Referrals in the EPIC EHR, and both studies included greater platforms of data. Adsit et al.'s (2014) run chart completed two simultaneous clinic site projects for 27 weeks, allowing for more time and enhanced opportunities to capture additional data, when compared to this project. Fiore et al. (2019) implemented their EHR e-Referral study in 23 primary care clinics in two different healthcare systems over a one-year time period, comparing fax-to-quit and electronic referral platforms; electronic referrals were associated with higher cessation rates (Fiore et al., 2019). Conclusively, electronic referral outcomes were statistically significant in both of these larger studies. Fiore et al. (2019) particularly highlighted the following advantages from the EHR-based e-Referral programs reporting, "An effective, closed-loop, interoperable means of referring patients who smoke to telephone quitline services, producing referral rates 3-4 times higher than the current standard of care (fax referral), including especially high rates of referral of underserved individuals" (p. 778). This situationally relates well to this project's objectives and frontier population.

The literature review surfaced three themes associated with tobacco use and MI related TCT: rural disparity implications, missed billing/coding opportunities for health systems are an opportunity for sustainment, and the general positive efficacy of MI. Overall, the literature supports this project's findings; Buettner-Schmidt et al.'s (2019) evidence that frontier communities are not being included in the forward momentum of decreasing TC trends are

reinforced by this project's data, specific to the unintended finding of 51 undocumented tobacco users at this clinic. Rural communities are being left behind when compared to the improving urban TCT trends, and this is where a future shift in monitoring quality metrics needs to extend beyond simple percentage monitoring for providers, encouraging more consistent tobacco screening routines (Levinson et al., 2015; Roberts et al., 2016). Also, as the project's implementation unraveled, there was a disconnect between Fiore et al.'s (2019) implications of closed-loop electronic updates within the EPIC system, and unfortunately this rural clinic did not have these EHR capabilities associated with each e-Referral submission, and this was a gap differentiating from what the previous literature alluded to.

Another important component to consider is that Singer et al. (2019) actually encourages financially incentivizing providers for TCT, and it should be considered a fiscally responsible avenue to recruit staff engagement. There is a disconnect between the administrative and frontline staff, particular to the fiscal transparency, and Singer et al. (2019) deliberates that if the frontline staff are engaged in this fiscal conversation, TCT quality metric results are positively impacted. In order to garner the most revenue longitudinally, curbing missed coding and billing opportunities for TCT with provider and staff engagement needs to be prioritized (Ekpu & Brown, 2015; Freeman, 2014; Leone et al, 2016; Nicoletti, 2016; Nishi et al., 2019; Oliverez, 2020). It is safe to say that if no one pushes to close this care gap or works to improve tobacco related quality improvement metrics, it will only continue to be set aside.

The third thematic underpinning of the literature review, MI efficacy, was clearly supported by the project's results. In the short six-week implementation timeframe, three patients enrolled for TCT via e-Referrals with the MTQL. The intentional focus toward MI counseling

techniques not only enhances established rapports with patients, but more importantly it created a medium in which the provider and rest of the healthcare team could reflect upon how their reach can be extended to patients. Auer et al. (2016), Odorico et al. (2019), and Shields et al. (2016) encourage MI because it creates a more favorable gradient in which TCT opportunities can be best nurtured. Future researchers will benefit from using this quality improvement project's results; it is confirmed that MI not only engages patients but healthcare team members as well, reinforcing it as a synergistically effective technique that is instrumental in supporting the unique, multi-faceted needs associated with the process of TCT (Odorico et al., 2019; Polinski et al., 2016).

Challenges Encountered and How Addressed

The two major challenges encountered for the implementation of this QI project were the aspect of time and the concerns associated with the COVID-19 virus. To combat the challenge of time, an anticipatory mindset guided planning of the project's implementation timeline since August 2020. Another unique challenge was the disconnect between follow-ups with the MTQL and the clinic; rather than there being an electronic closed-looped update within the EPIC system, which was the anticipated avenue for cessation updates, there was a fax that was sent back to the clinic. Due to the short time period, as of 2/10/21, no faxes have yet been received by the clinic updating the clinic staff of the cessation statuses. Nonetheless, the project was seamlessly implemented and there were minimal concerns with the logistical components of the project's implementation; this communicative issue was the largest implementation set-back.

To address the challenges associated with COVID and time, the back-up plan of communicating via video, telephone calls, and text messaging was successfully implemented to

absorb for the risk of exposure to COVID-19. Attentive persistence and communication assured a substantive six-week QI project, specific to weekly calls and constant text messaging to primarily address the process of submitting e-Referrals throughout implementation. This challenge was overcome by a succinct, respectful, and highly focused communicative rapport. Ultimately, rearranging the personnel who actually filled out the referral for the MTQL changed from the PA to the clinic nurse, and this was facilitated by clear support from the NP student.

The previously completed SWOT analysis was accurate in anticipating some of the larger challenges, specific to the administrative buy-in to the process, while also having to embrace the provider's hesitancy associated with the fact that this may compromise established rapports with his patients. To address these concerns with the administrative stakeholders, it was professionally and persistently highlighted that the provider already had a firm grasp on the basic concepts of MI, and that evidenced-based literature clearly supports the practice change of e-Referrals (Adsit et al., 2014; Fiore et al. 2019; Singer et al., 2019). In order for these e-Referrals to be carried out effectively, addressing informatics was key to overcoming the possible technological challenges. Fiore et al. (2019) diligently highlights the challenge of interoperability, and this was a challenge that was presented with generally implementing e-Referrals; however, the interoperability was not an issue to overcome with this project because this health system already has an established rapport with the MTQL, and it was simply not being utilized. In order to alleviate the provider's concerns about risking established patient relationships, it was thoroughly conveyed that there is evidence in support of how TCT enhances and exposes an overall positive systematic impact and synergistic relationship between technology and improved quality, patient-centered care (Adsit et al., 2014; Polinski et al., 2016).

Limitations

The limitations impacted the results in a few different ways. Since only three e-Referrals were submitted it would be difficult to acknowledge that of the newly documented 51 known tobacco users, MI is a reliable means to assist with enrolling patients in counseling with the MTQL via an e-Referral. However, relating to the project's findings, the larger limitations of the project consist of only one healthcare system, one quit line with demographically diverse counseling offices, one clinic, and one EHR system (Adsit et al., 2014). A larger, more diverse scope of resources and settings would afford greater comparison and opportunity to further understand the implementation of e-Referrals. The long-standing challenge to consider with this data is the conceptual uphill battle of pursuing a chronic disease management project and this too needs to be considered.

Furthermore, due to the highly classified nature, the compliance program at the organization refused to convey the associated billing/coding/RVU tobacco cessation related data, and this was very unfortunate because it would have closed the loop on the project's fiscal impact and potential. This needs to be acknowledged when considering the impact of this data. Additional administrative leadership support would have been very helpful with addressing the attitudes of the stakeholders, specific to revealing billing/coding/RVU statuses pre- and post-project implementation. This severely limits the implications associated with the results of this QI project; therefore, if this were to be carried out again, it would be advantageous to have a team member from the compliance department committed to releasing this data, as it is intended to support the project's sustainability.

MI historically has been difficult to assess or trend, and in order to address this concern the simplified MITI scoring system was implemented to analyze the PA's pre-and-post project comprehension of instituting basic MI techniques (Gill et al., 2020). This was not the primary data trended and analyzed but it contains another avenue to assess the overall fidelity of MI throughout the project; nonetheless, internal validity is limited as there is a possibility for bias with these scores.

The available time to engage clinic staff and potential patients was seven weeks total, including one week of education prior to the six-week project implementation; also, it was not anticipated that the e-Referrals submitted to the MTQL were going to be sent to different offices within the quit line agency, and this made tracking the counseling statuses of these patients difficult. After connecting with the MTQL staff on February 17th, 2021, it was understood that each of these three patient's e-Referrals was classified as "unreachable," otherwise known as the patients did not answer their phones, and this needs to be considered when analyzing these results. These inconsistencies were not revealed until after the project implementation concluded and none of the stakeholders were aware of these diverse TCT locations within the MTQL. These are factors that have the potential to compromise overall generalizability of the work.

Recommendations for Future Work

The future success of similar projects would rely heavily on a longer project timeline and diversified settings. It seemed as if the traction for a contagious, more palpable "change" energy engaged between weeks two through four, and this needs to be taken into consideration in order to assess for future change behaviors within an organization and team. It is clear that in moving forward with the results from this project that change takes time and so does harnessing the

collective momentum for the process of change in its entirety. Also, the administrative assistant and QI specialist RN served as the personnel who encouraged continuous momentum, inspiring clinic staff and patient engagement, and this conveys that it is critical to find innovative team members to keep processes moving forward with the project lead.

Applicability and lessons learned for future research revolve around understanding specifically where an e-Referral has been sent within the quit line system, in order to create opportunities for status inquiry if needed. Since there were issues with retrieving specific data for billing/coding/RVU statuses pre- and post-project, it would have been helpful to have a designated team member in the compliance department that would remove any patient sensitive data so this data could be safely released for system-wide momentum and influence.

Future researchers may benefit from consulting with other EHR vendors to facilitate further closed-loop electronic status updates on each patient who is being counseled by the MTQL and build more diverse opportunities to encourage staff and patient engagement (Adsit et al., 2014). Fiscal incentivization for providers should not be ill-advised, rather it is encouraged as a realistic motivator to create momentum with staff members in the process of pursuing TCT for patients (Singer et al., 2019). Since there was an unintended finding of 51 newly documented known tobacco users, this surfaced the following two concerns: 1.) care gap trend and quality metric percentages are artificially deflated as the team successfully screens and records more tobacco users in the EHR, and this dissuades teams from pursuing this cessation therapy because it highlights the poor-quality metrics associated with all of the newly documented tobacco users, and 2.) TCT needs to be inquired about more routinely by the staff on behalf of the patient population, because the patients are indirectly asking for help, and this data supports it.

Future extensions of QI metrics need to be considered, because simply measuring a provider's care gap with one percentage is failing the potential of future TCT counseling opportunities. Providers may be nervous to inquire about patient's tobacco statuses because they know the number of people who use tobacco will harm their quality metrics, and this should be dissuaded and another quality metric system should be instituted to assess a provider's quality in each category, as it is directly affecting if patients are receiving opportunities for TCT. This project is applicable in any other practice setting and that is the beauty of its nature, as TCT needs can be encountered in any discipline throughout the practice of medicine.

Project Work Related to DNP Essentials

At the graduate nursing level, both research- and practice-focused doctoral education programs share demanding and rigorous expectations, thus the American Association of Colleges of Nursing (AACN) (2006) highlights how the eight essentials afford all students the opportunity to attain DNP end-of-program competencies. The field of healthcare is continuously changing, and the DNP essentials provide graduate nursing students with a well-rounded, strong foundational core that provides a strong footing for new graduates to step into the academic, leadership, or practice arenas upon graduation. This QI project connects with all eight of the DNP essentials, and it is a great example of how these essentials blend together and complement one another, providing a medium for persistent innovation and serve as a constant reminder to continue to put the needs of the patient first (AACN, 2006).

This project identified two main contributions for clinical practice, and the following includes the two most notable facets: healthcare staff can be more engaged with tobacco cessation needs; the data conveys that patients are asking for TCT assistance but are in need of

an extended and more formal guidance. The first, second, fourth, sixth, and seventh DNP essentials were the most prominently achieved throughout this QI project (AACN, 2006). Nonetheless, the remaining third, fifth, and eighth essentials were also achieved through this project's contributions, but rather in a more complimentary manner (AACN, 2006).

The findings of this project impacts practitioners in multiple ways and the following highlighted DNP essentials assist with discernment in overall practice implications. The first essential, *Scientific Underpinnings for Practice,* conveys that scientifically basic MI techniques assist with engaging and enrolling tobacco users into e-Referrals for TCT, facilitated by weekly evidenced-based PDSA cycles, underscoring the importance of science-based concepts for evaluation and enhancement of healthcare delivery to improve patient outcomes (AACN, 2006). After completing a clinical rotation at this clinic in the fall of 2020, it was clear that TCT was being neglected; therefore, *Organizational and Systems Leadership for Quality Improvement,* the second essential, was noticeably applicable, as buy-in from organizational and system-level leadership was engaged through the project's extensive literature review (AACN, 2006). The project was guided by the latest evidenced-based support for the intervention of MI, along with the process of e-Referrals, to enhance quality improvement metrics in the category of tobacco cessation (AACN, 2006).

As the explosion of technology continues to pioneer the practice of medicine, the fourth essential, *Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care*, was instrumental as e-Referrals sent to the MTQL were the imposed change (AACN, 2006). This prepared the DNP student to enhance clinical practice standards through technological innovation, equipping the clinic staff with resources to provide

consistently improved patient-centered care for cessation and displaying a deep commitment to these patients that this care team is implementing cutting-edge technology for the betterment of this rural community (AACN, 2006). This e-Referral practice change allowed for a more transparent form of screening and documentation of tobacco user quality metrics, affording the administrative leadership staff with additional data to enhance quality metric decision-making (AACN, 2006).

The advanced electronic platform of e-Referrals for TCT interweaves the sixth and seventh essentials, *Interprofessional Collaboration for Improving Patient and Population Health Outcomes and Clinical Prevention and Population Health for Improving the Nation's Health*. The AACN (2006) illustrates that the sixth essential reinforces and advocates for a team-based approach, which was evident in this QI project, particular to highly focused communicative rapports to institute collaborative identification of tobacco users, MI, and referral submission to the MTQL. The seventh essential of health promotion and risk reduction clearly connects well with this project's commitment toward remedying one of the largest culprits of chronic disease, tobacco (AACN, 2006). This essential equips DNP prepared nurse practitioners with the skill-sets necessary to "Synthesize the psychosocial dimensions and cultural impacts related to population health" (AANP, 2006), and this QI project addressed critical gaps in care within this community.

Lastly, the third and eighth essentials focus on clinical scholarship and advanced nursing practice (AACN, 2006). Each of these essentials was included in this project, as both organizational and systems-level thinking was implemented to create unique opportunities for this rural Montana population, specific to a technologically driven TCT, similar to the capacity

that the rest of the modern healthcare systems routinely receive (AACN, 2006). Moreover, this project employed meaningful changes to the standard clinical practice guideline of using this referral process, with hope of establishing an organization-wide standard for the delivery of TCT (AACN, 2006). The eighth essential is framed on the advancement of nursing practice, focusing on the consistent commitment to improve patient-centered outcomes, all of which is supported by the, "Advanced levels of clinical judgement, systems thinking, and delivery of evidence-based care" (AANC, 2006). This QI project has been guided by the eight DNP essentials, and it has presented an unparalleled opportunity for both personal and professional leadership growth, most importantly engaging this healthcare system in actively identifying the unaddressed problem of TCT. This project will spearhead future opportunities and standardize clinical decision-making opportunities for providers when presented with patients who are tobacco users.

Feasibility and Plan for Sustainability

Adsit et al. (2014) and Fiore et al. (2019) pioneered the idea of using e-Referrals for TCT, particularly within the EPIC EHR platform, and this project utilized these concepts to connect this rural population to modernized resources. Since tobacco use is generally perceived as a subjectively controlled issue, healthcare personnel may not observe this as a need that has to be addressed, and that is exactly what was occurring within this rural clinic setting. Nonetheless, this project conveyed that routine screening and basic MI techniques are the first step in connecting both the clinic staff and patients with evidenced-based resources to assist with TCT.

The process-oriented plan that will ultimately afford this project's overall sustainability revolves around diligent transparency of the billing/coding/RVU statuses pre- and -post project implementation. However, in order for sustainment to occur more organically, the clinic manager

needs to also harness the staff's current buy-in energy to keep the momentum of this project's process implementation. As previously alluded to, the traction for change within the clinic staff took about two to three weeks for full engagement of the e-Referral process; therefore, this increased awareness and timing of the staff's heightened sense engagement may be the most important aspect to carry forward, with a simultaneous acknowledgment toward fiscal hygiene.

The clinic staff relayed that it would have been helpful to receive more real-time updates from the MTQL on the patient's referral and counseling statuses; consequently, this needs to be taken into consideration when permitting future research in this area. At this organization there are monthly provider meetings, and this project's results have been disseminated in April 2021 to assist with relaying its implications system wide. Overall, the cost-benefit analysis is in favor of the benefit because this process is already integrated within this hospital system, but it is simply not being implemented. The clinic's ability to garner revenue longitudinally with TCT has been untapped, and this project has revealed this potential of creating a synergistic effect between the health system and the community.

Summary

In summation, the feasibility of this e-Referral project enhances cessation opportunities for tobacco users through an external resource, and it is possible that both referral submissions and cessation rates could increase if the process of the closed-loop referral status updates were enhanced. Despite the project's limitations, the obtained data supports increased accessibility to quality patient-centered care and provides this rural community with modernized healthcare resources to support increased future TCT opportunities. The attention allocated toward the impression of fiscal hygiene is critical to garnering revenue longitudinally for this clinic;

however, this project most importantly assists in reducing tobacco use rates in these underserved communities, fostering an improved medium of health promotion and disease prevention (AACN, 2006).

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APPENDICES

APPENDIX A

SWOT ANALYSIS

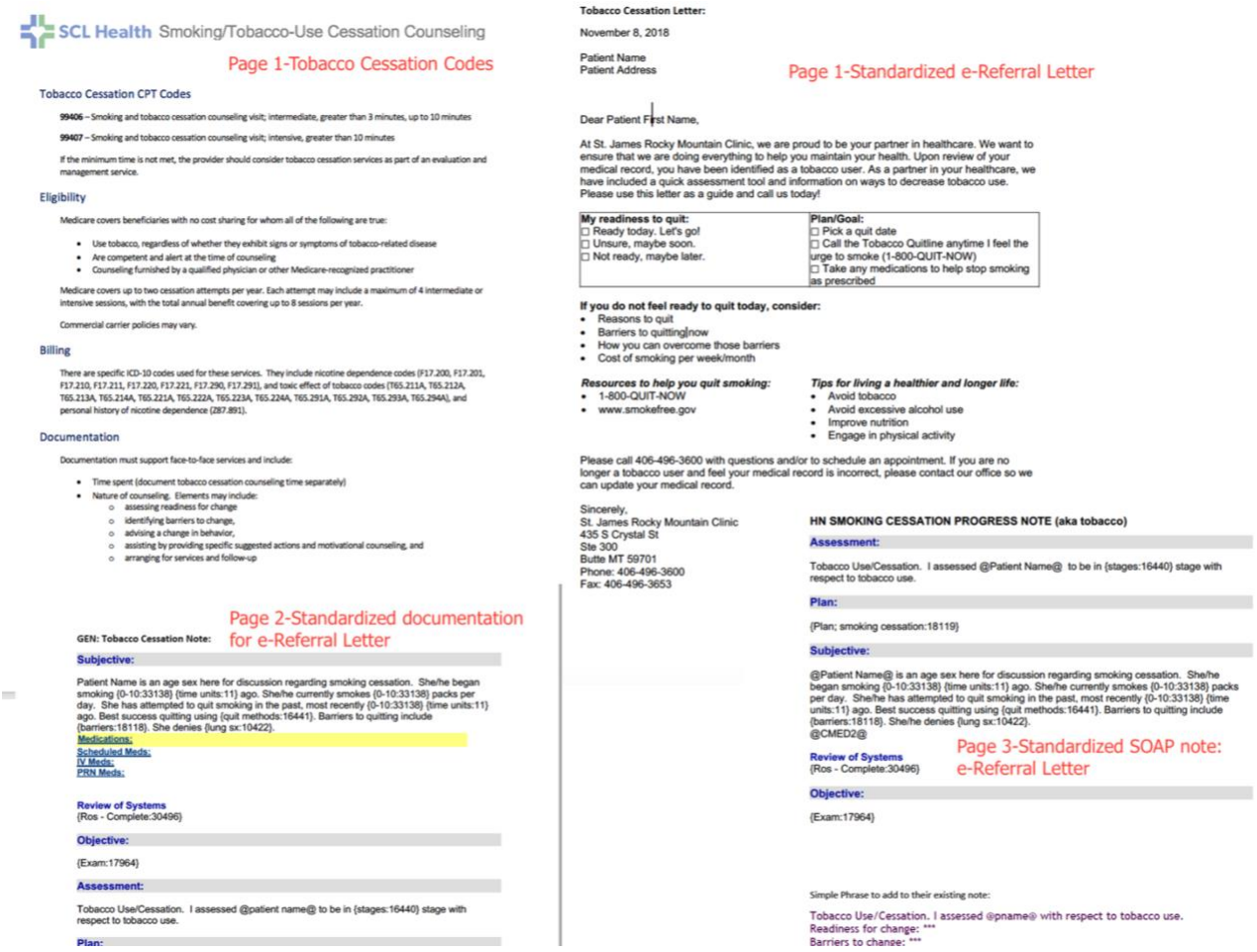
Strengths	**Weaknesses**
-Wide variety of opportunities for tobacco cessation -MI is an efficacious treatment process for TCT -MI skills training is contagious and can apply to other aspects of care delivered to patients -Quality over quantity, with regard to spending time with patients to assist with MI -Enhanced process to deliver streamlined healthcare -Higher standards of provider engagement via improved clinical practices -Reflect to patients that the staff are on the cutting edge of technological advancements in medicine to intercede for them at their most vulnerable times -Exposes an overall systematic impact and synergistic relationship between technology and improved quality, patient-centered care -e-Referral process already exists within the EPIC charting system but is not routinely implemented. -Evidence supports MI and e-Referrals for TCT -Efficacious results with MTQL and e-Referral processes (Adsit et al., 2014; MTQL, 2020)	-Difficult to prove qualitative research, compared to quantitative results, when assessing smoker's "crave factor" for tobacco -Inconsistent research with MI as a sole remedy for cessation -Tobacco use not seen as a "disease," but more of a "choice" -May view it as a waste of time and resources -Staff engagement -Administrative exhaustion regarding the time and energy spent to implement -Increased time and frustration with processing orders/notes, versus paper/fax or desktop submission -OARS MI tool may not resonate with PA (Lundahl et al., 2019) -EPIC e-Referral process challenges (even though the team/stakeholders are already familiar with process)

Opportunities	**Threats**
-There are millions of tobacco users and tobacco use contributes to over 480,000 deaths/year (Buettner-Schmidt et al., 2019) -Philosophies of care are becoming more longitudinal, fostering greater time for the provider-patient visit -To educate providers on how to improve patient-centered care with streamlined MTQL collaboration (Adsit et al., 2014; Polinski et al., 2016) -Contribute positively to the financial ecosystem of the organization -Improve provider satisfaction through RVUs -Improve CMS benchmark reimbursement standards -Garner longitudinal business through positive provider-patient rapports, specifically related to increased satisfaction scores (Polinski et al., 2016; Vink et al., 2019) -Each provider is constantly being trended with their "care gaps" and this is a measure that QI monitors -Benefit to use e-Referral process to collaboratively include MTQL services (services available Monday-Friday, 5am-11pm) -Increase a "closed-loop" form of communication for the provider, after referral, to see how the counseling is going for the patient (Adsit et al., 2014)	-Clinic staff and stress on patients; rural practice is already running on fumes regarding resources and staff-to-patient ratios. COVID-19 capacity concerns/restrictions. -Legal regulations/considerations with medical malpractice -Potential harm to Native American's culture or way of life with tobacco use -Team may not be accepting of platform, possibly delaying or compromising patient care and overall satisfaction -Consistent trends arise with provider resistance in the literature, and it is important to mention that this may be a risk and harm the validity of implementation -Compromise the integrity of the practice's current routine and relationship with patients -MTQL communication issues; patients may not have means to communicate conveniently regarding technological commitments -MITI tool from Gill et al. (2020) may not be as effective as the literature suggests -Ergonomics: physical neck/eye strain with more computer referrals

APPENDIX B

TOOLS

Table B1-EPIC TCT Guides (SCL Health, 2020)



SCL Health Smoking/Tobacco-Use Cessation Counseling

Page 1-Tobacco Cessation Codes

Tobacco Cessation CPT Codes

99406 – Smoking and tobacco cessation counseling visit; intermediate, greater than 3 minutes, up to 10 minutes

99407 – Smoking and tobacco cessation counseling visit; intensive, greater than 10 minutes

If the minimum time is not met, the provider should consider tobacco cessation services as part of an evaluation and management service.

Eligibility

Medicare covers beneficiaries with no cost sharing for whom all of the following are true:

- Use tobacco, regardless of whether they exhibit signs or symptoms of tobacco-related disease
- Are competent and alert at the time of counseling
- Counseling furnished by a qualified physician or other Medicare-recognized practitioner

Medicare covers up to two cessation attempts per year. Each attempt may include a maximum of 4 intermediate or intensive sessions, with the total annual benefit covering up to 8 sessions per year.

Commercial carrier policies may vary.

Billing

There are specific ICD-10 codes used for these services. They include nicotine dependence codes (F17.200, F17.201, F17.210, F17.211, F17.220, F17.221, F17.290, F17.291), and toxic effect of tobacco codes (T65.211A, T65.212A, T65.213A, T65.214A, T65.221A, T65.222A, T65.223A, T65.224A, T65.291A, T65.292A, T65.293A, T65.294A), and personal history of nicotine dependence (Z87.891).

Documentation

Documentation must support face-to-face services and include:

- Time spent (document tobacco cessation counseling time separately)
- Nature of counseling. Elements may include:
  - assessing readiness for change
  - identifying barriers to change,
  - advising a change in behavior,
  - assisting by providing specific suggested actions and motivational counseling, and
  - arranging for services and follow-up

Page 2-Standardized documentation for e-Referral Letter

GEN: Tobacco Cessation Note:

Subjective:

Patient Name is an age sex here for discussion regarding smoking cessation. She/he began smoking {0-10:33138} {time units:11} ago. She/he currently smokes {0-10:33138} packs per day. She has attempted to quit smoking in the past, most recently {0-10:33138} {time units:11} ago. Best success quitting using {quit methods:16441}. Barriers to quitting include {barriers:18118}. She denies {lung sx:10422}.

Medications:
Scheduled Meds:
IV Meds:
PRN Meds:

Review of Systems
{Ros - Complete:30496}

Objective:

{Exam:17964}

Assessment:

Tobacco Use/Cessation. I assessed @patient name@ to be in {stages:16440} stage with respect to tobacco use.

Plan:

Tobacco Cessation Letter:

November 8, 2018

Patient Name
Patient Address

Page 1-Standardized e-Referral Letter

Dear Patient First Name,

At St. James Rocky Mountain Clinic, we are proud to be your partner in healthcare. We want to ensure that we are doing everything to help you maintain your health. Upon review of your medical record, you have been identified as a tobacco user. As a partner in your healthcare, we have included a quick assessment tool and information on ways to decrease tobacco use. Please use this letter as a guide and call us today!

My readiness to quit:	Plan/Goal:
☐ Ready today. Let's go!	☐ Pick a quit date
☐ Unsure, maybe soon.	☐ Call the Tobacco Quitline anytime I feel the urge to smoke (1-800-QUIT-NOW)
☐ Not ready, maybe later.	☐ Take any medications to help stop smoking as prescribed

If you do not feel ready to quit today, consider:

- Reasons to quit
- Barriers to quitting now
- How you can overcome those barriers
- Cost of smoking per week/month

Resources to help you quit smoking:

- 1-800-QUIT-NOW
- www.smokefree.gov

Tips for living a healthier and longer life:

- Avoid tobacco
- Avoid excessive alcohol use
- Improve nutrition
- Engage in physical activity

Please call 406-496-3600 with questions and/or to schedule an appointment. If you are no longer a tobacco user and feel your medical record is incorrect, please contact our office so we can update your medical record.

Sincerely,
St. James Rocky Mountain Clinic
435 S Crystal St
Ste 300
Butte MT 59701
Phone: 406-496-3600
Fax: 406-496-3653

HN SMOKING CESSATION PROGRESS NOTE (aka tobacco)

Assessment:

Tobacco Use/Cessation. I assessed @Patient Name@ to be in {stages:16440} stage with respect to tobacco use.

Plan:

{Plan; smoking cessation:18119}

Subjective:

@Patient Name@ is an age sex here for discussion regarding smoking cessation. She/he began smoking {0-10:33138} {time units:11} ago. She/he currently smokes {0-10:33138} packs per day. She/he has attempted to quit smoking in the past, most recently {0-10:33138} {time units:11} ago. Best success quitting using {quit methods:16441}. Barriers to quitting include {barriers:18118}. She/he denies {lung sx:10422}.
@CMED2@

Review of Systems
{Ros - Complete:30496}

Page 3-Standardized SOAP note: e-Referral Letter

Objective:

{Exam:17964}

Simple Phrase to add to their existing note:

Tobacco Use/Cessation. I assessed @pname@ with respect to tobacco use.
Readiness for change: ***
Barriers to change: ***

Table B2-OARS (Gill et al., 2020; Lundahl, 2019; Peterson, 2019)

Table B3-Revised Global Scale MITI (Moyers et al., 2010)

Motivational Interviewing Treatment Integrity Code (MITI)
Coding Sheet Revised June, 2007

Tape #_____ **Coder:**_____ **Date:**_____

Global Ratings

Evocation		1 Low	2	3	4	5 High
Collaboration		1 Low	2	3	4	5 High
Autonomy/ Support		1 Low	2	3	4	5 High
Direction		1 Low	2	3	4	5 High
Empathy		1 Low	2	3	4	5 High

Behavior Counts

Giving Information			
MI Adherent	**Asking permission, affirm, emphasize control, support.**		
MI Non-adherent	**Advise, confront, direct.**		
Question (subclassify)	**Closed Question**		
	Open Question		
Reflect (subclassify)	**Simple**		
	Complex		
	TOTAL REFLECTIONS:		

First sentence:_____

Last sentence:_____

Revised 22 January 2010 (minor text revisions)

Table B4-MITI Measures (Moyers et al., 2005)

Table 2
Motivational Interviewing Treatment Integrity measures derived from EFA of MISC

Global ratings	Brief description	Represented factors
Empathy/ Understanding	extent to which the therapist understands and/or makes an effort to grasp the client's perspective	1
Spirit	collaboration, evocation and support of autonomy	1
Behavior Counts		
General Information	interviewer gives information, educates, provides feedback or discloses personal information.	5,9
MI-Adherent	interviewer behaviors that are consistent with a motivational interviewing approach.	7,8,11
MI-Nonadherent	interviewer behaviors that are inconsistent with a motivational interviewing approach.	4
Closed Question	interviewer asks the client a question that can be answered with a "yes" or "no" response.	3
Open Question	the interviewer asks a question that allows a wide range of possible answers.	3
Simple Reflection	conveys understanding or facilitates client/therapist exchanges. These reflections add little or no meaning (or emphasis)	3,6
Complex Reflection	adds substantial meaning or emphasis to what the client has said.	6,10
Total Reflection	sum of simple and complex reflections	3,6

Table B5- 14 MITI Variables (Forsberg et al., 2008)

Table 4. *Median and interquartile range in the MITI variables in the MI-trained group before and after MI training*

	Before training		After training	
MITI variable	*Mdn*	IR	*Mdn*	IR
Empathy	4.0	1.0	4.8	1.0
MI spirit	4.0	1.0	4.6	1.0
Information	4.9	7.0	5.8	1.0
MI-adherent statements	6.0	4.2	6.0	2.4
MI-nonadherent statements	4.0	2.2	2.3	1.4
Closed questions	12.2	4.7	10.8	2.3
Open questions	4.0	3.3	4.2	4.6
Simple reflections	5.3	1.2	9.8	4.2
Complex reflections	5.5	8.0	9.2	8.3
Total reflections	10.8	8.9	18.6	10.6
Prop. open questions to questions	0.28	0.17	0.30	0.16
Prop. reflections to questions	0.54	0.26	1.14	0.93
Prop. complex reflections to reflections	0.51	0.39	0.45	0.21
Prop. adherent statements	0.60	0.16	0.77	0.27

Note. *MITI=Motivational Interviewing Treatment Code; MI=motivational interviewing; IR=interquartile range.*

APPENDIX C

TIMEFRAME TABLE

Major Process Objectives	Responsible Individual	Process Participants	Expected Date of Completion
1. Development of the PA's educational training, specific to the OARS mnemonic handout and TCT examples.	Project Lead	Project Lead	11/1/2020
2. Receive the clinic's actual metrics of patients who are current tobacco users	Project Lead	Project Lead	10/28/2020
3. After successful proposal defense, schedule date and time to discuss education, educational trial week (11/16/20-11/20/20), and implementation, with weekly meetings, regarding EPIC charting and e-Referral processes.	Project Lead	Project lead, PA, QI RN, EPIC informatics liaison	-Begin: 11/16/2020 -Weekly thereafter: 11/23,30/2020; 12/7,14,21,28/2020 -Weekly PDSAs performed to assess the project's implementation, specific to e-Referral statuses and PA's understanding of MI
4. Healthcare system education at larger affiliated medical group at routine monthly meeting that occurs every third Thursday of the month for providers	Project lead	Medical group providers	04/15/2021
5. Modify e-Referral process in EPIC EMR with administrative assistant and PA.	Project lead	PA, administrative front desk assistant.	11/16/2020-11/20/2020
6. Weekly emails sent and exchange with PA to assess understanding of the basic MI techniques, specific to the OARS mnemonic.	Project lead	Project lead	Each week. This will occur with EMR chart audits via the EPIC system to discern if tobacco cessation care are gaps being met or not.
7. Obtain the EPIC "care gaps" charting data, number of e-Referral submitted, and PA's understanding of MI via the MITI scale	Project lead	Project lead, PA, QI RN, EPIC informatics liaison	12/28/2020
8. Assess and analyze provider feedback on the QI project and its effect on the systematic process of TCT. Data analysis thereafter	Project lead	Project lead, PA, QI RN, EPIC informatics liaison	12/29/2020-1/1/2021

APPENDIX D

IRB APPROVAL AND INFORMED CONSENT

MONTANA
STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD
For the Protection of Human Subjects
FWA 00000165

2155 Analysis Drive
c/o Microbiology & Immunology
Montana State University
Bozeman, MT 59718
Telephone: 406-994-4706
FAX: 406-994-4303
E-mail: cherylj@montana.edu

Chair: Mark Quinn
406-994-4707
mquinn@montana.edu
Administrator:
Cheryl Johnson
406-994-4706
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MEMORANDUM

TO: Matthew Douglas Hoffman and Casey Cole

FROM: Mark Quinn Mark Quinn cfj
Chair, Institutional Review Board for the Protection of Human Subjects

DATE: November 17, 2020

RE: *"A Formalized Approach to Remedy Tobacco Addiction: e-Referrals and the Ability of Documentation to Influence Opportunities through Motivational Interviewing" [MH111720-EX]*

The above research, described in your submission of November 17, 2020, is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal regulations, Part 46, section 101. The specific paragraph which applies to your research is:

____ (b) (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

_X_ (b) (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation; and (iii) the information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by section 16.111(a)(7).

____ (b) (3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

____ (b) (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.

____ (b) (5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

____ (b) (6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad to review it. If you wish a review and committee approval, please submit 3 copies of the usual application form and it will be processed by expedited review.

Consent Form

Hello and thank you in advance for your time and consideration! My name is Matthew Hoffman, I am a nurse practitioner student at Montana State University and am currently conducting a quality improvement research project related to tobacco cessation. This project specifically lends an opportunity to any tobacco user who is interested in pursuing a tobacco free lifestyle. It is clear that quitting tobacco is a process; therefore, if you are slightly interested in quitting, are not yet ready to quit, or have already quit and restarted, the Montana Tobacco Quit Line can assist you each step of the way.

This quality improvement project is structured around the principles of basic motivational interviewing techniques. My plan is to educate your healthcare provider on these basic motivational interviewing techniques, and they will then discuss with each patient about the specifics of tobacco cessation counseling while using these techniques. There are no risks or discomforts that are associated with this project. If you remain interested throughout the consult with your healthcare provider, with your permission, we will then be implementing an electronic, "e-Referral", to the Montana Tobacco Quit Line on your behalf. This is a free service and will be provided upon your agreement. This quit line provides you with your first step to an individualized and patient-centered approach toward becoming tobacco free.

My intention with this project is to gather data on motivational interviewing knowledge of the healthcare provider and the overall rates at which tobacco users pursue tobacco cessation counseling with these techniques, and whether or not tobacco users are interested in the free assistance from the Montana Tobacco Quit Line. If you agree to the e-Referral process, the staff here at the clinic will submit this referral in the computer system, and Montana Tobacco Quit Line will reach out to you and provide free resources for counseling. This process is unique because it allows your healthcare provider at this clinic to be involved in your journey of pursuing a tobacco free lifestyle, while receiving assistance from the expert quit line staff. Participation is completely voluntary, you are welcome to stop at any time, and you may choose not to answer questions you do not want to answer.

Authorization statement:

For one's own participation **(required wording)**:

AUTHORIZATION: I have read the above and understand the discomforts, inconvenience and risk of this study. I, _____ (name of subject), agree to participate in this research. I understand that I may later refuse to participate and that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

Signed: _____

Investigator: _____

Date: _____

APPROVED
MSU IRB
11/17/2020
Date approved