Implementing Substance Abuse Screening in a Free Clinic

by

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Dedication

I dedicate my DNP project to my late mother and brother. Also, I want to dedicate my project to those who are suffering substance abuse and their loved ones. May they find the hands of caring and knowledgeable healthcare providers with a desire to help.

Abstract

Substance abuse in the United States is on the rise and evidence has shown that screening patients is ideal in primary care. Early identification of substance use is important in decreasing mortality and morbidity associated with substance use. Protocols need to be in place to identify substance abuse and respond appropriately. The aim of this quality improvement project is to implement a substance abuse screening tool in a free clinic and develop a protocol for patients who screen positive. Over a 14-week period, patients were screened using the Tobacco, Alcohol, Prescription Medication, and Other Substances (TAPS-1) screening tool for substance use. A resource pamphlet, which identified resources within the community, was developed to distribute to patients screening positive. A retrospective chart review (n=159) identified that 5% of patients received screening using the TAPS-1. Implications for this DNP project include implementing the screening tool within the EHR and creating reminders. It is recommended that future project planners consider organizational readiness and assessment of potential barriers when working with free clinics and volunteer-based staff.

Key words: Tobacco, Alcohol, Prescription Medication, and Other Substances (TAPS-1), substance abuse, substance misuse

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Chapter One: Overview of the Problem of Substance Abuse

Substance abuse has risen among American citizens over the past few decades. According to the World Health Organization (2018), substance abuse is the use of harmful or hazardous psychoactive substances. Substance Abuse and Mental Health Services Administration (SAMHSA, 2017a) conducted the National Survey on Drug Use and Health on Americans, 12 years and older, about specific substance used in the previous month will be discussed in this chapter. These habits are associated with healthcare costs increases due to users' frequent hospitalizations, increased morbidity and mortality rates (Aroke et al., 2018).

In response to this crisis, initiatives such as Healthy People 2020 (2018) were begun to improve the health of Americans. Specifically, Healthy People 2020 focuses on assisting individuals with substance abuse, to improve their health, safety, and quality of life. Virginia Moyer, MD, MPH on behalf of the United States Preventative taskforce (2013) reported that screenings and brief interventions in primary care settings have demonstrated benefits for alcohol misuse.

The purpose of this chapter is to give an overview of prevalence of substance abuse and its significant impact and in the United States (U.S.). The chapter overview provides background information on substance abuse, including prescription medication usage. Finally, this chapter briefly describes a Doctorate of Nursing Practice (DNP) scholarly project.

Background Information

Substance abuse. Substance abuse includes a wide variety of substances that can affect anyone. Commonly used substances include marijuana, synthetic marijuana, prescription and over-the-counter medications (National Institute on Drug Abuse [NIDA], 2016). Greater than 90% of patients with substance abuse began with smoking, drinking, or using other drugs before

18 years old (The National Center on Addiction and Substance Abuse, 2018). These studies suggest that substance abuse begins in early life. Americans, young people are susceptible to use of any type of drug. These studies also indicate that Americans have easy substance accessibility they may use for recreational purposes.

In 2016, the SAMHSA (2017a) conducted a survey, of 135,188 people, that categorized by age group, individuals who abused substances in the previous year. According to this survey, the 18 to 25-year age group had the highest incidence of substance abuse; the 12 to 17-year age group had the lowest incidence of substance abuse among all other age groups. The survey also found that substance abuse more commonly occurred in the south and west regions of the United States. Furthermore, people living in poverty below the 200th percentile were more likely to have used illicit drugs during the prior year. The association between poverty and substance use may be due to lack of substance abuse resources, stress secondary to money and food insecurity, or unemployment.

Morbidity. Morbidities vary depending on which substance is abused and delivery method. For example, chronic heroin users experience insomnia, constipation, and lung complications through any delivery method (NIDA, 2018a). Specifically, users who snort heroin are at risk for a perforated nasal septum, while users who choose to inject are at increased risks for local bacterial infections, i.e., abscesses, septicemia, and endocarditis. (NIDA, 2018a)

Substance use has mental and physical negative impacts on users and their loved ones. Substance abuse is associated with sexually transmitted diseases, including HIV, domestic violence, child abuse, motor vehicle crashes, and physical fights (Healthy People 2020, 2018). Chronic drug use also predisposes a person to mental health conditions including paranoia, depression, anxiety, aggression or hallucinations (NIDA, 2017a). Persons addicted to drugs are

twice as likely to suffer from mood or anxiety disorders than persons in the general population. Similarly, individuals with anxiety or mood disorders are more likely to self-medicate with illicit substances than individuals free from such disorders (NIDA, 2017a).

Mortality. According to NIDA (2017a), drug-related deaths have doubled since 2000. One in four deaths is attributed to alcohol, tobacco, illicit or prescription drug use (NIDA, 2017a). Healthy People 2020 (2018) stated that substance abuse contributes to poverty, crimes, homicide, and suicide. Mortality risk among heroin users is 3-4x higher than the general population (Lopez-Quintero et al., 2015). Substance abusers have mental disorder co-morbidities, which increase their risk of death (Walker, McGee, & Druss, 2015). Walker, Pratt, Schoenborn and Druss (2017) found that individuals who reported heroin, cocaine, hallucinogens, or inhalants use were at increased risk of mortality from infectious diseases, such as HIV. Additionally, individuals who used only heroin had higher mortality from cancer (Walker, Pratt, Schoenborn, & Druss, 2017). Despite substance abuse fatal affects deaths may be prevented. Paddock et al., (2017) wrote that receiving treatment was associated with decreased mortality.

Prescription misuse. Illicit drugs are not the only abused substances. Specifically, the individuals may abuse physician-prescribed medications (NIDA, 2018b). It is estimated that 54 million people have used prescription opioid, central nervous system depressants, or stimulants for nonmedical reasons at least once in their lifetime (NIDA, 2018b). Opioid-related hospitalizations increased more than 60% since 2002. Highest rates occurred in the Northeast and Midwest United States (Agency for Healthcare Research and Quality [AHRQ], 2014).

Individuals aged 45 to 66 currently have the highest opioid-related hospitalization. Of those individuals, females surpassed males in 2014 (AHRQ, 2014). Cost of prescription drugs

more than doubled in 2012, at $9 billion (AHRQ, 2014). The inflation in opioid prices makes it difficult for pain suffers to afford their prescriptions, often forcing them to obtain drugs in which that increase drug misuse.

Opioid deaths. Deaths from drug over doses have become one of the leading causes of accidental death in the United States (Aroke et al., 2018). Specifically, in 2015 around 52,000 deaths were from drug overdoses of which 33,000 were linked to opioids (Center for Disease Control and Prevention [CDC], 2016). Rates have increased by 2.6% from natural/semisynthetic opioids, heroin, and synthetic opioids (CDC, 2016). According to Lev et al., 2015, 93.6%, of drug overdoses result from pharmaceutical drugs and accidental overdoses.

Significance of Clinical Problem

Substance abuse can affect anyone regardless of age, gender, or ethnicity. Nearly 21.5 million people over 12 had a substance abuse disorder (SAMHSA,2017b). Of these, 14.4 million people had an alcohol use disorder and 2.6 million had an illicit drug use disorder (SAMHSA, 2017b). NIDA (2017b) estimates that substance abuse is costing Americans more than $740 billion yearly in expenses related to crime, lost work productivity, and health care. In 2016, North Carolina had 19.7 deaths per 100,000 population (U.S. Department of Health & Human Services, 2017). In central North Carolina, there were 5,000 hospital admissions directly related to substance abuse (The Charlotte Mecklenburg Drug Free Coalition [CMDFC], 2016).

Substance abuse is widespread. Clearly, action is needed. The CMDFC (2016) recommends primary care offices initiate substance use screenings and interventions to reduce occurrences of substance use. Gurewich, Prottas, and Sirkin (2013) found optimal treatment outcomes can be achieved when primary care physicians coordinate services with substance abuse disorder clinicians.

Effects. All aspects of patients' lives are affected when they abuse substances. Individuals who use substances are affected mentally, physically, and emotionally when they are using. Substance use can deteriorate personal relationships, individual health, and create economic loss for the entire population. One study found that people with substance use disorder can correlate negatively with socioeconomic status (Dagher & Green, 2014). Research indicates substance abusers' children exhibit attention and cognitive problems, are anxious/depressed and withdrawn, which may lead to generational substance use (Lewis, Holmes, Watkins, & Mathers, 2015).

Question Guiding Inquiry (PICO)

Population. This DNP quality improvement project intends to screen all new adult patients (greater than or equal to 18 years of age) in a Central N.C. free clinic for substance abuse problems.

Intervention. The use of the Tobacco, Alcohol, Prescription Medication, and Other Substances (TAPS-1) will be used to screen patients regarding their use for various substances. For those who screen positive, any answer to substance use besides "never", will be given a resource pamphlet.

Comparison. Currently, the free clinic utilized the CAGE screening tool to identify alcohol misuse and they plan to continue the use of CAGE to provide more detail about alcohol habits. The goal of this project is to incorporate a tool to identify substance abuse among new patients and for 90% of patients to receive this education.

Outcomes. The outcomes of this DNP quality improvement project include implementation of a practice protocol using TAPS-1 to screen substance abuse among new patients in a Central N.C. free clinic. A questionnaire will be given regarding substance use

within the last 12 months and for all positive screenings will receive education on resources within the community for treatment of substance abuse.

Summary

Substance abuse is a rapidly growing problem in our country. Protocols need to be in place to identify substance use to intervene appropriately for the best patient outcomes. This quality improvement project will initiate the TAPS-1 screening tool and provide education to all patients with positive screenings. Clinical problem has been clearly defined; evidence is needed to determine best solutions. Literature review examined the concepts of substance abuse, substance abuse screening, and brief interventions to decrease substance abuse.

Chapter Two: Review of the Literature

Chapter two, review of literature, is a review of the literature on substance abuse screenings in general and specifically the Tobacco, Alcohol, Prescription Medication, and Other Substances (TAPS-1) tool. This chapter discussed the researcher's exact way of conducting research and identify research known about substance abuse, screening tools, and gaps within the research. In addition, chapter two will clarify how this research fit into this quality improvement project.

Methodology

Initially, literature searches were done in PubMed. PubMed search terms for the first search were "Substance abuse disorder screening substance misuse National Institute on Drug Abuse" yielded 30, inclusions included from year 2013 to 2018 and full text which yielded 18 results. Five articles were used from this search, the others were excluded due to detection methods not pertaining to this quality improvement project.

A second search was conducted in PubMed using the search terms "substance abuse" and "tobacco" and "screening" and "drugs" with 434 yielded. Inclusions included from year 2013 to 2018, full text, humans, English, and adult: 19+ years which yielded 76 results. There were a few that overlapped in the two searches so an additional two were used.

Literature Review Findings

Opioids misuse. Opioid misuse is a growing problem within the United States. Overdose has reached an epidemic level (Gryczynski et al., 2017; Schwarts et al., 2017). A study conducted by Olfson, Wall, Liu, & Blanco (2018) in efforts to determine if cannabis use is associated with the occurrence of nonmedical prescription opioid use. Adults were assessed at three years apart and found that cannabis use was associated with initiating nonmedical

prescription opioid use (Olfson, Wall, Liu, & Blanco, 2018). Even for patients that state they only use cannabis a few times in the last year, this study gives you all the more reason to address the cannabis use at that moment.

Screenings. After a thorough literature review, it was determined that screening for substance abuse and interventions do make a difference in the outcomes of healthcare cost and in patients' lives. It is suggested that primary care is the ideal place to screen for substance abuse, provide intervention, and make referral as appropriate (Wu et al., 2016). A study that observed treatment utilization in adolescent substance abuse, found that screening, brief intervention, and referral to treatment identifies substance use early can prevent substance abuse disorder (Haughwout, Hartford, Castle, & Grant, 2016).

Gryczynski et al. (2017) conducted a study with 2000 participants utilizing The Tobacco, Alcohol, Prescription Medication, and Other Substances (TAPS) screening tool as a two-step method. The TAPS tool was adapted from the NIDA Quick Screen and ASSIST-Lite (Gryczynski et al., 2017). TAPS-1 is a self-administered tool for detecting unhealthy substance use at each threshold severity. If a patient screened positive for TAPS-1, then one would proceed to TAPS-2. Gryczynski et al. (2017) used the TAPS-1 as a screener without TAPS-2, in efforts to identify adult primary care patients with unhealthy substance use. The study found that the TAPS-1 was able to identify substance abuse as a separate tool and used for quick triage in primary care. In addition, the study discovered that either self or interviewer administered, the screening tool was able to identify unhealthy substance use.

Schwartz et al. (2017) implemented a study with 2000 participants all greater than 18 years old at five different primary care clinics that had appointments the day of recruitment. A study was conducted comparing different screening tools for substance abuse, found that the

TAPS Tool, which used parts of the National Institute on Drug Abuse (NIDA) Quick Screen, was found to have a favorable sensitivity and specificity for detecting high risk use of alcohol, tobacco, opioids and stimulates. On the other hand, for detecting moderate risk it was favorable for alcohol, tobacco and marijuana but low in detecting stimulants, opioids, and sedatives. The authors of this study suggest that the likely reason for the low sensitivity was due to participants reporting abstinence but have experienced problems in the past. If the patient had not used in the past three months then will get a zero score (Schwartz et al., 2017).

McNeely et al. (2016) implemented a study in a primary care clinic with 393 adult participants that completed either interviewer-administered or audio-guided computer assisted self-interview of the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) followed by a drug test. It was found that the computer version was an effective method of identifying moderate-high-risk substance use in primary care. The interviewer administered ASSIST found that more participants reported tobacco and prescription misuse. However, with the audio-guided computer assisted self-interview more participants reported alcohol and illicit drug misuse.

All the studies found in the literature review ask very similar questions to the one in this DNP project. Another study by McNeely et al. (2015) found that their screening tool, Substance Use Brief Screen, had good test-retest reliability, sensitivity, and specificity for detection of past-year unhealthy use of tobacco, alcohol, and other drugs in primary care. The screening tool was implemented in a test-retest reliability consisting of 54 adults and a 2-site validation study with 586 adults.

In an urban hospital in New York 439 adults participated in a comparison of the Substance Use Brief Screen (SUBS) and the modified Alcohol, Smoking, and Substance

Involvement Screening Test (ASSIST) was conducted to evaluate the effectiveness for identifying illicit drug and non-medical use of prescription drugs (Han, Sherman, Link, Wang, & McNeely, 2017). Also, SUBS was compared to the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) to assess efficacy to identify excessive alcohol use. The SUBS can be an alternative to other screening instruments and was sensitive for detecting past-year unhealthy and high-risk use of alcohol and drugs when compared to longer screening tools.

Limitations of Literature Review Process

It was difficult finding articles related to screening for substance abuse and even more difficult finding ones utilizing the TAPS-1 screening tool. During the research, there were many articles that were unusable research such as to assess if patients were telling the truth by questioning them and then doing some sort of drug screen.

Discussion

After performing an extensive literature review, one can conclude that substance abuse is a detrimental problem in the United States including but not limited to morbidity and mortality. Substance abuse screening and early interventions were intended to decrease the use of higher acuity and costlier mental health services (Enos, 2018). Consistently, studies are stating that time constraints are among the top reason for not performing substance abuse screening and interventions in primary care (Carter et al., 2014; McNeely et al., 2016). In addition, McNeely et al. (2015) limitations included social desirability bias and confidentiality concerns. Although this screening tool is different than the one proposed for this project, these limitations also need to be taken into consideration when screening someone for substance abuse.

Depending on how screening tools are conducted, a patient may be less likely to report substance use, especially in a face-to-face interview. The McNeely et al. (2016) study found that

utilizing the computer assisted version of screening patients was as effective in identifying moderate-high-risk substance use in primary care patients. Also, McNeely et al. (2016) observed higher reporting for alcohol and illicit drug use on the computer assisted interview. However, this project will not have computers for patients to utilize so will have hard paper copies for patients to fill out. A limitation in the McNeely et al. (2016) study includes literacy level which also needs to be addressed in this quality improvement project.

Another study that implemented a screening among adolescents reported barriers of inadequate training and lack of resources for responding to positive screenings (Pitts & Shrier, 2014). It is important to keep other study barriers in mind in efforts to address potential problems in this quality improvement project.

According to Tenegra and Leebold (2016), their physicians stated not feeling prepared to identify and treat substance abuse. This DNP project intends to provide multiple education sessions teaching the TAPS-1 screening tool. The study by Schwartz et al. (2017) had low sensitivity due to only screening for substance use over the last three months, but to overcome this obstacle this DNP project will screen for a longer period of time.

As previously discussed, substance abuse can lead to various health concerns and is a huge concern that is on the rise and needs to be addressed. Ultimately, leading this project to help identify substance abuse and educate patients on available resources within the community. Due to barriers for providers not utilizing screening tools, this project utilizes one that consist of very few questions as to address the time constraint barrier (McNeely et al., 2016). In addition, this free clinic uses family members as interpreters, so it may be difficult to maintain that confidentiality concern and potential cultural and language barriers.

While some of the screening tools mentioned above are not the same as in this proposed project, many of the screening tools use some of the same questions. The study by Han, Sherman, Link, Wang, & McNeely (2017) use the SUBS tool which is brief like the TAPS-1 tool, the main difference is that the SUBS questions the same number of drinks for male and female. Given SUBS high sensitivity for detecting any unhealthy use or high-risk use of alcohol, illicit drugs, and prescription drugs, one can infer that the TAPS-1 would be the same.

Conclusion of findings. After performing a thorough literature review, this project will consist of a quick yet through questions that address substance abuse issues. Given the literature review findings, screening patient for substance abuse is the most important step in this DNP quality improvement project. In addition, patients who screen positive for substance abuse will be educated on resources within the community for substance abuse treatment.

Advantages and disadvantages of findings. The advantages are very clear within this project and potentially saving a life is immeasurable. This DNP project, Substance Abuse Initiative, aims to provide many benefits to patients individually and the community such as providing a tool that can be utilized in a busy clinic, decreasing morbidity and mortality, and decrease healthcare cost. Another advantage in screenings and early intervention leads to a decrease in higher-intensity and high-cost mental health services. Substance abuse treatment and management can increase a patients' overall health. The TAPS-1 screens for four substance categories and can be used without TAPS-2 (Gryczynski et al., 2017). The TAPS-1 is a short screening tool that has research to back up its validity in identifying substance abuse. Ultimately, healthcare will see a decrease in morbidity and mortality as it relates to substance abuse issues.

Disadvantages include confidentiality issues for non-English speaking patients. Another disadvantage in this DNP quality improvement, the patients who are already established within

this clinic would miss the screening for substance abuse. As previously stated, patients with a history of substance abuse are at risk for relapse, therefore making it essential to screening all patients within the clinic on a regular basis.

Utilization of findings in practice. The goals of this project are to evaluate the evidence of substance abuse screening and compare based on reliability and ease of complication. Therefore, the TAPS-1 tool will be utilized to screen patients for substance abuse. For patients that screen positive, a procedure will be developed based on recommendations from the staff which includes educating patients about resources within the community and making referrals as appropriate. Finally, the author will evaluate the results of the screening tool and make recommendations for improvement.

Summary

In efforts to address the overwhelming statistics of substance use issues in the United States, this quality improvement project will implement a substance abuse screening tool and provide patients with resources within their community. After performing a thorough literature review, the TAPS tool will be an excellent tool to utilize due to the reliability. Primary care providers are not confident in identifying and intervening for patients with substance abuse. There are many advantages and disadvantages within this quality improvement project and efforts are made to overcome these obstacles. The idea of this project is to utilize a substance abuse screening tool to help providers address substance abuse issues and give the patient referrals within the community. Next chapter will incorporate Neuman system model in this DNP quality improvement project.

Chapter Three: Theory and Concept Model for Evidence-based Practice

This chapter provides an overview for the theoretical framework and change model that guided the development of this Doctorate of Nursing Practice (DNP) quality improvement project. Specifically, Neuman System Model is the theory that was used to initiate the practice change. The Plan Study Do Act is the change model used to guide the implementation process of the practice change. Both will thoroughly be discussed as it relates to this DNP project.

Concept Analysis

Substance use disorder. Substance use disorder is defined as "recurrent use of alcohol and/or drugs that causes clinically significant impairment, including health problems, disability, and/or failure to meet major responsibilities at work, school, or home" (U.S. Department of Health and Human Services (USDHHS), 2017, p 9). In 2014, roughly 21.5 million Americans 12 years and older reported having a substance use disorder within the last year, and an estimated 8 million adults have a coexistence of mental health disorder (USDHHS, 2017). Substance abuse is the use of a harmful or hazardous use of psychoactive substance, which include alcohol and illicit drug (World Health Organization, 2018). Although many healthcare professionals are steering clear of the term "abuse" and using "use instead as not to sound criticizing to patients.

Misuse of substances. In 2015, nearly 119 million people in the United States used psychotherapeutic drugs including but not limited to: pain relievers such as hydrocodone, oxycodone, morphine, fentanyl, tranquilizers such as benzodiazepines, barbiturates, sedatives, and stimulates (Daley, 2018). Of those approximately nineteen million people misused these drugs and two million become addicted. According to Tamburello, Kathpal, and Reeves (2017), misuse is the use, including abuse, of a medication that is used differently from the way it is prescribed.

Overdose of substances. Since 1999, the drug overdose rate tripled from 4.71 deaths per 100,000 to 13.56 in 2014 (Center for Disease Control and Prevention, 2016). In 2016, a little over 64,000 Americans died from drug overdoses (NIDA, 2017c) Despite efforts to decrease opioid prescribing, overdoses continue to rise. Adults 45 to 64 years old consist of half the overdose deaths from prescription opioids. The study conducted by Xiwen, Keyes, and Gouhua (2018) suggest that older patients are more likely to be prescribed opioids than any other age group. While people ages 25 to 34 years have a higher overdose death rate from heroin due to the availability and desire for new experience (NIDA, 2014).

Theoretical Framework

Neuman system model (NSM) was developed in 1972 as a middle-range nursing theory. Today, NSM is used worldwide as a multi-disciplinary, holistic, and comprehensive approach to patient care (Neuman, 2017). Patients with substance abuse issues require a holistic and multi-disciplinary approaching making the NSM an ideal theory for this quality improvement project. Interventions in the NSM occur in the primary, secondary, and/or tertiary prevention.

Furthermore, Neuman system theory can be broken down into prevention interventions. Primary prevention is described as a client strengthening the flexible line of defense before the harmful stressor can affect them (Fawcett & Foust, 2017). Ways to strengthen the primary line of defense include education regarding abstinence of substance abuse and consequences of using substances. After harmful stressors have affected the well-being and the client has maintained stability this is called secondary prevention (Fawcett & Foust, 2017). Finally, tertiary prevention is following secondary prevention intervention and helps maintain stability (Fawcett & Foust, 2017). Patients at the tertiary prevention already experience complications of substance abuse such as hepatitis C and are now receiving treatment.

This DNP project uses secondary prevention as the focus. Secondary prevention is the achievement of wellness by increasing the strength of lines of resistance including symptom management and treatment (Butts & Rich, 2017). By screening patients for substance abuse and based on their responses would lead to treatment and symptom management. As previously stated, screening and early intervention can help eliminate morbidity and mortality associated with substance abuse. Screening and early interventions can help strengthen the lines of resistance.

A project conducted by Hammonds (2012) implemented a distress screening tool and utilized the NSM. Hammonds (2012) project included primary prevention by educating patients about distress and cancer, secondary prevention when administering the Distress Thermometer (distress screening tool), and tertiary prevention includes referring patients. Although this is different from the proposed project, essentially both are using a screening tool and have similar interventions. Therefore, the NSM would be an appropriate tool to guide this DNP project.

Butts and Rich (2017) describe the Neuman system model as primary prevention assesses and intervenes to identify reduction of risk factors; secondary prevention initiates treatment actions based on patient symptoms; tertiary prevention is after treatment and when wellness is encouraged. Specifically, this project will utilize the secondary prevention by administering the TAPS-1 screening tool and tertiary when referring patients who screen positive.

Application to practice change. Fawcett and Foust (2017) state that secondary prevention is effective treatment of symptoms and management of acute and chronic illnesses. For this DNP project the screening tool will lead to a referral and intervention. In addition, the project will implement a policy change within the practice for patients that test positive for substance abuse. The primary purpose of secondary prevention is to identify substance abuse and

lead to treatment. Tertiary prevention will include those who screen positive will be given education within the community based on appropriate treatment for substance abuse. Increasing the achievement of wellness, will be defined by identify that a patient has problem and then can increase those strength of lines of resistance. In order to do so, a new protocol will be developed to help providers address patients with substance abuse issues and positive screens will be referred for the appropriate treatment.

EBP Change Theory

The Plan-Do-Study-Act (PDSA) cycle was developed as a four-step cycle learning approach in efforts to make improvements (Taylor et al., 2014). The Agency for Healthcare Research and Quality (2013) states that this tool is used to test a change including the planning, trying, observing the results, and acting on what is learned. Coury et al. (2017) suggest that the PDSA model helps new ideas be introduced into various complicated environments.

Briefly, the PDSA model includes selecting a measurable metrics, make a detailed plan to implement, review the results, and make improvements (Morelli, 2016). The first step in utilizing the PDSA model is identifying the metrics. The plan includes asking yourself these questions: What do you want to improve? Is it measurable? Next one would question what is going to be done and how will it be done? These steps will very precise including who are the team members and what is their role within the project. Once results are found, feedback is then given to the participants in efforts to improve (Morelli, 2016).

Application to practice change. The PDSA model helps create a clear understanding of what the project entails. In addition, a study by Coury et al. (2017) found that the PDSA was best for identifying problems and optimizing evidence based into practice. One can conclude that the PDSA model is ideal since this project is using evidence-based research into practice.

Specifically, for this quality improvement project the site identified the metrics they wanted measured, which is includes screening for substance abuse and for those who screen positive resources will be given within the community. After researching and identifying an appropriate screening tool, a discussion with the director and nurse practitioner occurred to formulate the next step in determining roles and responsibilities. During our discussion, it was determined that the TAPS-1 screening tool will be given to new patients on a form at their initial visits and the nurse practitioner will review the answers and based on the patients' answers will determine the next step. After about ten weeks of this process change, an audit will be performed to asses if patients were screened using the TAPS-1 and if the next step was needed or not and whether it was done or not.

Summary

The NSM is the model used to drive a practice change particularly involving secondary and tertiary prevention. Secondary prevention describes the implementation of the TAPS-1 screening tool. Tertiary prevention describes the education given about resources within the community. Also, the practice model change used is the PDSA which guides how this project is implemented.

Chapter Four: Pre-implementation Planning

Providing a practice protocol for substance abuse screening and interventions was an identified problem within this free clinic. The Tobacco, Alcohol, Prescription Medication, and Other Substances (TAPS-1) screening tool is an evidence-based screening tool to identify participants with a substance abuse problem. This chapter provides an overview of the DNP Scholarly project with implementation plan and why this project was chosen within this organization.

Project Purpose

The purpose of this DNP quality improvement is to implement a practice protocol using TAPS-1 to screen substance abuse among new patients in a central N.C. free clinic. For patients that screen positive, any answer besides never, then the patient will be given resources within the community for substance abuse treatment (Schwartz et al., 2017). The goal is for 90% of patients to receive this education and screening tool.

Project Management

Organizational readiness for change. The organization is ready to make a change within their community and the need for change regarding substance abuse. The student project director facilitated a meeting with the director of the organization and the nurse practitioner to discuss the need for screening patients for substance abuse during their first visit to establish care. During the meeting, the organization director suggested that a project addressing substance abuse was critical given the rising problem within the community (Executive Director, personal communication, January 22, 2018). The organization is prepared to make an impact within their organization for patients with substance abuse problems.

Inter-professional collaboration. The project team members include the front desk staff, the director, the providers, and the medical assistants. The medical assistant was responsible for handing out the TAPS-1 screening tool prior to their visit. The providers were responsible for reviewing the screening tool and for anyone that answers any answer besides never will be given education regarding resources within the community. The director gave her approval to the project and provided oversight for the project within the organization.

Risk management assessment. A SWOT analysis was performed on this quality improvement project revealing many positive and negatives. Prior to implementation of this project strengths were identified including evidence found within the literature supporting screening patients for substance abuse and the ease of use for the TAPS-1 questionnaire. Finally, another important strength is organizational support. Weaknesses for this project include forgetting to use the TAPS-1 tool for screening and giving out the resource pamphlet for patients who screen positive. Another weakness is providers forgetting to document the use of TAPS-1 screening tool and when needed resource pamphlet given. Opportunities include new evidence revealing the overwhelming substance abuse problem in this county and studies suggesting that screening is the best tool. Additional, opportunities include staying up to date as those studies release new information. Traditionally, a SWOT analysis will also identify threats, which could potentially include providers not having time to screen patients for substance abuse.

Organizational approval process After reaching out via calling and emailing various organizations within the community, one agreed for a project to be implemented. The organization where this DNP project took place decided based on the needs within the community that substance abuse needed to be addressed. Currently, this organization does not have specific data since they only screen for alcohol abuse. Therefore, the DNP student came

across a screening tool for substance abuse and presented it the organization. After an agreement was made with the director and family nurse practitioner, it was decided that a practice change needed to be implemented for patients who screen positive for substance abuse.

Information technology. Many technology applications were used during the implementation of this project. One of the applications included the electronic medical record, "Amazing Charts" for this organization. "Amazing Charts" was used to collect the data for this quality improvement project. After completion of this project, another program is used to store the data and make charts and graphs.

Cost Analysis of Materials Needed for Project

The cost for this project was minimum. The nurse practitioner performs the initial visits, so time was spent educating her. In addition, an overview of the project was also educated to the director and medical director. Therefore, only three educational handouts were needed to discuss how to utilize the tool. Most printing services are about 49 cents per piece of paper. The handout for this project is two pages; therefore, the cost would be around $3. In addition, money was spent on paper to print out the TAPS-1 screening tool for patients to answer and pamphlets for patients who screen positive. First, I started out with 100 of each so a total of $100 is estimated for screening tools and pamphlets. In addition, doughnuts were brought to the educational sessions and visits to check in. Doughnuts are about $10 per dozen and six dozen were bought total for the organization. The running total is around $60. The running total for cost of implementation of this quality improvement project is about $163.

Plans for Institutional Review Board Approval

East Carolina University (ECU) Institutional Review Board (IRB) deemed this project a quality improvement therefore the project received an IRB waiver in July 2018. The project site

for this current project also did not require IRB. Documents submitted to ECU's IRB for review included the project's education tools, the TAPS-1 screening tool, and the pamphlet for patient resources.

Plan for Project Evaluation

Project evaluation will include chart audits. The DNP project lead will be looking at if the TAPS-1 screening tool was performed and if so was the education pamphlet given to any answer besides never.

Demographics. For the purpose of this DNP project, no patient demographics were collected as they were not needed for this project.

Outcome measurement. The primary outcome of this DNP project is to screen 90% all patients for substance abuse using the TAPS-1 screening tool (see Appendix A). For patients who screen positive, a pamphlet will be given with resources within the community. Use of the screening tool resulted in a practice change because previous screening included alcohol use rather than all substances such as tobacco, illegal drugs, or prescription drugs.

Evaluation tool. The audit tool that will be used to measure outcomes is in Appendix B. This tool was used to review the charts of new patients to assess if the TAPS-1 screening tool was completed and if patients who screened positive received a resource pamphlet.

***Data analysis*.** Since the practice was not screening for substance abuse beyond alcohol, the screening rate pre-implementation was 0%. The goal is 90% for screening patients after implementation. This will be determined by looking through all the new patients chart every 2 weeks manually to see if the screening tool was scanned in the charting system. In addition, for patients that screen positive the provider will document that a resource pamphlet was given. The percent will be calculated by how many received the screening tool divided by the number of

new patients. Since the project was expanded to established patients, the analysis will also compare data on screening tools given to new versus established patients.

Data management. For this DNP project charts will be given a number. The number does not correlate to any identified patient information. The chart audits were done in order of patients seen from the start of implementation. The hard copy of the chart audit is in a locked box and in a locked closet. After May 2019, the audit tool will be shredded. Digital copies will not have patient identifying information, however, will be destroyed to protect agency identification. Also, the computer used for this project is password protected with access to only the student project director.

Summary

Prior to the TAPS-1 screening tool implementation, this project conducted an assessment to determine if the organization was ready to make a change and who would be involved with the change. After explaining the steps for this project, it was determined that this quality improvement project did not need ECU's IRB approval. Next will be a discussion of the actual implementation process.

Chapter Five: Implementation Process

After discussing the pre-implementation stage and gaining approval from East Carolina University and the organization, the project was ready to be implemented. Next, this chapter will provide an overview of the implementation process. Specifically, the chapter will discuss the setting in which this project takes place and participants within this project including the recruitment process.

Setting

The setting for this DNP quality improvement project took place in a central North Carolina. At this free clinic, two neighboring counties were served. The population for two central counties in 2017 was almost 1.1 million and 231,000 (United States Census Bureau, 2017). In 2016, there were 12.3% and 9% of people living in poverty within these two neighboring counties. The free clinic at which this project took place, only accepted people who were at 200% or below the poverty level and do not have any health insurance that live within specific counties.

This free clinic was started in 2004 after a parish nurse within the community recognized the need for a free clinic. To be accepted into this free clinic, patients must have met specific residential and financial requirements and were required to go through a new patient screening prior to being seen by a provider. The clinic was run by volunteers with a few people on staff. At the time of this project, they had 28 volunteer providers ranging from acute and chronic primary care, gynecology, cardiology, pulmonology services, orthopedic, chiropractic and acupuncture services, physical therapy, behavioral health services, pharmacy, nutrition counseling and more. This clinic was funded by grants, private donations, and fundraisers.

Participants

The participants included in this DNP quality improvement project included any patient who arrived for their appointment. Specifically, these patients were selected based on a chart review during the timeframe that this project was implemented. No patients were excluded from this screening.

Recruitment

Retrospective chart reviews were done; therefore, recruitment was not done for this project. This quality improvement project involved substance abuse screening all patients who present to the clinic. These patients will be asked by either the medical assistant or the provider to complete the screening tool.

Implementation Process

This DNP quality improvement project was implemented over a span of 14 weeks from September 4, 2018 until December 12, 2018. In July, the DNP student reached out to the staff via email at the free clinic to organize a date when an educational session could be planned. On August 20,2018 the DNP student provided an educational session in the morning with the director and the nurse practitioner. The objectives of the training included an overview of the background of the problem, purpose of the project, and the practice change. In addition, another objective included on the educational handout consists of the TAPS-1 screening tool and how it will be used to assess substance abuse and/or use. During the educational session handouts were given to each member of the team. During the discussion some errors were identified on the screening tool. Originally, the incorrect wording of the screening tool was submitted for review. The DNP student corrected them and notified ECU's IRB. Afterwards, the implementation started September 4, 2018.

During the first week of implementation, the DNP student was available via phone and email to offer assistance as needed. Upon arrival for an appointment the patient was given a screening tool by the medical assistant. The provider then reviewed the patients answers and decides if patients need a resources tool. Any answer besides "never" requires that the patients are given the resources pamphlet. After patients were screened then within the week, their screening forms were scanned into their electronic medical records.

Initial chart audit was done on October 17,2018 then performed every few weeks afterwards. The DNP student would manually go through every chart seen to see if a TAPS-1 screening tool had been scanned into their chart and performed the audit using the audit tool (Appendix B). During this time, if any problems were identified then they were addressed. In the beginning, there was difficulty obtaining access to perform chart audits. After discussing this issue with the director, access to the electronic medical record was then obtained. Another issue identified was determining if resource pamphlets were given to patients that screened positive. Therefore, the DNP project lead changed the screening tool to add a place that the provider could just quickly say yes or no as to whether the pamphlet was given.

Plan Variation (If applicable)

After performing charts review in October, research determined that all patients within this practice would benefit being screened for substance abuse. Also, the project was expanded to gather more data. Therefore, starting on October 29, 2018 all patients were being given the TAPS-1 screening tool. The DNP student was on site November 1, 2018 to allow time to ask question and discuss the TAPS-1 screening tool with the other providers, nurses, and medical staff. For team members that the DNP project facilitator missed the site champion informed them

on the new protocol. Another plan variation for this project was to expand the resource pamphlet to include how to find Alcoholic Anonymous (AA) and Narcotics Anonymous (NA).

Summary

The purpose of this quality improvement project was to identify substance abuse This DNP quality improvement project was implemented in a free clinic with strict eligibility rules such as must live within a certain county and live 200% below the poverty level. This practice started out screening new patients then utilized the TAPS-1 tool to all patients within the practice. After thoroughly discussing the implementation process, the DNP student will discuss the evaluation process of the project.

Chapter Six: Evaluation of the Practice Change Initiative

This quality improvement project implemented the Tobacco, Alcohol, Prescription Medication, and Other (TAPS-1) screening tool in a free clinic. After having thoroughly discussed the implementation process including the unexpected discrepancies, this chapter will examine the evaluations of the practice change. Specifically, this chapter includes the demographics of the participants and the intended outcomes of implementing the TAPS-1. Lastly, the results of implementing the screening tool will be thoroughly explained.

Participant Demographics

The project targeted new patients at the free clinic. Typically, the clinic sees a wide variety of different ethnicities. Although, all patients seen at this practice were indigent. For patients to be accepted at this clinic, they had to meet certain requirements such as living within a specific county in Central North Carolina with no insurance and live 200% below the poverty level. In the beginning of the project implementation the TAPS-1 screening tool was only administered to new patients. To gather additional data for the project, it was determined that established patients could benefit from screening also. Therefore, the project was expanded to include both new and established patients.

Participant demographics were not collected as the DNP project objective was to examine changes in provider practice. In the free clinic, there are twenty-five providers who provide direct patient care. Of these providers twenty-four are volunteers and one is a paid employee. These volunteers work 66 hours per month with varying schedules but usually on a monthly basis. On average, the volunteers have been with the free clinic for five to ten years.

Intended Outcome

One in four deaths are attributed to alcohol, tobacco, illicit or prescription drug use (NIDA, 2017a). An estimated 21.5 million people have substance abuse disorder and research has shown there is a gap in screening for substance abuse (SAMHSA,2017b). The goal of this project was to implement a new substance abuse protocol in free primary care clinic. Resource pamphlets were given to patients who identified substance use. The resources included in the pamphlet were within the community for substance abuse, including how to locate alcoholic anonymous and narcotics anonymous near you and other facilities that provided detox programs.

Beginning September 4, 2018, new patients were given the TAPS-1 screening tool, to asses for substance abuse. After collecting data for a month, it was determined that the project needed to be expanded to established patients, which began on October 29, 2018. This was determined after doing a Plan Do Study Act (PDSA) cycle which identified a need to broaden the project to increase the sample size. The PDSA cycle involved the site champions, the DNP faculty, and the DNP project team lead. Additionally, another PDSA cycle was conducted due to having difficulty identifying whether the resource pamphlet was being distributed to patients. During the week of project expansion, the project, the DNP project lead was on site to offer assistance and discuss the use of the screening tool with the staff. As a result, a question was added to the screening tool that quickly allowed providers to circle “yes” or “no” to providing a resource pamphlet as seen in Appendix A.

Furthermore, other PDSA cycles were completed to address any role changes within the clinic. For example, during implementation, a medical assistant left the clinic and a new one was hired. As a result, the DNP project lead met with the new medical assistant to ensure awareness of the project implementation. This quality improvement project was implemented until December 12, 2018. The goal of this project was to screen 90% of all patients seen.

Currently, in the United States, substance use is highly under-identified and undertreated (Ghitza et al., 2013). The project lead implemented this project in hopes to identify those with substance abuse and provide them with available resources within the community for treatment. Specifcally, the project lead sought to screen the indigent population as during the literature review, a correlation was identified between living in poverty and substance use (SAMHSA, 2017a; Healthy People 2020, 2018). Ultimately, the main goal of this quality improvement project in screening for substance use, was to see a decrease in morbidity and mortality.

Findings

At the conclusion of this quality improvement project, a total of 159 retrospective chart audits were conducted from September 4, 2018 to December 12, 2018. A total of 159 patients were seen at the clinic during this timeframe, with 10 new patients seen and 149 established patients seen. Of the 159 patients, eight new patients (5%), were screened for substance abuse using the TAPS-1 screening tool. As seen in Figure 1, the chart displays the number of new patients seen who were also screened versus the number of established patients seen who were also screened. Of the eight patients that were screened, five patients screened positive. Based on a chart review, documentation indicated that the patients who screened positive did not receive a resource pamphlet. 5% of patients were screened; thus, the intended outcome was not met.

Figure 1. New vs Established Patients Evaluated and Screened

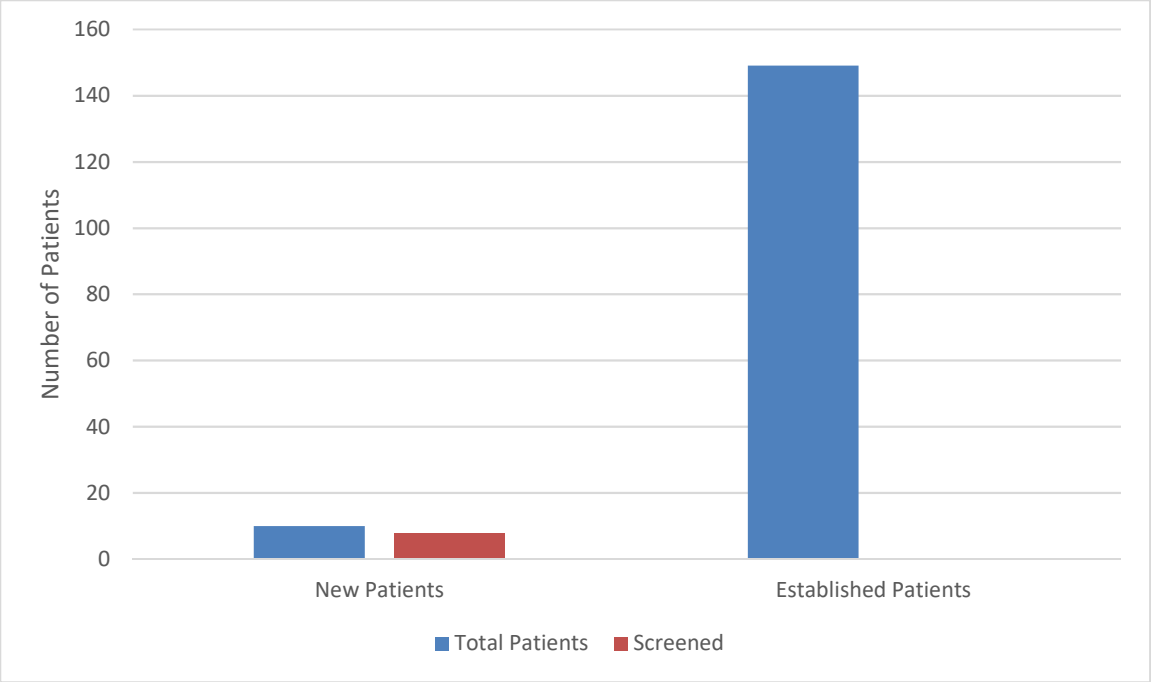
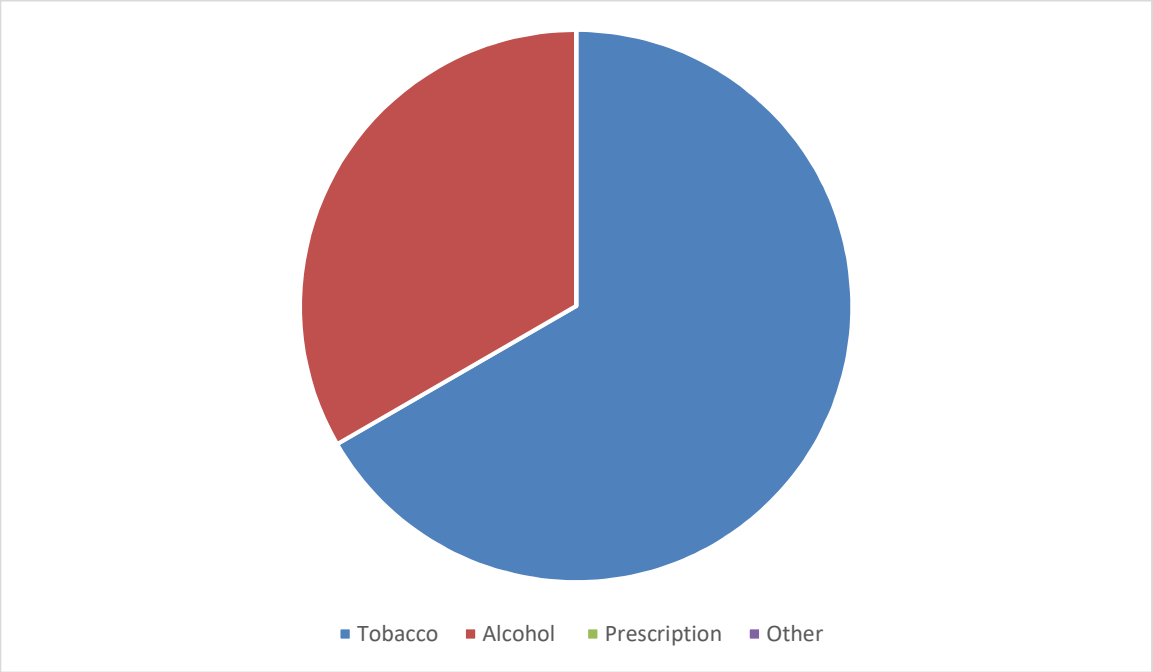


Figure 2. Types of Substance Use in Patients Who Screened Positive



As seen in Figure 2, two of the five patients screened positive for alcohol use. Specifically, one patient reported he/she drank monthly while another stated daily. Additionally, four of the five patients who screened positive, identified daily use of tobacco products. Of these

positive screenings, one patient reported to using both alcohol and tobacco products. None of the patients, screened positive for illicit or prescription medication misuse.

Summary

The intended outcome for this project was to have 90% of all patients seen in practice, screened for substance use. However, the actual screening rate was 5%, which was well below the projected goal. For patients who screened positive, a resource pamphlet was created with the intent for these patients to receive this pamphlet. After having discussed the evaluation of practice change, we will then move into the future implications and recommendations for nursing practice.

Chapter Seven: Implications for Nursing Practice

Healthcare is continuously changing but always aims to improve patient outcomes. For example, this quality improvement project implemented a substance abuse screening tool in a primary care setting, which according to Wu et al. (2016) is the ideal setting. Wu et al. (2016) also suggest providing intervention and making referrals as appropriate. Discussed in this chapter are the essentials that were a guide throughout the Doctor of Nursing Practice education and future implications.

Practice Implications

The Doctorate of Nursing Practice (DNP) program prepares nurses for the highest level of leadership in practice and scientific inquiry (AACN, 2006). DNP Essentials define the level at which nurses are able to practice and are the core of advanced nursing practice roles (AACN, 2006). Next, we will discuss the fundamental competencies essential to graduate from a DNP program and how it relates to this quality improvement project along with the essentials and how they relate to practice implications.

Essential I: Scientific underpinnings for practice. The first essential in the DNP program is for one to develop and improve practice (AACN, 2006). To be competent in this essential, one must be able to analyze theory and information while also having the ability translate and integrate research to develop new ideas, thereby improving practice and outcomes (AACN, 2006). Striving for practice improvement, the Center for Disease Control and Prevention (CDC) is currently considering recommendations to make substance use screening a routine element in all primary care settings (CDC, 2018). Although, a study by Gryczynski et al. (2018) suggests that additional studies are needed to have an effective strategy to provide disclosure of substance use and other sensitive behaviors in clinical screening.

As seen in the clinical setting, substance abuse is on the rise; particularly, in those living in the southern region of the United States and those living in poverty, are at an increased risk for using substances (SAMHSA, 2017a). As a result, screening for substance use is crucial. Not only does substance use increase morbidity and mortality but individuals who are addicted to drugs are twice as likely to suffer from a mood disorder, thereby leading to self-medicating (Aroke et al., 2018; NIDA, 2017a). Therefore, discussions regarding substance abuse and mental health should be implemented with primary care providers and healthcare personnel.

Evidence has shown that screening and initiating interventions, such as when coordinating with substance abuse clinicians, decrease the rates of substance abuse and provide the best patient outcomes (The Charlotte Mecklenburg Drug Free Coalition [CMDFC], 2016; Gurewich, Prottas, & Sirkin, 2013). Thus, it was decided that a substance abuse screening protocol would be developed in a free clinic, with patients living below the 200% poverty level, with the available resources provided. This site location was chosen since the patients at this clinic tend to be more vulnerable to substance abuse along with the fact that the providers in the clinic are these patients' sole clinicians. As a result, it was determined that this site would be best benefit from a substance abuse screening tool.

Due to research findings and interaction with the free clinic, initiating a referral to a specific substance abuse clinic, as opposed to providing positively screened patients with resources, is recommended. Specifically, consideration of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) framework, particularly in a community clinic setting where it has been shown to be successful, is recommended (Ladegast, 2016). In a study using the SBIRT framework, researchers found that alcohol was decreased by about 35% and illicit drug use was decreased by 75.8% after six months (Aldridge, Linford, & Bray, 2017).

Collaboration between research-doctorates and practice-doctorates is essential in implementing evidence-based practice (EBP) and improving healthcare. The research-doctorates are in a unique position to develop research and conduct studies while practice-doctorates improve practice by implementing the changes within their practice. For example, research-doctorates are able to research and identify screening tools that are more sensitive and specific in detecting substance use. With future research identifying these screening tools, practice-doctorates are able to implement the optimal EBP into practice.

This DNP project used the Neuman System Model (NSM) and the Plan-Do-Study-Act (PDSA) cycles to guide the protocol and decisions made throughout the project. The NSM is a multi-disciplinary, holistic, and comprehensive approach to patient care with the use of primary, secondary, and/or tertiary prevention (Neuman, 2017). Secondary prevention is the achievement of wellness by increasing the strength of lines of resistance, including symptom management and treatment, which is seen with screening and early interventions within this project (Butts & Rich, 2017). Throughout the implementation process, the PDSA model was utilized to make project improvements. Essentially, the PDSA model is selecting measurable metrics, making a detailed plan to implement, reviewing the results, and thus making improvements (Morelli, 2016). After auditing charts and identifying the issues as previously discussed, improvements were made. The project was continuously modified due to frequent monitoring with the site champions to identify barriers.

Essential II: Organization and systems leadership for quality improvement and systems thinking. This essential evaluates the development of leadership during this project implementation that enhances practice and ongoing improvement of health outcomes, while ensuring patient safety (AACN, 2006). Essential II also captures the improvements in the

healthcare delivery system (AACN, 2006). The goal of this DNP project was to screen patients for substance abuse using the TAPS-1 screening tool. While it is known that substance abuse is related to crime, loss of work productivity, and an increase in health care cost related to increased morbidity and mortality, identifying substance use can improve all aspects (U.S. Department of Health & Human Services, 2017; NIDA, 2017a). By striving to reduce substance use, cost can be saved at the micro, meso, and macro level. In efforts to address these concerns, recommendations at the micro, or organizational level, include to continue to educate providers and associated healthcare personnel regarding the significance of substance use and the importance of screening. At the meso, or state level, the DNP project lead recommends all healthcare organizations screen patients for substance use. As previously discussed, the CDC (2018) recommends implementing substance use screening in primary care settings. Additionally, at the macro, or national level, recommendations include conducting further clinical trial to improve recommended guidelines for screening and treatment of patients with substance abuse.

Within free clinics, one may identify a lack of quality improvement culture as most employees are volunteer-based. Prior to implementing a quality improvement project, it is essential to asses organizational readiness, as without this, new practice initiatives may not be implemented fully. In efforts to address organizational perspectives, the project lead performed research to identify a hassle-free screening tool for a busy practice that is volunteer-based. Although the screening tool provided a quick and easy to use, it was underutilized despite addressing all staff concerns. Therefore, it is recommended to ensure that screening tools be more accessible. For example, screening forms may be kept in every clinic room for patients to fill out and be addressed by providers. Lack of use was the ultimate barrier and if utilized

appropriately, may have led to further patient stratification and improvement in one's quality of life, if addressed appropriately.

The target population within this DNP project consisted of patients at a free clinic without insurance who lived 200% below the poverty level. From an economic perspective, the DNP project lead included free and/or cost-effective resources available within the community for patients who screened positive for substance use, which included resources, such as alcoholics anonymous (AA), narcotics anonymous (NA), and detox programs, and is still recommended for those who screen positive.

Essential III: Clinical scholarship and analytical methods for EBP. One component of the DNP Essentials is analyzing literature to determine best practice and using that knowledge to design and implement quality improvement and develop practice guidelines (AANC, 2006). Initially, a literature review was performed regarding screening for substance use and which tool was best supported by research. The literature review supported a lack found in primary care settings for the utilizations of substance abuse screening tools, despite being the ideal setting (Wu et al., 2016; CMDFC, 2016). Deaths associated with drug overdoses is one of the top accidental deaths in the United States supporting that substance abuse increases morbidity and mortality (Aroke et al.,2018; Healthy People 2020, 2018; NIDA, 2017a). In the literature, there are multiple substance abuse screening tools available but not a standardized practice guideline. More research is needed to develop a standardized guideline for assessing patients with substance abuse in a busy primary care setting, including how often should patients be screened for substance abuse. Many studies found that time constraints are one of the top reasons primary care does not screen for substance abuse, which is why the TAPS-1 screening tool was chosen (Carter et al., 2014; McNeely et al., 2016).

Leadership was demonstrated from the beginning and throughout this quality improvement project. In the beginning, in collaboration with the director of the organization and the family nurse practitioner, it was determined that substance abuse screening was the desired topic for quality improvement initiative. The evidence found was disseminated via a face-to-face meeting with the site champions. After dissemination, the site disclosed that they were not alarmed by the findings within the project. Although, this is hard to say given the lack of data. Moving forward the site has chosen to screen patients prior to admittance to their practice, as they do not prescribe controlled substances and the clinic prefers to refer to community resources in advance.

Essential IV: Information systems/technology and patient care technology for the improvement and transformation of healthcare. The fourth essential enhances the DNP prepared nurses' ability to improve patient care and healthcare by using information systems and technology to support and provide leadership within healthcare (AANC, 2006). This essential includes the use of technology when creating a budget and productivity tools, practicing information systems and support, and utilizing web-based learning or intervention tools to support and improve patient care (AANC, 2006). During the implementation process, the screening tools were completed on paper then scanned into the electronic health record (EHR). The DNP project lead utilized the EHR to manually audit charts to collect data. Going forward, it is recommended that the screening tool be incorporated within the EHR and populate a reminder to be completed. A study implemented EHR reminders for a one-time HIV test in a primary care office and found an increase in the number of patients being screened. (Avery, Del Toro, & Caron, 2014). This study suggests that with a reminder in the system it decreases providers time

in determining if screening is needed (Avery et al., 2014). Therefore, adding a reminder for the TAPS-1 screening tool within the EHR system to increase compliance is recommended.

Additionally, information systems and technology were utilized to improve patient care throughout this project. For example, it was most useful when searching within the online library database for EBP and research. Without technology, it would have been difficult to identify the best screening tool for a busy free clinic.

Essential V: Healthcare policy for advocacy in healthcare. Essential V incorporates policy into healthcare such as analyzing health policy, provide leadership in developing and implementing, influencing policymakers, educating stakeholders, and advocating for nursing (AANC, 2006). An organizational protocol was developed for substance abuse screening which included a procedure for positive screens. Without insurance, patients have difficulty paying for their medications or doctors visit. North Carolina has only three state ran substance abuse centers which can treat 3,875 yearly (Namkoong, 2015). Approximately, 21.5 million people over the age of 12 had a substance abuse disorder (SAMHSA, 2017b). One can conclude there are not enough treatment facilities at the state or national level especially for people who qualify for a free clinic. An estimated, $740 billion are spent yearly on negative consequences related to substance use (NIDA, 2017b). Recommendations to address this issue include redirecting funds to treatment in hopes of preventing some of the negative consequences.

As previously stated, The Charlotte Mecklenburg Drug Free Coalition (2016) recommends primary care offices initiate substance use screenings and interventions to reduce occurrences of substance use. Recommendation at the organizational, local, or national/international policy are the same, which is to screen all patients for substance use.

Advance practice nurses are in a unique position to be advocates for the public and participate in legislation to improve health care for patients with substance use.

Essential VI: Interprofessional collaboration for improving patient and population health outcomes. The DNP graduate works in an interdisciplinary team while demonstrating effective collaboration and communication to develop and implement practice, policy, standards of care, and scholarship while providing leadership (AACN, 2006). Throughout this project, leadership was demonstrated by identifying a site to implement a quality improvement process and the designing a protocol to change practice. At the free clinic, a protocol was lacking for screening patients for substance use; therefore, the DNP project lead used evidence-based practice to create a protocol. Communication and collaboration were key components needed for this quality improvement project. When working with a free clinic, future implications should include providing more site visits during the beginning of implementation to reach more volunteers.

Interprofessional collaboration "is the process by which different health and social care professional groups work together to positively impact care" (Reeves, Pelone, Harrison, Goldman, & Zwarenstein, 2017, p. 1). Interprofessional collaboration can not only improve patient outcomes but can reduce healthcare costs and improve relationships with other disciplines (Jakubowski & Perron, 2018). This is essential when working within a free clinic. Often times free clinics are run by volunteers, so collaborating with different professions is vital in efforts to decrease the workload and duplicated work (Jakubowski & Perron, 2018). Future implications include to constantly work on interprofessional collaboration.

Communications is another important characteristic to attain when changing a process. In regard to this quality improvement project, communication was an issue. In free clinics that

are volunteer-based where schedules are inconsistent, it is crucial to identify how the clinic communicates. One should consider communicating in the same manner the site already relays information. For example, communicate via email or in attendance at their meetings.

Essential VII: Clinical prevention and population health for improving the nation's health. The aim of this essential is to improve health promotion and risk reduction/illness prevention for individuals and families within a community or aggregate (AACN, 2006). This project is aimed at improving health promotion and risk reduction by identifying substance use and giving those who use the resources within the community for treatment. Additionally, this essential takes public health, determinants of health, and environmental and occupational health into consideration when achieving the national goal of improving the health status of the populations of the United States (AACN, 2006). According to Healthy People 2020, social and physical environment can make one's health outcomes worse (Healthy People 2020, 2019). Individuals who live in public house and receive governmental financial assistance are more likely to have behavioral issues such as mental health and substance abuse (Taylor & Distelberg, 2016). Race, poverty, and gender can all aggravate the prevalence of mental health and substance abuse (Taylor & Distelberg, 2016). Many factors play a role in who is more likely to abuse or misuse opioids and other substances such as lack of economic opportunity, poor working conditions, and eroded social capital in depressed communities, along with feelings of hopelessness and despair (Dasgupta, Beletsky & Ciccarone, 2018). These individuals are at a disadvantage. Specifically, the individuals where the project took place do not have insurance or money therefore do not have the means to pay for rehab and/or substance abuse treatment centers. While there are a few state-ran facilities within North Carolina, they only have 196 beds combined.

An article by the North Carolina General Assembly (2014) found that substance abuse cost is higher then if the state would expand on substance abuse treatment. Clearly, North Carolina is in need of prevention and treatment programs for patients with substance abuse. In addition, substance abuse is a chronic medical condition that changes brain chemistry and function that persist even after use (North Carolina General Assembly, 2014). Future implications should include more education regarding substance abuse for providers and the public as these patients will need continuous medical care for their chronic conditions. North Carolina needs to help fill that gap for patients without health insurance or available resources.

Essential VIII: Advanced nursing practice. Finally, the last essential prepares the graduate to develop and sustain therapeutic relationships and partnerships with patients and other professionals to facilitate optimal outcomes (AACN, 2006). One in four deaths are attributed to alcohol, tobacco, illicit or prescription drug use (NIDA, 2017a). It is imperative for all advance practitioner to assess for substance abuse. A study by Alemi, Avramovic, and Schwartz (2018) found that the purpose of screening patients is a conversation starter for patients and clinicians with a consequence of either patients altering their lifestyle or clinicians altering their practice. Regardless, of the type of practice every patient should be screened for substance abuse; therefore, all practices should implement a substance abuse protocol. The use of the TAPS-1 screening tool is useful in a primary care setting and assist providers with identifying current drug use and/or problem (Schwartz et al., 2017). While primary care would be ideal for screening for substance abuse, realistically some people may only see one provider so appropriate screening and intervention needs to be done at that time.

Organizations have a unique opportunity in quality improvements and changing practice. Nurse educators have an opportunity to discuss substance use relating to screening and treatment.

Additionally, it is recommended that organizations implement a protocol for substance use screening and referrals. Ladegast (2016) suggest that healthcare providers have the ability to identify substance abuse and intervene with screenings and referrals. DNP graduates are at an advantage when compared to other advance practice prepared nurses, they have the skill set to assist with quality improvement projects including performing literature reviews and identifying practice implications.

Summary

The DNP Essentials provide a guide for students when implementing a quality improvement project. Specifically, related to this DNP project the essentials guided the identification of the process change and how to initiate that change while making future recommendations. Recommendations include to screen all patients for substance use and EHR reminders are recommended to increase compliance. Other future implications when working with free clinics include effective communication and interprofessional collaboration. This chapter clearly defined the competencies used to guide the implementation process throughout this project and how to improve practice going forward.

Chapter Eight: Final Conclusions

Substance use is on the rise in American and is associated with an increase in morbidity and mortality (Aroke et al., 2018). A thorough literature review that supported the use of the Tobacco, Alcohol, Prescription, and Other drugs (TAPS-1) screening tool. After implementing the TAPS-1 in a free clinic, it was noted that 5% of patients were screened. Finally, the conclusion will be discussed. This chapter will include the discussion the significance and project strength and limitations. In addition, recommendations will be conversed to overcome weakness and limitations and offer guidance to others working with free clinics.

Significance of Findings

The purpose of this quality improvement project was to increase screening for substance abuse using an evidence-based tool. Prior to the implementation of this project, the site was only screening patients for alcohol use. Based on a discussion with the executive director, a need for substance abuse screening tool to include other substances was identified. During the implementation of this project, it was identified that there was an opportunity for providers to improve care for these patients. It brought awareness of substance abuse as an issue to the providers and staff within this clinic site. While 5% of patients were screened, the staff were still provided education and made aware of the significance and prevalence of substance use in America. Another observation included that due to primarily being a volunteer-based site, communicating with everyone is difficult. For those that screened positive, it gave staff an idea of the resources within their community. Previously, it has been discussed that substance abuse is linked to an increase in morbidity and mortality. By identifying patients with substance use, we can potentially save a life and decrease morbidity and mortality.

When implementing this quality improvement project, a few things were observed within the primary care free clinic. One observation included that free clinics heavily rely on fundraising and donations to fund them. A lot of time and effort was put into their annual fundraisers which resulted in quality improvement initiatives being put on hold and not a top priority. This impacted the quality improvement project by having a decrease in patients being seen and a lack of focus on implementing and educating other staff members on the use of the screening tool. Moving forward, this project will be maintained by the site champions, the executive director and the nurse practitioner.

Project Strength and Limitations

The TAPS-1 screening tool is an evidence-based tool that was found to be used easily and with reliability (Gryczynski et al., 2017). However, while the tool has been shown to have some limitations such as quantifying alcohol use. If patients report using alcohol, then more in-depth questions need to be asked. TAPS-1 screening tool is a great way to start a conversation about substance abuse with patients, but providers need to use their clinical judgment to further the conversation.

When implementing change, there are limitations identified within an organization including role changes, resistance, and/or time. During implementation of project, the medical director was on leave; therefore, the second site champion, the nurse practitioner, role was changed. Due to the nurse practitioner's role changes, this resulted in a decrease in new patients being seen; therefore, the project was expanded to established patients. For future projects, the project leads needs to be prepared for unexpected changes and always have a backup plan. Also, within the organization, other role changes were experienced such as the medical assistant leaving and hiring a new one. Inconsistent staff contributed to the limitations within this project.

Most of the staff within this organization were volunteers. They have 30 volunteers that provide direct patient care with an average of 403 volunteer hours each month. This made it increasingly difficult for the project lead to meet with each volunteer to educate on the quality improvement process. The DNP project lead attempted to do site visits on different days of the week but still was unable to see all the volunteers.

Another limitation included time constraints. The nurse practitioner within the organization was out of town for two weeks which posed a delay for project implementation expansion to include established patients. Additionally, in the time this project was implemented, the organization had its biggest fundraiser of the year. This also contributed to a lack of time as everyone within the organization was focused on planning and preparing for this major event. This distraction led to less focus on this quality improvement and less time patients were being seen.

Project Benefits

The intended benefit of this quality improvement project was aimed at assisting providers in the identification of substance use in patients. As the outcomes were not met, there are many lessons learned and future implications when moving forward and implementing a similar project.

Recommendations for Practice

As discussed previously, the number of people who have a substance abuse disorder and the morbidity and mortality related to substance abuse is significant in the United States. We know that substance abuse screening is needed. In efforts to overcome some barriers associated with not screening, one should consider including the screening tool in the Electronic Medical Record (EMR) and adding reminders. One study found that the use of EMR enhances

identification of substance use while providing patients with early prevention measures (Ghitza et al., 2013). In addition, Ghitza et al. (2013) found that for patients at high-risk of substance use the EMR can provide better quality of care.

When working with organizations that volunteer-based, it is essential to find a site champion who is onboard with your project and can really advocate for your project. In addition, a champion should be willing to assist with relaying the process change to everyone. Prior to implementation, one should figure out how information is relayed within the organization and inquire about adding the quality improvement project to the agenda. Communication is key when implementing a project. Abrahamson, DeCrane, Mueller, Davila, and Arling (2015) implemented a quality improvement project and state that communication, teamwork, and interprofessional collaboration are essential skills to have.

Free clinics provide limited services due to limited funding to 1.8 million uninsured patients (VanderWielen & Ozcan, 2015; Hutchison et al., 2018). Therefore, when working with free clinics time of the year should be considered. The majority of free clinics are funded through fundraisers. To address the time constraints barrier, it is recommended that one should implement a project in the off season of their main fundraising events. In addition, since patients utilizing a free clinic have no insurance, the project lead needs to be cognizant of treatment that is either free or attainable for this population. It is imperative, that prior to implementing a quality improvement project in a free clinic, that one is aware of the resources not only within the clinic but also the community.

Final Summary

Substance use continues to be on the rise in the United States, with more than 21.5 million having a substance abuse disorder and the increase in deaths related to substance use

(SAMHSA,2017b; NIDA, 2017a). Change is in order for our country and it starts with primary care providers. Primary care practices would benefit from a protocol for screening and referring patients with substance abuse. After a thorough literature review was done, the project leads created a protocol that implemented a quick and easy to use substance abuse screening tool, TAPS-1, to decrease morbidity and mortality and decrease healthcare cost by identifying the issue. For patients who screened positive, they were to be given a resource pamphlet outlining community resources for treatment of substance abuse. The outcome was for 90% of patients to be screened, which the site was nowhere near goal at 5%. Ultimately, the significance of this quality improvement project was to identify substance use and ultimately decrease morbidity and mortality.

When identifying a project and site champion, it is essential to find a site champion who is invested in your project and willing to assist and advocate for the process change. As previously discussed, communication and interdisciplinary collaboration are key characteristics when initiating change. Throughout the process of this quality improvement project, hurdles were identified and jumped leading the DNP project lead to identify strengths and limitations, thus guiding future practice recommendations. Particularly, when working with free clinics recommendations are geared towards overcoming barriers identified when working with volunteer-based staff and time constraints. Prior to project implementation, one should adequately assess potential barriers and plan for variations.

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Appendix A

Screening tool

TAPS-1 Screening Tool

1. In the past 12 months, how often have you,
    a. For men had more than 5 drinks in a day
    b. For women more than 4 drinks in a day
        i. Never
        ii. Less than monthly
        iii. Monthly
        iv. Weekly
        v. Daily/Almost Daily
2. In the past 12 months, how often have you used tobacco products (for example, cigarettes, e-cigarettes, cigars, pipes, or smokeless tobacco)?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily/Almost Daily
3. In the past 12 months, how often have you used any prescription medications just for the feeling, more than prescribed or that were not prescribed for you?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily/Almost Daily
4. In the past 12 months, how often have you used any drugs including marijuana, cocaine, or crack, heroin, methamphetamine (crystal meth), hallucinogens, ecstasy/MDMA?
    a. Never
    b. Less than monthly
    c. Monthly
    d. Weekly
    e. Daily/Almost Daily
    f.

(McNeely et al., 2016)

Resource pamphlet given:
Circle: y or n

Appendix B

Audit Collection Tool

Date:

	TAPs-1	Resources	ETOH frequency	Tobacco Frequency	Prescription frequency	Drug frequency
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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22						
23						
24						
25						
26						
27						

Legend: N=Never, <M=Less than monthly, M=monthly, W=weekly, D=daily or almost daily