

**Substance Use Screening and Referral Toolkit**

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Doctor of Nursing Practice

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### **Notes from the Author**

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### Abstract

**Problem:** More than nine percent of the United States population is addicted to drugs and alcohol. Despite the growing health concern of alcohol and substance use, many providers do not feel trained to identify and assist patients with substance use disorders. The purpose of this Doctor of Nursing Practice (DNP) project was to develop a toolkit for primary care practitioners that included screening tools, a list of local treatment centers, and information about the referral processes. The goal was to increase the knowledge of primary care providers by 5%.

**Methodology:** The FADE Model provided the framework of planning, implementation, and evaluation of this DNP project. The implementation included a presentation at the project sites about the substance use and alcohol screening tools and information about local treatment centers and referral processes. Data from a pre-presentation and post-presentation survey were compared to identify a change in personal perception of knowledge and comfort levels, intent to use the toolkit, and appropriateness of the toolkit in primary care settings. **Results:** Eight of 9 participants reported an increase in knowledge of substance abuse screening and referrals. Six of 9 participants “very comfortable” assessing patient for substance use. Nine of 9 participants intended to use the toolkit. Nine of 9 participants “strongly agree” the toolkit was suitable for primary care. **Conclusion:** A limitation of this project is a small sample size of nine participants. However, this project did meet the expectation of increasing provider knowledge of substance use screening and the referral to specialized treatment.

*Keywords:* substance uses, alcohol use, screening tools, quality improvement, primary care

**Table of Contents**

Notes from the Author .....	2
Abstract .....	3
Section I: Introduction .....	6
Background.....	6
Organizational Needs Statement.....	7
Problem Statement.....	8
Purpose Statement.....	9
Section II: Evidence.....	9
Literature Review.....	9
Evidence-Based Practice Framework.....	15
Ethical Consideration and Protection of Human Subjects.....	16
Section III: Project Design.....	17
Project Site and Population.....	18
Project Team.....	18
Project Goals and Outcomes Measures.....	18
Implementation Plan.....	20
Timeline.....	22
Section IV: Results and Findings.....	22
Results.....	22
Discussion of Major Findings.....	24
Section V: Interpretation and Implications.....	25
Cost-Benefit Analysis.....	25

Resource Management.....	27
Implications of the Findings.....	28
Sustainability .....	29
Dissemination Plan .....	30
Section VI: Conclusion.....	30
Limitations.....	30
Recommendations for Others.....	32
Recommendations for Further Study.....	33
References.....	34
Appendices.....	38
Appendix A: Literature Review Matrix.....	38
Appendix B: Presentation Surveys.....	44
Appendix C: Project Timeline.....	47
Appendix D: Pre-Test Survey Results.....	48
Appendix E: Post-Test Survey Results.....	49
Appendix F: DNP Project Budget.....	51
Appendix G DNP Essentials .....	52

## Section I. Introduction

### Background

Substance and alcohol misuse are growing problems in North Carolina as well as the United States. According to Healthy People 2020, 27% of adults reported excessive drinking, and 10% of adults reported illicit drug use within the last 30 days (Office of Disease Prevention and Health Promotion [ODPHP], 2020). This is an increase from the Healthy People 2010 final report of 7.9% of adults reporting illicit drug use within the previous 30 days (Center for Disease Control and Prevention [CDC], 2015). More than nine percent of the US population is addicted to drugs or alcohol, including prescription and over-the-counter medications (Tenegra & Leebold, 2016). Additionally, Czeisler et al. (2020) reports 13.3% of adults aged 18 and older started or increase the use of substances to cope with the hardship of the coronavirus disease (COVID-19) in 2020. Substance abuse and overdose deaths has been a growing problem in the United States for the last 20 years and is now widely known as the opioid epidemic (CDC, 2020; State Health Access Data Assistance Center [SHADAC], 2020).

Primary care providers are faced with many challenges in the substance abuse epidemic as most substance overdoses are caused by synthetic opioids or prescription opioids (SHADAC, 2020). An estimate of more than 20% of primary care patients suffer from a substance use disorder (Tenegra & Leebold, 2016). Patients with substance use disorders are more likely to have associated health conditions such as hypertension, congestive heart failure, cirrhosis, and overdoses related to misuse (Tenegra & Leebold, 2016). Despite the growing health concern of alcohol and substance abuse, many providers do not feel adequately trained to identify and assist patients with substance use disorders. Providers report uneasiness discussing substance use with patients and report time constraints during appointments (Tenegra & Leebold, 2016). Shaprio et

al., (2013) supports this information by reporting less than 20% of primary care providers described themselves as very prepared to identify alcohol or illegal substance abuse, and 50% of patients reports that primary care providers did not address his or her substance abuse.

Due to these concerns, primary care providers are missing the opportunity to screen patients for alcohol and drug use. Screening is imperative in primary care to recognize patients' unhealthy patterns and patients depend on providers for referrals and treatment options. The Office of Disease Prevention and Health Promotion (ODPHP, 2020) and the U.S. Preventive Services Task Force (USPSTF, 2018) support screening every adult patient in primary care.

Several screening tools are available to use and some tools focus on alcohol use alone while others address multiple substances. Successful recognition of substance use in primary care depends on the provider using an appropriate screening tool and asking the proper questions (Tenegra & Leebold, 2016). Supplying resources for primary care providers to aid them in selecting evidence-based screening tools and appropriate treatment centers for referral may help increase the number of screenings in primary care and enhance the knowledge of substance abuse screening in providers.

### **Organizational Needs Statement**

The partner for this Doctor of Nursing (DNP) project, a healthcare organization in Central North Carolina, recognized the need for provider and staff education on substance use screening and the referral process for specialized treatment. The healthcare system did not have a policy in place to screen for alcohol or substance use for all adult patients and did not recommend a specific screening tool for their providers to use. The healthcare system had two family practice offices delivering primary care that were interested in resources to improve

screening and the referral process for their patients. This information was determined by speaking with the office managers and the providers at the two locations.

Healthy People 2020 offers important benchmarks for achieving improved substance use screening. One objective is to increase the number of primary care practices that use screening tools for adult patients. Another essential objective is increasing the number of people that receive specialized treatment for alcohol, substance use, and dependence by 10% (ODPHP, 2020). The U.S. Preventive Services Task Force (2018) recommends all adult patients in primary care practices should be screened for unhealthy alcohol use. The North Carolina Opioid Action Plan endorses the goal to increase the number of people that receive treatment for substance use (North Carolina Department of Health and Human Services, 2019).

Providing primary care providers with an easy-to-use resource toolkit for substance use screening and referrals helps address the Institute for Healthcare Improvement (IHI) Triple Aim. The Triple Aim is a framework to improve three aspects of healthcare performance: patient experience, health of populations, and reduce healthcare cost (IHI, n.d). The Triple Aim is addressed by 1) improving the health of the population through increased screenings and referral for treatment of patients with drug or alcohol use disorders; 2) enhancing patient experience by tailoring their treatment to their individual needs; and 3) decreasing patient out-of-pocket expenses by supplying information about each treatment facility's accepted insurance plan.

### **Problem Statement**

According to the family practice sites in Central North Carolina, additional education and resources were needed for providers to screen patients for alcohol or substance use. The Drug Rehab Services (2021) lists numerous treatment facilities in Central North Carolina, and each treatment facility offers different services. Navigating through many resources to find treatment



for specific addiction disorders is both laborious and inefficient for primary care providers. There are also numerous substance use screening tools available for providers to choose from, but not all are evidence-based or appropriate for the primary care setting. Primary care providers face challenges in identifying proper screening tools, screening all adult patients, and navigating referral processes due to the large volume of available services.

### **Purpose Statement**

The purpose of the proposed DNP project was to develop a Substance Use Screening and Referral Toolkit (SUSRT) for primary care practitioners in Central North Carolina, that included evidence-based screening tools appropriate for the primary care setting, a list of local treatment centers, and appropriate treatment center referral processes. The goal was to increase the knowledge of primary care providers in Central North Carolina about substance use screening in primary by 5% by the end of Fall 2020.

## **Section II. Evidence**

### **Literature Review**

The literature review for this DNP project aimed to identify valid, evidence-based substance abuse screening tools for primary care practice use. One Search from East Carolina University (ECU) Library, PubMed, and ProQuest were used to identify evidence-based tools for this project. Search terms included substance abuse, alcohol use, screening tools, screening, primary care, adult, and screening tools recommended by the content expert: CAGE (Cut down, Annoyed, Guilty, Eye opener), AUDIT (Alcohol Use Disorders Identification Test), TAPS (Tobacco, Alcohol, Prescription medication, and other Substances), DAST (Drug Abuse Screening Test). Inclusion criteria for selected articles focused on primary care, adults, and pertained explicitly to substance abuse screening. The level of evidence was taken into

consideration when selecting articles, and only level I through level V evidence from systematic reviews were included. These levels of evidence were utilized to obtain scientific evidence of the screening tools but also the medical options and usefulness of the tools in primary care.

Exclusion criteria included articles that focused on oncology, adolescents, pregnancy, or articles that did not relate to substance abuse screening in primary care. The following literature review searches were limited to articles published between April 2015 to April 2020.

The One Search ECU Library database was used with the keywords “substance abuse” and “screening tools.” Limitations that applied to the search criteria included articles published within the last five years, English language, adult patients, primary care, scholarly and peer-reviewed articles. Exclusion limits applied were child, children, adolescents, teenagers, pediatrics, pregnancy, and youth. With these search criteria, 2,480 articles were produced. Exclusion terms were then added to find the most reliable evidence for adult patients in the primary care setting. The following exclusions to search terms were then applied to the 2,480 results: acquired immune deficiency syndrome, anxiety, depression, human immunodeficiency virus, mental disorders, mental health, mortality, neurosciences, pain, psychology, stress, surveys, symptoms, and treatment outcomes. These search terms were determined to produce results that are not purposeful for the goal of this DNP project. The new search criteria produced 285 articles and the titles of these articles were reviewed. Titles that pertained to specialized hospital departments, implementation of standard practices, electronic screening, and substance abuse in specific populations were discarded. Only seven articles (n=7) from the 285 articles with titles that were specific to adult substance abuse screening in primary care were kept.

The ProQuest Central database was used with the same keywords “substance abuse” and “screening tools” with a five-year limit and peer reviewed search criteria applied. The initial

search results yielded 20,925 article results. Exclusion terms were then added to find the most reliable evidence for the predetermined setting. The following subject terms were excluded: mental disorders, mental health, mental depression, substance abuse treatment, human immunodeficiency virus, teenagers, acquired immune deficiency syndrome, children, psychiatry, anxieties, women's health, children and youth, clinical trials, mental health care, mortality, adolescents, trauma, comorbidity, hospitals, pain, suicides and suicide attempts, post-traumatic stress disorder, pregnancy, anxiety, research, domestic violence, and violence. These search terms were excluded due to the large amount of search results that incorporated substance abuse with other factors of mental health or for specialty populations that are not the focus of this project. The search results were decreased to 7,416 and additional subject inclusion terms were applied. For a primary care focused search, the new inclusion subject terms included: screening, adults, primary care, and substance abuse and 420 results populated. As in the previous search, articles were selected based on the title of the articles, and only articles that related to substance abuse screening in adults were kept. From the 420 results, only 13 articles (n=13) were kept from the ProQuest Central database search.

An advanced search in PubMed was performed with the search terms "substance abuse" and "screening." The filters placed on this search are a 5-year publication date, English language, and adult (19 years or older). This search produced 7,753 search results but PubMed does not have an option to limit search results to subjects or topic. An additional filter of systematic review was applied to the search and the results were decreased to 72 total articles. The same elimination process was applied to this database search and articles were eliminated by title alone. Three articles (n=3) were kept based on the title implying screening adult patients in primary care for substance abuse.

The search results from One Search ECU, ProQuest Central, and PubMed produced a total number of 23 articles (n=23) that were kept. The abstracts from these articles were reviewed to determine if specific knowledge from the articles would be relevant to screening adults for alcohol and substance abuse in primary care. From the 23 articles, 13 articles (n=13) were thought useful for this project and the entire articles were then reviewed. Articles that only reviewed alcohol abuse screening and the effectiveness of electronic screening were read and reviewed but did not pertain to the goal of a complete substance abuse screening tool and were discarded. The information from the 13 remaining articles was used to identify evidence-based substance abuse screening tools for use in the primary care setting. The full literature review can be found in Appendix A.

### ***Current State of Knowledge***

The U.S. Preventive Service Task Force recommends screening of all adults for unhealthy alcohol use and substance use in primary care (USPSTF 2018; 2019). Multiple factors affect which screening tools are used in primary care, and shorter versions or brief screening tools are beneficial for busy primary care practices (USPSTF, 2019). The more extended tools assess the specific risk for substance abuse and trigger the need for diagnosis and treatment. Screening tools are designed to evaluate the status of alcohol and substance use but are not diagnostic tools. Patients with positive screenings may need additional assessments or referral for diagnostic assessment (USPSTF, 2019)

The current literature shows little evidence of a standardized screening tool for alcohol or substance abuse in primary care. Multiple sources support the recommendation to screen all adult patients (Rizer & Lusk, 2017; Tenegra & Leebold, 2016). However, the literature review revealed there is not one definitive screening tool that is recommended for use by all primary

care providers. The AUDIT and AUDIT-C demonstrate both validity and sensitivity and are recommended for use in primary care to screen for alcohol use disorders (Higgins-Biddle & Babor, 2018; Wells et al., 2018; Rizer & Lusk, 2017).

Screening tools that are supported in primary care that assess multiple substances are TAPS, ASSIST, and DAST-10 (Adam et al., 2019; Gryczynski et al., 2017; Mulvaney-Day et al., 2018). The benefit of these screening tools is that they address tobacco, alcohol, prescription medication, and other substance use in one tool. Mulvaney-Day et al. (2018) provide evidence that the DAST-10 is beneficial in assessing substance use in primary care settings with high sensitivity. Mulvaney-Day et al. (2018) report that the TAPS is a newer tool and is still being studied but has shown reasonable specificity for problem use. The ASSIST tool is the longest to administer but provides low, moderate, or high-risk misuse screening for each substance. (Mulvaney-Day et al., 2018). This tool shows greater strength in discriminating between substance use and substance abuse (Mulvaney-Day et al., 2018).

### ***Current Approaches to Solving Population Problem***

The recommended framework for substance abuse screening in primary care is SBIRT: screening, brief intervention, and referral to treatment (Rizer & Lusk, 2017). This approach is essential to the aim of this DNP project. Although Rizer and Lusk (2017) recommends using the AUDIT screening tool, the screening tool should be specific to the patients' needs or providers concerns. Brief intervention should start in primary care by encouraging the patient to recognize substance misuse, providing education on health consequences, and encouraging for the patient to participate in a treatment plan. Once the patient is agreeable to the plan of care, then specific treatment referral is recommended based on local resources (Rizer & Lusk, 2017).

### ***Evidence to Support the Intervention***

Primary care providers are potentially the first provider to recognize alcohol or substance misuse and to address the concern with the patient. Screening and detecting substance use have been challenging for providers due to multiple concerns and factors. One factor is that providers do not feel prepared to identify and assist patients with addiction and substance misuse. Another factor is the need to ask the right questions by using the appropriate screening tool (Tenegra & Leebold, 2016)

The literature supports screening all adult patients in primary care for alcohol and substance abuse or misuse, including oncology, obstetrics, and adolescent patients (USPTF, 2018). The research does not support a particular screening tool for all substance abuse screening in primary care, but multiple screening tools are recommended as evidenced from the literature review. The National Institute on Drug Abuse (NIDA) Quick Screen is a four-question survey that would provide a quick and easy to use an assessment in a busy primary care practice (USPSTF, 2019). The NIDA Quick Screen assesses adults for alcohol, tobacco, prescription drug, and illegal drug use in the past year (USPSTF, 2019), and is validated with an evidence rating III (National Institute for Children's Health Quality [NICHQ], n.d.).

The Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS) tools is a two-part tool that combines screening with a brief assessment (Gryczynski et al., 2017). Part one of the TAPS tools consists of four questions about the frequency of substance use in the past year, ranging from never to daily. Part two of the tool is only used if any section of part one is positive and helps the provider assess for use of specific substances and medications if the past three months (Gryczynski et al., 2017). The results of the TAPS score will provide a risk category of no risk, problem use, and higher risk with adequate sensitivity of about 72% (Mulvaney-Day et al., 2018).

Many articles and the USPTF reference the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) that is an eight-part questionnaire for assessing unhealthy substance use and the associated risks (USPTF, 2019). The ASSIST screening tool can be administered by healthcare workers or self-administered by the patient and takes less than 10 minutes to complete (National Institute for Children’s Health Quality [NICHQ], n.d.). The tool assesses for lifetime substance use and within the past three months with an evidence rating III (NICHQ, n.d.). The ASSIST has high specificity of an estimate of 89% and determines low, moderate, or high risk for tobacco, alcohol, cannabis, cocaine, amphetamines, sedatives, and opioids abuse (Mulvaney-Day et al., 2018).

The 10 question Drug Abuse Screening Test (DAST-10) is considered to have reasonable accuracy in detecting drug abuse (Mulvaney-Day et al., 2018), but does not assess for alcohol or tobacco use. Additional tools such as AUDIT-10 and CAGE are successful in detecting alcohol misuse and take less than five minutes to administer, but do not assess for the range of substances screened for in the TAPS and ASSIST (Mulvaney-Day et al., 2018).

It is essential to know the type of substance being used to create an appropriate management plan for the patient. The Substance Use Screening and Referral Toolkit (SUSRT) includes evidence-based screening tools that are appropriate to the primary care setting and information on the referral process to local treatment centers in Central North Carolina. A toolkit which offers providers evidence-based resources and local treatment options may increase providers' knowledge in screening and referring patients with substance abuse.

## **Evidence-Based Practice Framework**

### ***Identification of the Framework***

The framework that was used to execute this project was the FADE model that is a four-step change cycle for quality improvement (Duke University School of Medicine [DUSM], 2020). FADE represents focus, analyze, develop, and execute with ongoing evaluation to monitor the process and generate success. The problem is verified and defined during the focus portion of the cycle with a written statement of the problem. Baseline data and influential factors are collected during the analyze cycle. In the develop cycle, a solution is selected and a plan for implementation is developed. The plan is then executed and monitored for impact during the execute process (DUSM, 2020).

The FADE framework is an appropriate tool for the SUSRT project as primary care providers face challenges with screening adult patients for substance use. The focus for this project was to identify evidence-based screening tools for substance use. Screening tools were analyzed through a literature review and verified as appropriate screening tools in the primary care setting. The develop section of this framework included the review of the evidence, development of the substance use toolkit, and the plan to disseminate the toolkit to primary care providers. The execution of this project was the assessment of the providers knowledge, comfort level, and the intention to use the toolkit after attending a presentation and receiving the SUSRT.

### **Ethical Consideration & Protection of Human Subjects**

The protection of participants and the participants personal information is an essential ethical concern for all quality improvement projects. This population health project has minimal to no risk to the target population of providers in Central North Carolina. However, one concern for this project was that participants may feel obligated to complete the questionnaires to obtain the Substance Use Screening and Referral Toolkit. This risk was minimized by informing the



participants that the presentation and surveys were voluntary. Providers from the project site were informed that they may withdraw from participation at any time without penalty.

All providers at both family practice locations had an equal opportunity to attend the SUSRT presentation. Participation was voluntary and personal demographic information was not collected. Information collected from the participants was de-identified by listing each survey with a number instead of personal demographic information. This project measured the pre-presentation knowledge through a questionnaire, and then results were compared to a similar post-presentation survey. This data produced educational and aggregated data that was used to evaluate the effectiveness of the presentation and toolkit.

The data was stored in a paper format and then transferred into an electronic format for data analysis on a password protected device that is not accessed by members outside of this project. The data was stored in a secured location at a private residence within a locked security box that only members of the project team had access to. The results from the data will be shared through a presentation at East Carolina University, through the ECU digital repository (The ScholarShip), and with the participating family practice participants and staff. The results of the surveys and data collected will not be used in any additional research or projects.

In preparation for the implementation of this project, the Collaborative Institutional Training Initiative (CITI) social and behavioral research program was completed. Ethical considerations such as federal regulations, privacy, and vulnerable subjects were assessed through the CITI program (The CITI Program, 2017). The Institutional Review Board (IRB) at East Carolina University reviewed this project and deemed it Quality Improvement/Program Evaluation program that was not research in need of IRB approval.

### **Section III. Project Design**

### **Project Site and Population**

The implementation of this project was performed at two family practice locations within one healthcare system in Central North Carolina. The family practices include nurse practitioners, medical doctors, and physical assistance that treat patients of all ages across the lifespan with the focus of family medicine and primary care. The organization mission is to provide preventive services and health education to all members of the community regardless of the ability to pay for services (██████████, 2016). One goal of the healthcare organization, including the two-family practice locations, is to have an interdisciplinary team approach with the patient, the provider, and partnership of community services (██████████, 2016).

### **Project Team**

The project team for the SUSRT project was comprised of multiple people. First, was the project leader whose responsibility was to develop, implement, and evaluate the toolkit using evidence-based data. Second, was the East Carolina University DNP project coach who helped guide the project leader throughout the course of four semesters. The third member of this project was the project content expert who assisted in reviewing the research, provided recommendations of substance use screening tools, and resources on local treatment centers. Lastly, the project team consisted of the project partners, two family practices that worked in collaboration with the project leader to implement the toolkit.

### **Project Goals and Outcome Measures**

The project goal was to increase the knowledge of primary care providers in Central North Carolina about substance use screening in primary by 5% by the end of Fall 2020. Data was collected on the day of presentation with a pre- and post-presentation survey of the

providers' knowledge level on substance abuse and referral to treatment. Refer to Appendix B for the pre-presentation and the post-presentation questionnaires.

### ***Description of the Methods and Measurement***

The FADE Model provided the framework of planning, implementation, and evaluation of this project (DUSM, 2020). FADE stands for focus, analyze, develop, execute and the following is an overview of how the FADE model was used to implement the SUSRT project.

**Focus:** Primary care providers face challenges in identifying proper screening tools and navigating referral processes for substance use in primary care patients due to the large volume of available services in Central North Carolina. Screening is challenging in primary care due to time restrictions, and a reported lack of confidence among many in assisting patients with substance misuse.

**Analyze:** Current recommendations are to screen all adult patients in primary care for unhealthy alcohol and substance use. Research supports numerous screening tools for alcohol and substance use, but few of the screening tools are recommended in primary care.

**Develop:** The goal was to increase the knowledge of primary care providers about substance use screening and how to refer patients to local treatment. The SUSRT provided evidence-based screening tools, a list of local treatment centers, and the appropriate referral process to these centers.

**Execute:** A presentation about the toolkit was completed at two family practice locations in Central North Carolina. The presentation included the project leader presenting a PowerPoint presentation that included recommendations for screening adult patients, evidenced-based screening tools appropriate for primary care, and the detailed information listed inside the SUSRT on screening tools and local treatment centers. The toolkit provides an efficient process of offering information on local treatment centers based on location, the level of treatment needed, and the patient's ability to pay or accepted insurance. The data from the pre-presentation

and post-presentation questionnaires was evaluated. The results were expected to show an increase in the providers knowledge of substance use screening by 5%.

### *Discussion of the Data Collection Process*

The data collection process for this project consisted of two surveys from the participating providers at the project sites. The surveys did not contain personal information from the participants and assessed the knowledge and comfort level of the family practice providers before and after the presentation of the toolkit. The survey was developed by the project leader and was specific for evaluating the goal for this project. Although the toolkit was designed for adult primary care providers, the providers at the project site treat all ages and one clinic has behavioral health specialists. Therefore, one question in the survey assessed the providers current field of work: primary care, behavioral health, not applicable, or other. Other questions focused on screening tools the provider currently uses, the comfort level of screening and referral for substance misuse, and self-assessed knowledge level of screening and referrals from novice to expert. See Appendix B for the pre-presentation and post-presentation surveys.

Following the presentation, the post-presentation survey assessed if the providers knowledge and comfort level increased. The survey assessed the intention to use the toolkit or to use the information given to make referrals to local treatment centers. The appropriateness of the toolkit was assessed using the Intervention Appropriateness Measure (IAM). The IAM questions were designed to assess the perceived suitability of evidence-based practice in a practice setting (Weiner et al., 2017).

### **Implementation Plan**

The implementation of this project was in collaboration with two family practice locations in Central North Carolina. The implementation dates for the project presentations were

November 2<sup>nd</sup>, 2021 and November 5<sup>th</sup>, 2021. The implementation occurred during a Lunch-and-Learn style presentation at both locations. The participants were given the pre-presentation survey before the providers attended the presentation. The post-presentation survey was administered immediately after the presentation. The project leader stayed while lunch was served to answer questions, receive feedback, and obtain contact information for any participants that requested an electronic copy of the toolkit.

The presentation was in a PowerPoint format with visuals of the various substance use screening tools. The presentation also included evidence to support or not to support specific screening tools in primary care. The screening tools listed on the PowerPoint presentation and within the SUSRT were supported from evidence by the literature review. Information about how the contents of the SUSRT were obtained and how the local treatment centers were listed by county and then alphabetically were explained. A handout of the PowerPoint presentation was given to participants before the start of the presentation and the toolkit was given to the providers and staff after the presentation.

The data collected from the pre- and post-presentation surveys was stored on paper and electronic format. Personal data was not collected with the pre-presentation and post-presentation surveys to maintain the privacy of the participants. The results of the two separate surveys were then compared to identify any change in personal perception of knowledge and comfort levels, intent to use the toolkit, and appropriateness of the toolkit in primary care settings.

The DNP project was designed for an in-person Lunch and Learn style presentation. Given the COVID-19 pandemic, the project presentation was easily adapted to a virtual presentation format and electronic surveys; although, permission was granted by the family practices for a face-to-face presentation using appropriate safety precautions. Additional safety

precautions were taken by supplying extra facial masks, hand sanitizer, and limiting the number of participants in the conference room to six or less people. Individual handouts and toolkits were given to each participant in the effort to increase the toolkit use, but also to limit contact between individuals. Additional copies of the SUSRT were given to the office managers to store for future use or distribution.

### **Timeline**

The timeline for implementation of this DNP project included biweekly meetings with the East Carolina University DNP faculty project leader from August-November 2020. An estimated timeframe to confirm the presentation date and time was July 31<sup>st</sup>. The plan was to have the physical and electronic toolkit completed by August 30<sup>th</sup> and reviewed by the project content expert by September 10<sup>th</sup>. Revisions to the toolkit were estimated to be completed so that the toolkit presentations could occur by October 30<sup>th</sup>, 2020. The proposed project timeline can be reviewed in Appendix C.

## **Section IV. Results and Findings**

### **Results**

The number of participants from the presentations at the two-family practice locations equaled nine providers (N=9). All the providers worked in primary care. All participants completed the pre-survey and post-presentation survey with a 100% completion rate. The following are the results from the pre-presentation survey. Nine participants reported that their healthcare organization does not screen all adult patients for substance use. Eight providers use the CAGE screening tool, and two providers use AUDIT, zero providers reported that they use TAPS, ASSIST, DAST-10, or any other screening tools. When asked if the providers were comfortable assessing patients for substance use or abuse, three providers were not comfortable,

five were somewhat comfortable, and one was very comfortable. When evaluating if the providers were comfortable referring patients to treatment centers, four providers were not comfortable, four were somewhat comfortable, and one was very comfortable.

The knowledge of the providers was assessed in the pre-presentation survey through self-described knowledge levels of novice, beginner, intermediate, advance, or expert. Four providers rated their knowledge of substance use screening as beginner, four as intermediate, and one as advance level. The results of knowledge level in referral to treatment are as following: two providers were novice, three were beginner, three were intermediate, and one was advance knowledge level. The full pre-survey results can be viewed in Appendix D.

The post-presentation survey has the same self-described rating system for comfort in screening for substance use. Three providers rated somewhat comfortable in assessing patients for substance use and six providers rated very comfortable post-presentation. When asked about comfort in referring to treatment, one provider rated somewhat comfortable and eight rated very comfortable post-presentation. Eight providers strongly agreed when asked if the presentation increased their knowledge, and one answered agreed. Most of the providers reported that they will use the information from the presentation to change their practice (n=7). All nine providers plan to use the toolkit that was provided and intend to use the information to make referrals in the future (n=9).

The last several questions of the post-survey provided data from the IAM Tool, and the participants were given the option to choose between strongly disagree to strongly agree. Eight providers strongly agreed that the toolkit seems fitting, nine participants strongly agree that the toolkit was suitable for primary care practice. The majority of the participants (n=8) strongly

agreed that the toolkit seems applicable, and five providers strongly agreed that the toolkit seems like a good match. The full post-survey results can be found in Appendix E.

### ***Outcomes Data***

The outcome data for this DNP project was the results of the pre-presentation and post-presentation results. The results from the data show that the providers are more comfortable assessing for substance use with six participants answering very comfortable on the post-survey in comparison to one participant on the pre-survey. The results show an increase in comfort for referring to substance abuse treatment centers with one participant being very comfortable pre-survey and eight participants being very comfortable post-survey. All participants answered agree or strongly agreed when asked if the presentation increased their knowledge of screening and referrals. Most of the participants (n=7) will use the information to change their current practice. All nine participants plan to use the toolkit that was provided and intend to use the toolkit to make referrals in the future.

Process measures results from the IAM tool were also supported the presentation and SUSRT. All the participants felt that the toolkit was fitting with eight participants indicating strongly agree and one agree. The participants strongly agreed that the toolkit seems suitable for primary care practice (n=9). The toolkit received positive results when asked if it seems applicable or like a good match with results of agree or strongly agree.

### **Discussion of Major Findings**

The results of the pre-survey and post-survey showed a positive impact on the participants' comfort level, knowledge level, and the intent to use the SUSRT. The outcome measures aligned with the project goal to increase the knowledge of family practice providers in Central North Carolina about substance use screening in primary care and how to refer patients



to local treatment centers. All nine providers agreed that the presentation increased their knowledge of substance use screening and referring to treatment. The majority of the providers reported that they would change their practice (n=7) based on the information that was provided to them. All nine providers plan to use the toolkit and to use the information to make referrals.

The results from this project supports prior evidence (Tenegra & Leebold, 2016; Shaprio et al., 2013) that providers lack knowledge and comfort in assessing patients for substance use. The participants of this project self-described lower levels of knowledge and comfort in screening and referral to treatment centers before the presentation and explanation of the toolkit. As the results indicate, the knowledge and comfort levels increased after the educational presentation.

The SUSRT has the potential to continue to improve outcomes as the providers use the toolkit for future use and referrals. Additionally, the results from the data support that the toolkit is an acceptable tool for the use of primary care. A provider at the project site has agreed to maintain and update the toolkit for continued use among the practices.

## **Section V. Interpretation and Implications**

### **Cost Benefit Analysis**

Most quality improvement projects have costs associated with conducting the data collection, design, implementation, and evaluation of a project. A cost-benefit analysis can be used to measure the cost associated to create a project in comparison to the benefits the project produced or will produce. A cost benefit analysis for this DNP project has been conducted that includes the time, money, people, and other resources needed to complete the project.

The amount of time in the development phase of this project should be considered in the cost-benefit analysis. Toolkit development is a time-consuming process that included a literature

review for evidence-based screening tools appropriate for primary care and research on local treatment centers throughout central North Carolina. Time spent on the toolkit development was approximately 30 hours, and an approximate 2 hours per month would be required to maintain the toolkit. The maintenance of the toolkit would include researching and updating evidence based screening tools, updating the local treatment center resource and referral process, and distributing the updated information to the providers.

The actual cost to the organization varies depending on the staff that will maintain the toolkit. The maintenance could be completed by support staff such as a licensed clinical social worker, office manager, behavioral health specialist, or staff that is familiar with local resources. It is unlikely that a new staff position is needed to complete the upkeep of the toolkit at the local level. However, a full-time position would be needed if a large organization requested a toolkit for a state or multi-state level.

The monetary cost to conduct the presentations includes the cost of printed educational material, published toolkit, and lunch for both presentation sites total to \$1,022. An unexpected cost due to the COVID-19 pandemic included disinfectants, facial mask, and hand sanitizer for the conference rooms, bringing the total cost of the project to \$1,047. The family practice locations did have additional safety and cleaning supplies. The table in Appendix F shows the full budget for this project.

The toolkit has the benefit of decreasing the providers workload when patients require additional treatment services. Generally, any primary care practice located in the selected areas would have a profitable return on the investment with this toolkit due to the efficiency in using the toolkit. The project presentation and toolkit has increased the providers skill level in

substance use screening and referral process, preparing the family practice to better service their communities.

### **Resource Management**

Several resources were needed for the success of the toolkit. The most important is the content expert in substance abuse treatment. The content expert was able to add insight into the shortage of treatment referrals and the expert opinion of screening tools. The additional online resources used included: Drug Rehab Services (2021), Aunt Bertha, a public benefit corporation (n.d.), and the Substance Abuse and Mental Health Services Administration (SAMHSA, n.d.). These resources were used to help locate treatment centers in Central North Carolina in conjunction with the content expert.

The presentation sites had a fair-sized conference room with limited presentation equipment that was used for the small presentation group at each location. The presentation rooms could hold 10 people but due to COVID-19 safety regulations, the amount of people in the conference room were limited to six. Resources that the project leader brought to the presentation included a laptop, PowerPoint handouts, and copies of the toolkit. The toolkit also provides online resources for the screening tools, copyright information, and web addresses for each treatment center.

The large healthcare organization offers several medical services throughout Central North Carolina including primary care for all ages, behavioral health care, and dental services. Unfortunately, the project leader was unable to establish communication among the behavioral health resources before the project presentation. The project could have been tailored to the needs of the healthcare organization or the needs for the individual primary care location if communication was made before the implementation process.

**Implications of the Findings**

The implications of this DNP project have potential to impact several factors in healthcare including patient care, the nursing process, and changes in a healthcare system. The project implications for the Central North Carolina community are the benefit of having providers skilled in screening for substance use and knowledgeable about the local resources. The nursing process is impacted due to the change that advanced practice registered nurses (APRN) can provide care throughout a healthcare system with education and quality improvement projects. The healthcare system may be impacted by this DNP project as it could lead to a policy change to screen adults for substance use across the system.

***Implications for Patients***

Patients in the community will benefit from the early recognition of substance abuse or misuse through proper screenings. The quick assessment from the screening tools may lead to the appropriate referral to treatment based on the patient's needs. The toolkit provides information about each treatment center, the referral paper if applicable, and the insurance accepted when applicable. The toolkit also provides information about the services each facility offers such as inpatient, outpatient, children services, and may offer legal advice and services. This information can be shared with the patient so that a collaborative decision about treatment may be made with the patient.

***Implications for Nursing Practice***

The goal of this project was to introduce a toolkit and resources to providers and staff in primary care practices. This DNP project demonstrates that APRNs can provide essential education and quality improvement to general healthcare practices. The SUSRT and project presentation was successful in increasing providers knowledge about screening tools for alcohol

and substance use. The toolkit may improve the number of screenings and referrals with the providers having an increase knowledge and comfort level with substance abuse screening. This project validates the important contributions APRNs can make to an interdisciplinary approach in research, planning, implementing, and evaluating quality improvement throughout healthcare.

### ***Impact for Healthcare System(s)***

Although this project was implemented at two small family practice locations, it could have a larger impact on the large healthcare organization in Central North Carolina. The DNP project was designed around the Healthy People 2020 goal to screen all adult patients for alcohol and substance abuse and increasing the number of people who receive specialized treatment by 10% (ODPHP, 2020). This project goal was not to assess for an increase in substance use screenings or referrals, but to assess for the increase in knowledge of providers and their plan to use the developed toolkit. The data from this DNP project could be used to expand on an existing policy to screen adult patients for substance use or to implement a new practice of screening using a specific tool. The SUSRT could help multiple practices and healthcare systems achieve the Healthy People 2020 goal. Fortunately, Medicare reimburses for alcohol and drug use screening when using the Screening, Brief Intervention, and Referral to Treatment (SBIRT) method and billing accordingly (SAMHSA, 2020).

### **Sustainability**

One of the project site locations has additional behavioral health resources and specialist within the family practice clinic. This project site has a behavioral health nurse practitioner that is interested in managing and updating the toolkit as needed. The nurse practitioner will continue the effort from this project and continue to provide resources to the local providers. This may

increase the number of screenings, referrals, and develop into an essential policy change for the individual practice or healthcare system.

### **Dissemination Plan**

The dissemination plan is to continue to share the toolkit and project findings with organizations or primary care providers that are interested. The project will be presented virtually within the East Carolina University DNP presentation group on April 6<sup>th</sup>, 2021. After this presentation, the project leader will distribute the project findings and poster presentation with the project site facility via email or virtual meeting. The DNP project paper will become open to the public after being submitted to the online ScholarShip database for East Carolina University scholarly community on April 25<sup>th</sup>, 2021.

It is challenging to apply for conferences or provider group meetings due to the limitation of virtual conferences during the COVID-19 pandemic. The project leader has reached out to local nurse practitioner and physician assistance groups in Central North Carolina and state level organizations to gauge interest in the project results. One goal is to distribute the toolkit and findings with providers at the project leader's current or previous clinical rotation sites and provider colleagues.

## **Section VI. Conclusion**

### **Limitations**

There were several limitations and barriers that were identified throughout the course of the DNP project. Barriers and limitations included commitment concerns of the project sites, safety precautions, and communication barriers. The project leader also had to develop a contingency plan in the event that in-person implementation could not occur due to the COVID-19 safety concerns.

One concern was forming a commitment with a presentation group. A potential group of 50 nurse practitioners with a wide variety of specialties was anticipated to be the implementation audience. The goals of the potential nurse practitioner group and the goals for this DNP project did not align. Therefore, a delay in obtaining a committed project partner created a challenge in developing a toolkit specific to a target audience.

The effort to find a project site was also limited by several of the large healthcare organizations limiting visitors, including students, into their facilities during the COVID-19 pandemic. Many of these organizations were discouraged to have any student projects or preceptorship during this uncertain time. The healthcare organization of the two project sites determined that the decision to have a student project implementation was to be made by the individual practices. Once the project sites were confirmed, pandemic safety guidelines continued to discourage large group gatherings of more than 10 people. This obstacle was overcome by having two separate presentations with less than 10 providers in attendance at each location.

The two project sites were small family practices that did not have more than five providers at each location, leading to a small sample size of nine participants. Safety precautions were followed by the project leader and participants. Proper personal protective equipment was worn including facial masks, eye protection. Tables and chairs were disinfected before and after the presentation, and hand sanitizer was provided in the conference room and throughout the practice. The participants did not eat the provided lunch during the presentation but instead, had lunch at their designated locations and then came into the conference room. Therefore, masks were worn while in contact with other staff and the project leader.

The most influential barrier was communication with the project implementation sites and project leader. Several emails were not received by from the project site contacts, as emails from outside the organization were flagged as spam and were not seen. Telephone communication was limited due to numerous staff at the project sites working from home several days a week. These obstacles were overcome by providing additional contact information to both the project leader and the presentation site managers.

### **Recommendations for Others**

This DNP project is recommended for additional primary care practices within the healthcare organization of the two project sites or other healthcare organizations. This project and toolkit could be reproduced in any location as the need for substance use screening and referral information is a national issue. Any recommendations from this project would depend on the planned presentation group locale or size. The planning process would be more in depth for a larger area, such as at a state level. A clear understanding of the target audience is required when planning. This is because acute care, obstetrics, and oncology have specific recommended screening tools that differ from those of adult patients in primary care. Knowing the current knowledge or comfort level of the participating providers would also be beneficial in the planning process so that project could be tailored to accommodate the learners' needs.

The implementation process depends on the availability of the participants and can occur in multiple presentation forms. To implement the toolkit and presentation for an entire healthcare organization, one could transform the project information into an electronic learning formation or virtual presentation meeting to meet the needs of a larger number of providers. It is recommended to have physical copies of the toolkit for the project participants in addition to an electronic copy.



**Recommendations for Further Study**

There is a clear gap between the recommendation for screening all adult patients for substance use in primary care and having no recommended screening tools to assess for substance use, specifically in primary care. Additional research to determine the most appropriate screening tools in primary care or other specialties is warranted. Additionally, studies examining the challenges that providers and staff face in screening adult patients for alcohol and substance use are needed. Further study is also recommended for evaluating the effectiveness of a SUSRT in primary care. Utilizing a framework model that would assess the actual number of screening and referrals would be beneficial to assess the change in practice after the toolkit presentation.

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Appendix A

Figure 1

Literature Review Matrix

Authors	Year Pub	Article Title	Journal	Summary	Design/Analysis	Instr. Used	Citation
Jan Gryczynski, PhD, Jennifer McNeely, MD, MS, Li-Tzy Wu, ScD, Geetha A. Subramaniam, MD, Dace S. Svikis, PhD, Lauretta A. Cathers, PhD, Gaurav Sharma, PhD, Jacqueline King, MS, Eve Jelstrom, CRNA, MBA, Courtney D. Nordeck, BA, Anjalee Sharma,	2017	Validation of the TAPS-1: A Four-Item Screening Tool to Identify Unhealthy Substance Use in Primary Care	Journal of General Internal Medicine	TAPS tool is a combined two-part screening and brief assessment developed for adult primary care patients. The TAPS-1 can identify unhealthy substance use in primary care patients with a high level of accuracy, and may have utility in primary care for rapid triage.		TAPS	Gryczynski, J., McNeely, J., Wu, L., Subramaniam, G. A., Svikis, D. S., Cathers, L. A., Sharma, G., King, J., Jelstrom, E., Nordeck, C. D., Sharma, A., Mitchell, S. G., O' Grady, K. E., & Schwartz, R. P. (2017). Validation of the TAPS-1: A four-item screening tool to identify unhealthy substance use in primary care. <i>Journal of General Internal Medicine</i> : JGIM, 32(9), 990-996. <a href="https://doi.org/10.1007/s11606-017-4079-x">https://doi.org/10.1007/s11606-017-4079-x</a>
Angéline Adam, Robert P. Schwartz, Li-Tzy Wu, Geetha Subramaniam, Eugene Laska, Gaurav Sharma, Saima Mili, and Jennifer McNeely	2019	Electronic self-administered screening for substance use in adult primary care patients: Feasibility and acceptability of the tobacco, alcohol, prescription medication, and other substance use (myTAPS) screening tool.	Addiction Science & Clinical Practice	The TAPS Tool is a substance use screening and brief assessment instrument that was developed for use in primary care medical settings. It is one of the first screening instruments to provide rapid assessment of all commonly used substance classes, including illicit and prescription opioids, and is one of the only available screeners designed and validated in an electronic self-administered format.	Adult patients (N = 2000) from five primary care clinics completed the TAPS Tool. he median time to complete myTAPS screening was 4.0 minutes. TAPS screening was feasible and well accepted by adult primary care patients.	TAPS	Adam, A., Schwartz, R. P., Wu, L., Subramaniam, G., Laska, E., Sharma, G., Mili, S., & McNeely, J. (2019). Electronic self-administered screening for substance use in adult primary care patients: Feasibility and acceptability of the tobacco, alcohol, prescription medication, and other substance use (myTAPS) screening tool. <i>Addiction Science &amp; Clinical Practice</i> , 14(1), 39-39. <a href="https://doi.org/10.1186/s13722-019-0167-z">https://doi.org/10.1186/s13722-019-0167-z</a>

John C. Higgins-Biddle and Thomas F. Babor

2018

A review of the Alcohol Use Disorders Identification Test (AUDIT), AUDIT-C, and USAUDIT for screening in the United States: Past issues and future directions

The American Journal of Drug and Alcohol Abuse

This paper describes the structural and functional features of the AUDIT and methodological problems with the validation of the alcohol consumption questions (AUDIT-C). The USAUDIT has adapted the WHO AUDIT to a 14 g standard drink, and US low-risk drinking guidelines. These changes provide greater accuracy in measuring alcohol consumption than the AUDIT-C.

Narrative review focusing on the consumption elements of the AUDIT. Four studies of the AUDIT-C are reviewed and evaluated. Highest efficiency can be achieved by administering the USAUDIT-C universally, with the remaining seven AUDIT questions given only to those who screen positive for current alcohol consumption. Responses to these questions provide useful information to clinicians in discussing symptoms of dependence and harm with patients.

AUDIT and AUDIT-C,

Higgins-Biddle, J. C., & Babor, T. F. (2018). A review of the alcohol use disorders identification test (AUDIT), AUDIT-C, and USAUDIT for screening in the United States: Past issues and future directions. *The American Journal of Drug and Alcohol Abuse*, 44(6), 578-586. doi:10.1080/00952990.2018.1456545

Carol A. Rizer and Marcie Dianne Lusk

2017

Screening and Initial Management of Alcohol Misuse in Primary Care

The Journal for Nurse Practitioners

Despite the prevalence and health impact of alcohol misuse, and recommendations for use of regular screening, many providers report lack of preparation and confidence in the identification, treatment, and referral. Several validated and evidence-based screening, assessment, intervention, and treatment options are available.

Narrative review focusing on screening and brief intervention for alcohol misuse is a preventive service that nurse practitioners can provide to their patients.

AUDIT and AUDIT-C,

Rizer, C.A., & Lusk, M. D. (2017). Screening and initial management of alcohol misuse in primary care. *The Journal for Nurse Practitioners*, 13(10), 660 - 666.e1.  
<https://doi.org/10.1016/j.nupra.2017.08.011>

2018

Screening for Behavioral Health Conditions in Primary Care Settings: A Systematic Review of the Literature

Journal of General Internal Medicine

The goal for this systematic literature review was to identify and evaluate publicly available, psychometrically tested tools that primary care physicians can use to screen adult patients for common mental and substance use disorders such as depression, anxiety, and alcohol use disorders. Numerous other tools could meet the needs of primary care practices. Numerous tools could meet the needs of primary care practices.

Systematic literature review following the IOM review guidelines. This review provides information that PCPs can use to select appropriate tools to incorporate into a screening protocol.

24 screening tools identified for primary care use

Mulvaney-Day, N., Marshall, T., Piscopo, K.D., Korsen, N., Lynch, S., Karnell, L.H., Moran, G.E., Daniels, A.S., & Ghose, S. S. (2018). Screening for behavioral health conditions in primary care settings: A systematic review of the literature. *Journal of General Internal Medicine*, 33(3), 335-346.  
<https://doi.org/10.1007/s11606-017-4181-0>



<p>Jennifer McNeely MD, Shiela M. Strauss PhD, Richard Saitz MD, Charles M. Cleland PhD, Joseph J. Palamar PhD, John Rotrosen MD, and Marc N. Gourevitch MD</p>	<p>2015</p>	<p>A Brief Patient Self-administered Substance Use Screening Tool for Primary Care: Two-site Validation Study of the Substance Use Brief Screen (SUBS)</p>	<p>American Journal of Medicine</p>	<p>Primary Care: Clinics in Office Practice</p>	<p>The Substance Use Brief Screen (SUBS) was developed as a brief, self-administered instrument to identify unhealthy use of tobacco, alcohol, illicit drugs, and prescription drugs. The 4-item SUBS can be recommended for primary care settings that are seeking to implement substance use screening.</p>	<p>Physicians perform alcohol screenings, but do not follow up the screening with intervention. Attention should be focused on delivering intervention to those identified as at risk for alcohol abuse through standard screening tools, specifically to men, diabetics, and lower income groups.</p>	<p>Substance use recognition and treatment are crucial to improved overall health for patients. Screening as well as anticipatory guidance during preventive visits can inform patients regarding the dangers of substance misuse/abuse, and treatment plans can integrate strategies to address these issues early on.</p>
<p>G. Kilian Wells, Sheniz Moonie and Jennifer Pharr</p>	<p>2018</p>	<p>Association between alcohol screening and brief intervention during routine check-ups and alcohol consumption among adults living in California</p>	<p>Archives of Psychiatric Nursing</p>	<p>Primary Care: Clinics in Office Practice</p>	<p>Cross-sectional study, using population-level data from the Behavioral Risk Factors Surveillance System from 8832 interviews age 18+ in the United States about alcohol consumption</p>	<p>Narrative review focus on increase knowledge of PCP screening for substance abuse, community resources, and pharmacology strategies.</p>	<p>AUDIT, DAST-10, DAST-20, CAGE-AID</p>
<p>McNeely, Jennifer, MD, MS, Strauss, S. M., PhD, Saitz, Richard, MD, MPH, Cleland, C. M., PhD, Palamar, Joseph J., PhD, MPH, Rotrosen, J., MD, &amp; Gourevitch, Marc N., MD, MPH. (2015). A brief patient self-administered substance use screening tool for primary care: Two-site validation study of the substance use brief screen (SUBS). <i>American Journal of Medicine</i>, <i>The</i>, 128(7), 784.e9 - 784.e19. doi:10.1016/j.amjmed.2015.02.007</p>	<p>2015</p>	<p>A Brief Patient Self-administered Substance Use Screening Tool for Primary Care: Two-site Validation Study of the Substance Use Brief Screen (SUBS)</p>	<p>American Journal of Medicine</p>	<p>Primary Care: Clinics in Office Practice</p>	<p>The Substance Use Brief Screen (SUBS) was developed as a brief, self-administered instrument to identify unhealthy use of tobacco, alcohol, illicit drugs, and prescription drugs. The 4-item SUBS can be recommended for primary care settings that are seeking to implement substance use screening.</p>	<p>Physicians perform alcohol screenings, but do not follow up the screening with intervention. Attention should be focused on delivering intervention to those identified as at risk for alcohol abuse through standard screening tools, specifically to men, diabetics, and lower income groups.</p>	<p>Substance use recognition and treatment are crucial to improved overall health for patients. Screening as well as anticipatory guidance during preventive visits can inform patients regarding the dangers of substance misuse/abuse, and treatment plans can integrate strategies to address these issues early on.</p>
<p>Wells, G.K., Moonie, S., &amp; Pharr, J. (2018). Association between alcohol screening and brief intervention during routine check-ups and alcohol consumption among adults living in California. <i>Archives of Psychiatric Nursing</i>, <i>32</i>(6), 872-877. <a href="https://doi.org/10.1016/j.apnu.2018.07.001">https://doi.org/10.1016/j.apnu.2018.07.001</a></p>	<p>2018</p>	<p>Association between alcohol screening and brief intervention during routine check-ups and alcohol consumption among adults living in California</p>	<p>Archives of Psychiatric Nursing</p>	<p>Primary Care: Clinics in Office Practice</p>	<p>Cross-sectional study, using population-level data from the Behavioral Risk Factors Surveillance System from 8832 interviews age 18+ in the United States about alcohol consumption</p>	<p>Narrative review focus on increase knowledge of PCP screening for substance abuse, community resources, and pharmacology strategies.</p>	<p>NIAAA screening tool</p>
<p>Tenegra, J.C. &amp; Leebold, B. (2016). Substance abuse screening and treatment. <i>Primary Care: Clinics in Office Practice</i>, <i>43</i>(2), 217-227. <a href="https://doi.org/10.1016/j.pop.2016.01.008">https://doi.org/10.1016/j.pop.2016.01.008</a></p>	<p>2016</p>	<p>Substance Abuse Screening and Treatment</p>	<p>Primary Care: Clinics in Office Practice</p>	<p>Primary Care: Clinics in Office Practice</p>	<p>Substance use recognition and treatment are crucial to improved overall health for patients. Screening as well as anticipatory guidance during preventive visits can inform patients regarding the dangers of substance misuse/abuse, and treatment plans can integrate strategies to address these issues early on.</p>	<p>Substance use recognition and treatment are crucial to improved overall health for patients. Screening as well as anticipatory guidance during preventive visits can inform patients regarding the dangers of substance misuse/abuse, and treatment plans can integrate strategies to address these issues early on.</p>	<p>AUDIT, DAST-10, DAST-20, CAGE-AID</p>

Jennifer McNeely, Pritika C. Kumar, Traci Rieckmann, Erica Sedlander, Sarah Farkas, Christine Chollak, Joseph L. Kannry, Aida Vega, Eva A. Waite, Lauren A. Peccorato, Richard N. Rosenthal, Dennis McCarty, and

2018

Barriers and facilitators affecting the implementation of substance use screening in primary care clinics: a qualitative study of patients, providers, and staff

Addiction science & clinical practice

Participants consistently agreed that having knowledge of a patient’s substance use is important because of its impacts on health and medical care, that substance use is not properly identified in medical settings currently, and that universal screening is the best approach.

Focus groups, individual interviews, and narrative surveys were conducted with 67 stakeholders, including patients, primary care providers, nurses, and medical assistants, in two urban academic health systems using Knowledge to Action (KTA) framework.

N/A

McNeely, J., Kumar, P. C., Rieckmann, T., Sedlander, E., Farkas, S., Chollak, C., Kannray, J.L., Vega, A., Waite, E.A, Peccorato, L.A, Rosenthal, R.N, McMary, D. & Rottosen, J. (2018). Barriers and facilitators affecting the implementation of substance use screening in primary care clinics: A qualitative study of patients, providers, and staff. *Addiction Science & Clinical Practice*, 13(1), 8-15. doi:10.1186/s13722-018-0110-8

R. P Schwartz, J McNeely, L. T Wu, G Sharma, A Wahle, C Cushing, C. D Nordeck, A Sharma, K. E O’Grady, J Gryczynski

2017

Identifying substance misuse in primary care: TAPS Tool compared to the WHO ASSIST

Journal of Substance Abuse Treatment

There is a need for screening and brief assessment instruments to identify primary care patients with substance use problems. This study’s aim was to examine the performance of a two-step screening and brief assessment instrument, the TAPS Tool, compared to the WHO ASSIST.

Two thousand adult primary care patients recruited from five primary care clinics in four Eastern US states completed the TAPS Tool followed by the ASSIST. The ability of the TAPS Tool to identify moderate- and high-risk use scores on the ASSIST was examined using sensitivity and specificity analyses.

TAPS and ASSIST

Schwartz, R. P., McNeely, J., Wu, L. T., Sharma, G., Wahle, A., Cushing, C., Nordeck, C.D., Sharma, A., O’ Grady K.E., Gryczynski, J., Michelle, S.G., Alig, R.L., and Subramaniam, G. A. (2017). Identifying substance misuse in primary care: TAPS tool compared to the WHO ASSIST. *Journal of Substance Abuse Treatment*, 76, 69-76. doi:10.1016/j.jsat.2017.01.013

<p>Daniel Hargraves, Christopher White, Rachel Frederick, Margaret Cimibulk, Meriden Peters, Ashlee Young and Nancy Elder</p>	<p>Pooja Lagisetty, Katarzyna Klasa, Christopher Bush, Michele Heister, Vineet Chopra and Amy Bohnert</p>	<p>2017</p>	<p>2015</p>
<p>Implementing SBIRT (Screening, Brief Intervention and Referral to Treatment) in primary care: lessons learned from a multi-practice evaluation portfolio</p>	<p>Primary care models for treating opioid use disorders: What actually works? A systematic review</p>	<p>Public Health Reviews</p>	<p>AUDIT, AUDIT-C, and AUDIT-3: drinking patterns and screening for harmful, hazardous and dependent drinking in Katutura, Namibia</p>
<p>SBIRT is an effective tool that can empower primary care providers to identify and treat patients with substance use and mental health problems before costly symptoms emerge. Using the pragmatic best practices we describe, primary care providers may improve their ability to successfully create, implement, and sustain SBIRT in their practices.</p>	<p>EBP interventions and identify program structures and processes associated with improved patient outcomes in order to guide future policy and implementation in primary care settings.</p>	<p>Public Health Reviews</p>	<p>Evaluate brief versions of the AUDIT against the full AUDIT to determine their effectiveness in detecting harmful drinking. The AUDIT-C was almost as effective as the full AUDIT and may be easier to implement in clinical settings as a routine screening tool in resource-limited settings because of its brevity.</p>
<p>10 primary care practices implement an SBIRT program in their location. Each practice chose the conditions for which they would screen, the screening tools, and how they would provide brief intervention and referral to treatment within their setting. Qualitative data were analyzed and key strategies for success are detailed for implementing SBIRT in primary care.</p>	<p>Systematic review of 1,844 articles- randomized controlled or quasi experimental trials and observational studies evaluating OUD treatment in primary care settings</p>	<p>SBIRT</p>	<p>A cross-sectional survey was conducted in four constituencies and 639 participants, 18 years or older, completed a sociodemographic survey and the AUDIT. The effectiveness of the AUDIT-C (first three questions) and the AUDIT-3 (third question) was compared to the full AUDIT.</p>
<p>Hargraves, D., White, C., Frederick, R., Cimibulk, M., Peters, M., Young, A., &amp; Elder, N. (2017). Implementing SBIRT (screening, brief intervention and referral to treatment) in primary care: Lessons learned from a multi-practice evaluation portfolio. <i>Public Health Reviews</i>, 38(1), 31-11. doi:10.1186/s40985-017-0077-0</p>	<p>Lagisetty, P., Klasa, K., Bush, C., Heister, M., Chopra, V., &amp; Bohnert, A. (2017). Primary care models for treating opioid use disorders: What actually works? A systematic review. <i>PLoS One</i>, 12(10), e0186315- doi:<a href="https://doi.org/10.1371/journal.pone.0186315">https://doi.org/10.1371/journal.pone.0186315</a></p>	<p>AUDIT, AUDIT-C, and AUDIT-3</p>	<p>Seth, P., Glenshaw, M., Sabatier, J. H. F., Adams, R., Preez, V. D., DeLuca, N., &amp; Bock, N. (2015). AUDIT, AUDIT-C, and AUDIT-3: Drinking patterns and screening for harmful, hazardous and dependent drinking in Katutura, Namibia. <i>PLoS One</i>, 10(3) doi:<a href="http://dx.doi.org.proxy.lib.ecu.edu/10.1371/journal.pone.0120850">http://dx.doi.org.proxy.lib.ecu.edu/10.1371/journal.pone.0120850</a></p>

## Appendix B

### Pre-Presentation Survey

1. In what kind of setting do you work?
  - a. Primary care
  - b. Behavioral health
  - c. N/A – not currently employed
  - d. Other: \_\_\_\_\_
  
2. Does your organization screen all adult patients for substance abuse?
  - a. Yes
  - b. No
  
3. Which screening tool do you currently use? (circle all that apply)
  - a. CAGE
  - b. TAPS
  - c. ASSIST
  - d. AUDIT
  - e. DAST-10
  - f. Other: \_\_\_\_\_
  
4. How comfortable are you assessing patients for substance misuse or abuse?
  - a. Not comfortable
  - b. Somewhat comfortable
  - c. Very comfortable
  
5. How comfortable are you referring patients to a substance abuse treatment center?
  - a. Not comfortable
  - b. Somewhat comfortable
  - c. Very comfortable
  
6. How would you rate your current knowledge of substance abuse screening?  
(with 1 being least knowledgeable and 5 being expert level knowledge)
  1. Novice
  2. Beginner
  3. Intermediate
  4. Advance
  5. Expert
  
7. How would you rate your current knowledge of substance abuse referral?  
(with 1 being least knowledgeable and 5 being expert level knowledge)
  1. Novice
  2. Beginner
  3. Intermediate
  4. Advance

## 5. Expert

**Post-Presentation Survey**

1. How comfortable are you assessing patients for substance misuse or abuse?
  - a. Not comfortable
  - b. Somewhat comfortable
  - c. Very comfortable
2. How comfortable are you referring patients to a substance abuse treatment center?
  - a. Not comfortable
  - b. Somewhat comfortable
  - c. Very comfortable
3. Did this presentation increase your knowledge of substance abuse screening and referrals?
  - a. Strongly disagree
  - b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly agree
4. Will the information from the presentation change your practice?
  - a. Yes
  - b. No
5. Do you plan to use the Substance Abuse Toolkit that was provided?
  - a. Yes
  - b. No
6. Do you intend to use the information presented to make referrals to treatment centers in the future?
  - a. Yes
  - b. No

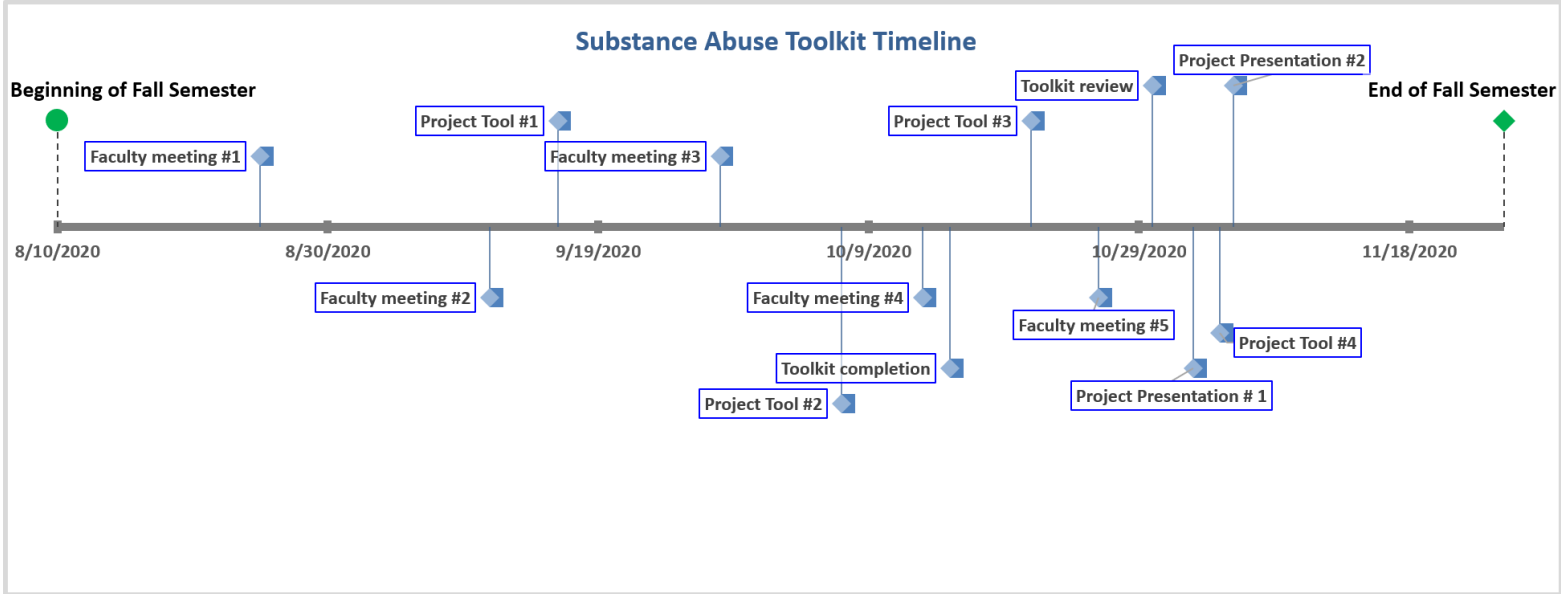
*The follow questions are adapted from Weiner et al. (2017) implementation outcome measures.*

7. The Substance Abuse Toolkit seems fitting.
  - a. Strongly disagree
  - b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly agree
8. The Substance Abuse Toolkit seems suitable for primary care practice.
  - a. Strongly disagree

- b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly agree
9. The Substance Abuse Toolkit seems applicable.
- a. Strongly disagree
  - b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly agree
10. The Substance Abuse Toolkit seems like a good match.
- a. Strongly disagree
  - b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly agree

Appendix C

Figure 2  
Project Timeline



Note. This figure describes the planned implementation timeline for this DNP project.

## Appendix D

Table 1

*Pre-Test Survey Results*

	Primary care	Behavioral Health	N/A	Other		
In what kind of setting do you work?	9	0	0	0		
	Yes	No				
Does your organization screen all adult patients for substance abuse?	0	9				
	CAGE	TAPS	ASSIST	AUDIT	DAST-10	Other
Which screening tool do you currently use?	8	0	0	2	0	0
	Not comfortable	Somewhat comfortable	Very comfortable			
How comfortable are you assessing patients for substance misuse or abuse?	3	5	1			
How comfortable are you referring patients to a substance abuse treatment center?	4	4	1			
	Novice	Beginner	Intermediate	Advance	Expert	
How would you rate your current knowledge of substance abuse screening?	0	4	4	1	0	
How would you rate your current knowledge of substance abuse referral?	2	3	3	1	0	



**Appendix E**

**Table 2**

*Post-Test Survey Results*

	Not comfortable	Somewhat comfortable	Very comfortable			
How comfortable are you assessing patients for substance misuse or abuse?	0	3	6			
How comfortable are you referring patients to a substance abuse treatment center?	0	1	8			
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
Did this presentation increase your knowledge of substance abuse screening and referrals?	0	0	0	1	8	
	Yes	No				
Will the information from the presentation change your practice?	7	2				
Do you plan to use the Substance Abuse Toolkit that was provided?	9	0				
Do you intend to use the information presented to make referrals to treatment centers in the future?	9	0				
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
The Substance Abuse Toolkit seems fitting.	0	0	0	1	8	

The Substance Abuse Toolkit seems suitable for primary care practice.	0	0	0	0	9
The Substance Abuse Toolkit seems applicable.	0	0	0	1	8
The Substance Abuse Toolkit seems like a good match.	0	0	0	4	5

**Appendix F****Table 3***DNP Project Budget*

Item	Quantity	Cost	Total
<b>Printed Materials</b>			
Toolkit Booklet	10	\$44.2 each	\$442
PowerPoint Handout	20	\$2/handout	\$40
Thank you notes	1 packet	\$5	\$5
<b>Food</b>			
Panera Lunch	2 lunch bundles	\$255 each	\$510
Water Bottles	1 packet	\$10	\$10
Candy	3 bags	\$5 each	\$15
<b>Safety</b>			
Facial Masks	2 boxes	\$5 each	\$10
Hand Sanitizer	1 bottle	\$5	\$5
Disinfectant wipes	2 packages	\$10	\$10
<b>Total</b>			<b>\$1,047</b>

## Appendix G

Table 4

*Doctor of Nursing Practice Essentials*

<b>Essential</b>	<b>Description</b>	<b>Demonstration of Knowledge</b>
<b>Essential I</b> <i>Scientific Underpinning for Practice</i>	<p><b>Competency</b> – Analyzes and uses information to develop practice</p> <p><b>Competency</b> -Integrates knowledge from humanities and science into context of nursing</p> <p><b>Competency</b> -Translates research to improve practice</p> <p><b>Competency</b> -Integrates research, theory, and practice to develop new approaches toward improved practice and outcomes</p>	Completed by performing literature review and the development of the SURT based on evidenced-based information.
<b>Essential II</b> <i>Organizational &amp; Systems Leadership for Quality Improvement &amp; Systems Thinking</i>	<p><b>Competency</b> –Develops and evaluates practice based on science and integrates policy and humanities</p> <p><b>Competency</b> –Assumes and ensures accountability for quality care and patient safety</p> <p><b>Competency</b> -Demonstrates critical and reflective thinking</p> <p><b>Competency</b> -Advocates for improved quality, access, and cost of health care; monitors costs and budgets</p> <p><b>Competency</b> -Develops and implements innovations incorporating principles of change</p> <p><b>Competency</b> - Effectively communicates practice knowledge in writing and orally to improve quality</p> <p><b>Competency</b> - Develops and evaluates strategies to manage ethical dilemmas in patient care and within health care delivery systems</p>	Completed by assuming the leadership for this DNP project, using effective communication with all members of the project team, creating a budget and cost analysis, and developing a tool to help promote improvement of substance use screening and referrals in primary care.
<b>Essential III</b> <i>Clinical Scholarship &amp; Analytical Methods for Evidence-Based Practice</i>	<p><b>Competency</b> - Critically analyzes literature to determine best practices</p> <p><b>Competency</b> - Implements evaluation processes to measure process and patient outcomes</p> <p><b>Competency</b> - Designs and implements quality improvement strategies to promote safety, efficiency, and equitable quality care for patients</p> <p><b>Competency</b> - Applies knowledge to develop practice guidelines</p>	Completed by analyzing the literature to identify the concerns in primary care screening and determining the best screening tools for primary care practice based on the literature review. Also completed by analyzing the data from this DNP project, evaluating the results, and disseminating the findings by

	<p><b>Competency</b> - Uses informatics to identify, analyze, and predict best practice and patient outcomes</p> <p><b>Competency</b> - Collaborate in research and disseminate findings</p>	<p>presenting at the ECU DNP project presentation and to the project sites.</p>
<p><b>Essential IV</b> <i>Information Systems – Technology &amp; Patient Care Technology for the Improvement &amp; Transformation of Health Care</i></p>	<p><b>Competency</b> - Design/select and utilize software to analyze practice and consumer information systems that can improve the delivery &amp; quality of care</p> <p><b>Competency</b> - Analyze and operationalize patient care technologies</p> <p><b>Competency</b> - Evaluate technology regarding ethics, efficiency and accuracy</p> <p><b>Competency</b> - Evaluates systems of care using health information technologies</p>	<p>Analyzed research on multiple screening tools to create the SUSRT. Used PowerPoint or the educational presentation at the project sites. Used Excel to evaluate data from implementation and to create charts and graphs.</p>
<p><b>Essential V</b> <i>Health Care Policy of Advocacy in Health Care</i></p>	<p><b>Competency</b>- Analyzes health policy from the perspective of patients, nursing and other stakeholders</p> <p><b>Competency</b> – Provides leadership in developing and implementing health policy</p> <p><b>Competency</b> –Influences policymakers, formally and informally, in local and global settings</p> <p><b>Competency</b> – Educates stakeholders regarding policy</p> <p><b>Competency</b> – Advocates for nursing within the policy arena</p> <p><b>Competency</b>- Participates in policy agendas that assist with finance, regulation and health care delivery</p> <p><b>Competency</b> – Advocates for equitable and ethical health care</p>	<p>Advocated for equitable healthcare by encouraging substance use screening of all adult patients in primary care. Analyzed the providers intent to change their practice based on project recommendations which may lead to system policy change.</p>
<p><b>Essential VI</b> <i>Interprofessional Collaboration for Improving Patient &amp; Population Health Outcomes</i></p>	<p><b>Competency</b>- Uses effective collaboration and communication to develop and implement practice, policy, standards of care, and scholarship</p> <p><b>Competency</b> – Provide leadership to interprofessional care teams</p> <p><b>Competency</b> – Consult intraprofessionally and interprofessionally to develop systems of care in complex settings</p>	<p>Completed through effective collaboration with the project leader, project sites, and content expert using email, phone calls, and on-site education for implementation.</p>

<p><b>Essential VII</b> <i>Clinical Prevention &amp; Population Health for Improving the Nation's Health</i></p>	<p><b>Competency-</b> Integrates epidemiology, biostatistics, and data to facilitate individual and population health care delivery  <b>Competency</b> – Synthesizes information &amp; cultural competency to develop &amp; use health promotion/disease prevention strategies to address gaps in care  <b>Competency</b> – Evaluates and implements change strategies of models of health care delivery to improve quality and address diversity</p>	<p>Completed by using the FADE model throughout this DNP project to implement and evaluate change.</p>
<p><b>Essential VIII</b> <i>Advanced Nursing Practice</i></p>	<p><b>Competency-</b> Melds diversity &amp; cultural sensitivity to conduct systematic assessment of health parameters in varied settings  <b>Competency</b> – Design, implement &amp; evaluate nursing interventions to promote quality  <b>Competency</b> – Develop &amp; maintain patient relationships  <b>Competency</b> –Demonstrate advanced clinical judgment and systematic thoughts to improve patient outcomes  <b>Competency</b> – Mentor and support fellow nurses  <b>Competency-</b> Provide support for individuals and systems experiencing change and transitions  <b>Competency</b> –Use systems analysis to evaluate practice efficiency, care delivery, fiscal responsibility, ethical responsibility, and quality outcomes measures</p>	<p>Completed by the design, implementation, and evaluation of this project. Used advance clinical judgement throughout the literature review, creation of the SUSRT, and the evaluation of the implementation results.</p>