Unhealthy Alcohol Use: Improving Practice Compliance

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Doctor of Nursing Practice

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Abstract

Unhealthy alcohol use is a complex health problem that plagues the veteran population. The Alcohol Use Disorder Identification-Consumption (AUDIT-C) and brief intervention for positive AUDIT-C screens are evidence-based preventative practices for reducing or eliminating negative outcomes and improving health. This Doctor of Nursing Practice project aimed to improve alcohol-related clinical practice compliance by increasing the number of AUDIT-C and Positive Alcohol Follow-Up Clinical Reminders during a routine primary care appointment. The IOWA model-revised and recovery-based care concepts were used to guide project development and practice change. Strategies implemented during the project included staff education, creation of a virtual appointment schedule, and planned clinic workflow. The AUDIT-C completion scores increased to 93% or higher throughout project implementation. Out of four clinics, only one clinic increased their Positive Alcohol Follow-Up completion scores. Providing staff education regarding unhealthy alcohol use and the impact on health and addressing staff's perception of the importance of alcohol screening and their comfort level discussing alcohol use with patients are effective strategies for improving alcohol-related clinical practice compliance.

Keywords: unhealthy alcohol use, alcohol use disorder, AUDIT-C, alcohol screening tool, alcohol-related clinical practice guidelines, veterans

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Section 1. Introduction

Background

The mission of the U. S. Department of Veterans Affairs (VA; 2019) is to "Honor American's veterans by providing exceptional health care that improves their health and well-being." According to the 2018 National Survey on Drug Use and Health (NSDUH), out of 1.1 million Veterans, 80.2% or 899,000 reported "struggling with an alcohol use disorder" (McCance-Katz, 2018). Teeters et al. (2017) found that alcohol use and heavy drinking are higher among veterans than non-veterans. Alcohol use and heavy drinking among veterans was noted as 56.6% and 8% compared to 50.8% alcohol use and 6.5% heavy drinking for non-veterans. Unhealthy alcohol use, defined as heavy or binge drinking (Williams et al., 2016) and alcohol use disorder (AUD) can negatively impact one's health and well-being.

The Doctor of Nursing Practice (DNP) project aims to improve compliance with alcohol-related clinical practice guidelines by increasing the completion of the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) and Positive Alcohol Follow-up Clinical Reminders during routine primary care appointments. The AUDIT-C is a standardized tool used to screen for the quantity and frequency of alcohol consumption. An AUDIT-C score of five or above is considered positive and triggers the Positive Alcohol Follow-up. This follow-up clinical reminder is completed by a licensed practitioner and serves as a brief intervention and if necessary, a referral for substance abuse treatment. The brief intervention consists of reviewing the reported alcohol consumption pattern and discussing the relationship of this pattern to the veteran's health and health outcomes. A brief intervention is required for AUDIT-C scores ranging from five to seven, while AUDIT-C scores of eight and above, indicates the need for a brief intervention and referral for substance abuse treatment. Early detection, brief intervention

for unhealthy alcohol use, and referral for AUD treatment are evidence-based strategies that can help veterans combat unhealthy alcohol use and lessen or eliminate the impact of alcohol-associated behaviors, circumstances, and conditions negatively influencing their overall health and well-being.

Organizational Needs Statement

A Veterans Affairs Health Care System in western North Carolina identified the need to improve compliance with alcohol-related clinical practice guidelines. The organization currently gauges practice compliance by comparing their AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder completion scores to a national benchmark score of 91.29. These clinical reminders are embedded in the electronic health record (EHR) and are identified as two of the VA's External Peer Review Process (EPRP) measures for Clinical Practice Guidelines and Prevention Indicators (CGPI). According to EPRP data extracted in December 2020, the organization’s score for AUDIT-C screening and Positive Alcohol Follow-Up completions were 84.7 and 89.0, respectively, both of which fell below the national benchmark of 91.29. This data indicates missed opportunities to detect unhealthy alcohol use and identifies a gap in treatment for veterans with a positive AUDIT-C screen.

The project site recognized the need to reduce or eliminate these missed opportunities and close the intervention gaps for providing preventative alcohol-related care. Increasing the AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder completions during routine primary care appointments will promote the identification of unhealthy alcohol use and the implementation of early intervention to provide veterans with strategies to combat alcohol-related sequela. Alcohol screenings, interventions, and treatments are addressed in Healthy People 2020, Healthy North Carolina 2030 and are pertinent to each arm of the Quadruple Aim.

Healthy People 2020

Substance abuse is a Healthy People 2020 health indicator. In 2015, 26.9 % of adults 18 years of age and older reported binge drinking within the past 30 days (Office of Disease Prevention and Health Promotion [ODPHP], 2020). Binge drinking, substance abuse (SA) health indicator 14.3, aims to reduce binge drinking of adults 18 and older from 26.9% to 24.2%. Two additional SA metrics, SA 9 and SA 10, defined in the substance abuse screening and treatment objectives, address screening and interventions for unhealthy alcohol use. SA 9 focuses on increasing referrals for continuity of care for people presenting to the emergency department with alcohol-related concerns or conditions, and SA 10 speaks to increasing the number of evidence-based alcohol screenings and brief interventions in primary care settings and trauma centers. Completing the AUDIT-C and Positive Alcohol Follow-Up clinical reminders can serve as effective strategies to detect, intervene, and reduce binge drinking.

Healthy North Carolina 2030

North Carolina Institute of Medicine (NCIOM; n.d.), Healthy North Carolina 2030, health indicator 12 addresses excessive drinking. According to NCIOM (n.d.), 16.9% of adults reported binge or heavy drinking. Health indicator 12 aims to reduce binge and heavy drinking and meet a set target of 12%. The alcohol-related clinical reminders are interventions for identifying and reducing excessive drinking patterns.

Quadruple Aim

Enhanced Patient Experience

The veteran experience can be enhanced by the primary care nurse's veteran-centered approach to alcohol screening questions and discussion. Facilitating a therapeutic conversation about alcohol use in a non-threatening, non-judgmental manner and incorporating the veteran's

preferences and strengths in treatment strategies set the tone for an authentic discussion and veteran-driven behavior changes.

Enhance Population Health

Unhealthy alcohol use is a complex public health problem that impacts the social determinants of health and population health. Veterans engaging in unhealthy drinking are at an increased risk for comorbid psychiatric illnesses and medical comorbidities, damaged relationships, economic hardship, and suicide (Canigalia et al., 2020; Chavez et al., 2017; Lan et al., 2016). Early identification and intervention for unhealthy alcohol use can offset these negative outcomes.

Reduced Costs

Healthcare and economic costs related to unhealthy alcohol use and AUD are staggering. The 2017 economic expenditures of excessive drinking in the project sites' county were over $102 million (North Carolina Department of Health and Human Services [NCDHHS], 2019). If early detection and illness prevention strategies are effective, costs and alcohol use expenditures may decrease. Potential cost-savings include reducing urgent care and emergency department visits, hospitalizations, and treatments associated with comorbidities and alcohol-related issues. Additional economic benefits likely to result from unhealthy alcohol use and AUD interventions and treatments include decreased unemployment rates, homelessness, and criminal and legal expenditures.

Enhance Provider Experience and Well-Being

Improving provider' well-being and enhancing the meaning of work involves provider and organizational actions. A provider determines the meaning and joy of their work and practices accordingly. This project will empower nurses by providing patient engagement

strategies to facilitate a veteran-centric approach to screening and intervening for unhealthy alcohol use. Nurse-patient engagement techniques, quality improvement participation, and removal of practice barriers for AUDIT-C and Positive Alcohol Follow-Up completions are organizational actions projected to improve job satisfaction.

Problem Statement

Early detection and treatment for unhealthy alcohol use and AUD are effective interventions for providing quality alcohol-related care. As indicated by the December 2020 EPRP data, the organization did not meet the national benchmark of 91.29 for the AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder completions. These completion scores indicate missed opportunities for identifying veterans with unhealthy alcohol use and a treatment gap for intervening for a positive AUDIT-C screen.

Purpose Statement

The purpose of the DNP project is to improve the compliance of alcohol-related clinical practice guidelines by increasing alcohol-related clinical reminder completions during routine primary care appointments. Arming veterans with knowledge and strategies will empower and enable them to fight against unhealthy alcohol use or AUD and fulfill the VA mission of honoring veterans by providing alcohol-related care to improve their health and well-being.

Section II. Evidence

Literature Review

The Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, PubMed, and PsychINFO were the electronic databases used to search for original articles written in English and dated from July 2015 to present. Search terms included were:

- “alcohol use disorders” AND AUDIT-C
- United States Department of Veterans Affairs AND Veterans
- AUDIT-C AND (MH "United States Department of Veterans Affairs")
- “Veterans diagnosed with alcohol use disorders AND (MH "Alcohol-Related Disorders")
- "recovery-oriented practice” AND (MH "conceptual framework")
- “Military Veterans” AND “alcohol screening and brief interventions
- USPSTF AND “unhealthy alcohol use OR (MH “Alcohol Drinking” and USPSTF AND “unhealthy alcohol use)
- “AUDIT-C” AND implementation AND “Veterans Affairs”
- “alcohol screening tools” AND implementation AND “Veterans Affairs”

Inclusion criteria included article titles containing one of the following terms:

- alcohol use disorder
- unhealthy alcohol use
- AUDIT-C or other alcohol use screening tools
- veteran population
- Veterans Affairs,
- recovery-based care

- AUDIT-C or alcohol screening tool implementation

The levels of evidence defined by Melnyk & Fineout-Overholt (2019) were used to determine the inclusion criteria for qualitative and quantitative studies. Qualitative studies, Level II and above, and quantitative studies, Level III and higher were included in the literature review. Exclusion criteria included non-Veteran populations, diagnoses other than alcohol use disorder or unhealthy alcohol use, and treatment for alcohol use disorder or unhealthy alcohol use. The initial search resulted in 296 articles. The title and abstract review determined if the article met the established inclusion criteria. Two hundred and thirty-two articles were eliminated based upon the exclusion criteria found in the article title and abstract. The 64 remaining articles, initially meeting inclusionary criteria, were reviewed in their entirety to determine appropriateness and applicability to the DNP project. From this review, 12 articles met the established inclusion criteria and are listed in the literature matrix (see Appendix A).

Current State of Knowledge

Excessive drinking and alcohol use disorder (AUD) are among the most frequently ranked causes of premature deaths in the U. S. (Curry et al., 2018) and account for the most commonly diagnosed Substance Use Disorder (SUD) among U. S. veterans (Lan et al., 2016). Excessive drinking, categorized as binge drinking or heavy drinking, is among the top four modifiable risk factors for preventable chronic diseases. Binge drinking is measured by the number of drinks per occasion, while the determination for heavy drinking is the number of drinks per week. As described by the U. S. Preventive Services Task Force (USPSTF) unhealthy alcohol use is identified as alcohol consumption that exceeds the U. S. recommended limits and ranges in severity from excessive drinking to alcohol use disorder (Curry et al., 2018). In the

U. S, one drink is characterized as an alcoholic beverage containing 14 grams of alcohol (National Center for Chronic Disease Prevention and Health Promotion [NCCDPHP], 2019). U. S. daily limits are defined as one drink for women and two drinks for men.

Early detection, prevention, and brief interventions are best practices for reducing mortality, comorbidities, pain, substance use, acute hospitalizations, and the negative psychosocial and economic consequences of unhealthy alcohol use (Canigalia et al., 2020; Chavez et al., 2017; Higgins-Biddle & Babor, 2018; Huffstetler et al., 2020). Designing and implementing health care practices geared toward prevention is crucial for reducing harmful alcohol consumption and alcohol-related burdens (Tan et al., 2018). Huffstetler et al. (2020) indicate that patient-provider rapport and provider approach to the subject of alcohol use influences the quality and effectiveness of alcohol use screening and interventions.

Current Approaches to Solving Population Problem(s)

The USPSTF recommends screening for unhealthy alcohol use during a primary care visit (Curry et al., 2018). Known as the gatekeepers of health care, primary care providers are often the most influential practitioners for initiating a change of patients' health-related behaviors (Naps et al., 2018). Screening and brief interventions result in a moderate net benefit for adults with unhealthy alcohol use and reduction of unhealthy drinking behaviors (Curry et al., 2018). According to Bradley et al. (2016) and Huffstetler et al. (2020), screening for unhealthy alcohol use and alcohol counseling based on screening scores reduces and improves health outcomes such as alcohol-related comorbidities, mortalities, and hospitalizations. Alcohol screening tools commonly used include the CAGE questionnaire, the Alcohol Use Disorders Identification Test (AUDIT), the AUDIT-Consumption (C), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) Single Question (Tan et al., 2018).

Evidence to Support the Intervention

The AUDIT-C screening tool compares patients' self-reported alcohol consumption patterns to the U.S. recommended guidelines and should be utilized as a preventive strategy and clinical screening when providers suspect an alcohol-related clinical presentation or medical condition (Higgins-Biddle & Babor, 2018). AUDIT-C scores ranging from five to 12 were positively associated with increased high-density lipids (HDL) cholesterol, increased the probability of experiencing traumatic injuries and alcohol-related gastrointestinal hospitalizations (Bradley et al., 2016), and was predictive of all-cause mortality risk among Veterans identified as current drinkers (Kuitunen-Paul & Roerecke, 2018).

Despite the national recommendations, clinical practice guidelines, and evidence of effectiveness, overcoming systems and implementation barriers for alcohol screening and brief interventions have proven to be challenging (Dzidowska et al., 2020; Hanschmidt et al., 2017; Privett & Guerrier, 2021; Williams et al., 2016). Systems barriers, such as the number of preventative screenings, the time allotted for appointments, and the workforce, impede providers' ability to provide the USPSTF recommended preventative care practices (Privett & Guerrier, 2021). Implementation barriers such as stigma, clinic workflow, workload, resources, patient and provider attitude toward alcohol use, and knowledge of risks associated with alcohol use hinder providers from conducting alcohol screenings and implementing brief interventions (Dzidowska et al., 2020; Hanschmidt et al., 2017). Anticipating systems and implementation barriers and effective strategic planning to overcome the barriers are vital for effective alcohol screening and intervention improvement efforts.

Evidence found by Dzidowska et al. (2020) and Hanschmidt et al. (2017) suggest strategies most effective for combatting the implementation barriers are those that acknowledge

provider and patient beliefs and perceptions about alcohol use, map and modify the workflow to allow for ample time to complete screenings, and address clinic or organization specific-barriers or deficits. Williams et al. (2016) recommends developing and providing education sessions based on frontline staff's perception of the importance and baseline knowledge and skill set to complete the AUDIT-C screening.

Evidence-Based Practice Framework

The Iowa model-revised: evidence-based practice to promote excellence in health care and recovery-based care frameworks were used to guide the DNP project's development, implementation, and evaluation. The Iowa model-revised provides a stepped-approach to implementing evidence-based practice to promote and improve quality of care and health care outcomes (Buckwalter et al., 2017; Dang et al., 2019). Recovery-concepts, such as a patient's strengths, values, and preferences, are patient-engagement components of the Iowa model-revised.

The Iowa model-revised methodically outlines the steps for developing, implementing, and evaluating practice change (Buckwalter et al., 2017). Applying this model to the DNP project guided the project team in understanding the project purpose and aim and practice change implementation. The DNP project lead and site champion formed an interdepartmental team consisting of key stakeholders that were felt to be committed to improving alcohol-related practice compliance. The DNP project lead appraised and synthesized the literature and best practices for alcohol screening and brief interventions and presented the information to the project team. The team used this evidence as a foundation for project design and piloting clinic-specific practice changes to improve AUDIT-C and Positive Alcohol Follow-up Clinical Reminder completion scores. Weekly pilot data was collected, trended, and used by the team to

guide implementation changes. As described by Buckwalter et al. (2017), pilot data indicated the practice change outcomes, the effectiveness of practice change implementation strategies, and the value of spreading the change to other areas. The project's pilot data provided support and justification for project adoption and dissemination to other primary care and mental health clinics throughout the organization.

Recovery-oriented practice, also known as recovery-based care, was the framework used to guide nurses' patient-engagement approach to alcohol screening and brief intervention. Recovery-based care is a concept of care-delivery built upon the patient's values, strengths, and preferences. Incorporating recovery-based principles into practice requires a paradigm shift from provider-focused to patient-focused care (Dalum et al., 2015). According to the Substance Abuse and Mental Health Services Administration (SAMHSA; 2020), recovery is a personal journey of proactive self-change that transforms health and well-being by changing health behaviors, defining self and meaning of life, and living a productive life in one's preferred community. Treating patients with respect, instilling hope, allowing them to define their recovery, and using person-first language are interventions for reducing stigma and promoting recovery, health, and well-being. In addition to using person-first language, incorporating recovery principles into practice increases providers' and patients' exposure and acceptance of recovery-oriented care (Stacy & Rosenheck, 2019) and enhances a veteran's choice of place: a place to be, do, become and belong (Doroud et al., 2018).

Use of the recovery concepts frames a conversation about alcohol use in a non-judgmental and non-threatening manner and validates for the patient that unhealthy alcohol use or an alcohol use disorder (AUD) diagnosis does not define who they are as a person, but instead, define a health problem that can be changed (O'Donnell et al., 2020). As indicated by Naps et al. (2018),

barriers to meeting standards and recommendations for alcohol screening and interventions stem from providers' level of comfort and competence in initiating and participating in conversations about alcohol use and their perception of potential treatment benefits for patients. People living with AUD and with lived experiences of AUD often feel ashamed and stigmatized. A non-recovery approach to alcohol use screening and interventions may exacerbate feelings of shame and stigmatization (Naps et al., 2018). The recovery-framework will guide nurses' screening and delivery skills, allowing for a psychologically safe approach to discuss alcohol use and interventions. Recovery-based care captures the central tenants of hope and positive change, both of which are required to decrease unhealthy alcohol use, AUD, and their associated burdens.

Ethical Consideration & Protection of Human Subjects

The university and project site Institutional Review Board (IRB) chair classified the project as a quality improvement project. Both the university and project site IRB review processes were imperative to ensure the protection of human subjects. The ethical principles of justice, beneficence, respect of persons, and ethical data management guided the DNP project implementation.

The DNP project design, implementation, and evaluation were equitable to everyone in the target population. Project and pilot data were protected on a personal identification verification (PIV) password-protected computer and did not include identifying information. The initial and follow-up nursing staff questionnaire did not contain identifying information and were secured in a private office that remained locked when not used by the project lead. By meeting the project aim, the project will prove valuable by improving the organization's compliance with alcohol-related clinical practice guidelines, thus fulfilling the VA mission of honoring veterans by providing quality and timely alcohol-related care to improve veterans' health and well-being.

Section III. Project Design

Project Site and Population

The project site was a Veterans Affairs Health Care System (VAHCS) Primary Care Service Line that serves veterans within a 21-county catchment area in western North Carolina. The site uses the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) and Positive Alcohol Follow-Up Clinical Reminder completion scores to gauge practice compliance with alcohol-related clinical practice guidelines by comparing the scores to a national benchmark score of 91.29. These clinical reminders are embedded in the electronic health record to assist with preventative care and management of unhealthy alcohol use. The AUDIT-C is completed annually for veterans enrolled in Veterans Affairs (VA) health services.

The project population consists of primary care licensed practical nurses (LPNs) and registered nurses (RNs) assigned to a Patient Aligned Care Team (PACT). Two of the PACT LPNs' and RNs' primary duties are to complete annual clinical reminders and provide preventative screenings and education to Veterans.

Description of the Setting

The VAHCS Primary Care Service Line includes four primary care clinics, each offering same-day access for non-emergency health care needs and primary care services to veterans 18 years of age and older deemed eligible for Veterans Affairs health care benefits. For the project, the primary care clinics were designated as Clinic A, Clinic B, Clinic C, and Clinic D. Veterans enrolled in primary care are assigned to a PACT teamlet consisting of a primary care provider (PCP), LPN, RN, clinical pharmacist, and medical administrative support (MSA) staff member. The number of veterans assigned to each PACT team ranges from 1,000 to 1,300. The PACT

model fosters veteran-centric care as each veteran is considered a central member of their PACT teamlet and is actively engaged in health care decision-making.

Description of the Population

The project population included PACT LPNs and RNs who provide primary care nursing services to veterans assigned to their PACT teamlet. PACT nursing responsibilities include obtaining vital signs, completing clinical reminders, providing patient education, and documenting new clinical information and pertinent health status changes. The PACT nurses are integral PACT members, functioning at the top of their licensure to provide quality veteran-centric care. This professional functioning level facilitated the project goal of increasing practice compliance for alcohol-related clinical practice guidelines. All PACT LPNs and RNs were offered the opportunity to participate in the project as the practice change(s) were piloted in their respective clinic.

Project Team

The project team consisted of the project lead, project sponsors, process owners, and team members. The project lead planned, implemented and evaluated the project outcomes based on weekly data and team feedback. The site champion and DNP project faculty were the project sponsors. The site champion provided organizational guidance and resources while the DNP project faculty advised the project lead on project plan implementation. As the nursing leaders for the front-line staff directly involved in the project process, the Ambulatory Care Chief Nurse and Primary Care Nurse Manager served as process owners. The interdepartmental team members were selected from the Office of Performance and Quality (OPQ), Primary Care Services, a PACT teamlet, and Health Informatics.

The OPQ member is the organization's Performance Improvement Coordinator and served as the team's Clinical Practice Guideline and Prevention Indicators (CGPI) subject matter expert (SME). The PACT Coordinator, who has an intricate depth of knowledge of PACT practice guidelines and data management, was the PACT compliance and data SME. The "boots on the ground" team members were the PACT LPN and RN that work the primary care processes daily, and the Clinical Application Supervisor (CAS) from the Health Informatics department was the team's AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder data expert.

Project Goals and Outcome Measures

The project goal was to improve compliance with alcohol-related clinical practice guidelines by increasing AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder completion scores to 93% or higher for veterans scheduled for routine primary care appointments. The project was implemented in November 2020. During the implementation phase, the process, balancing, and outcome measures were collected, trended, and analyzed. The process measures included elements identified from a current state mapping exercise and pre-and-post comparative data obtained from an initial and follow-up staff questionnaire. The project's outcome measures included weekly clinical reminders data in November 2020 and mid-January 2021 to late-April 2021. The project team identified and monitored balancing measures throughout the implementation phase to ensure the piloted practice change strategies did not impede clinic throughput or workflow.

Description of the Methods and Measurement

The operational tools for project implementation consisted of a Project Charter (see Appendix B), an initial nursing staff questionnaire (see Appendix C), a follow-up nursing staff questionnaire (see Appendix D), and a Plan-Do-Study-Act (PDSA) model (see Appendix E). The

Project Charter was developed by the project lead and was reviewed during the first project team meeting. The Charter's elements provided an overview of team member roles, the problem, purpose and aim statements, project measures and metrics, and project scope. Three PDSA cycles were used to plan, implement, evaluate, and guide implementation strategies based on nursing staff input, clinical data, and identified practice change barriers. The process, outcome, and balancing measures were incorporated into the monthly PDSA cycle review.

Nursing staff questionnaire responses provided the process measure data. The initial questionnaire consisted of seven questions: four demographic questions, and three questions related to nursing knowledge. The nursing knowledge questions measured baseline knowledge of alcohol-related comorbidities and the impact of unhealthy alcohol use on health and well-being, personal comfort level in facilitating an alcohol-related conversation with veterans, and barriers to completing the AUDIT-C clinical reminder during a routine appointment. A follow-up questionnaire consisted of the same three knowledge questions as the initial questionnaire. Comparison of the initial and follow-up responses was used to evaluate changes in nursing knowledge, skill, comfort level, and practice barriers.

During the first team meeting, the project lead led the team in a current state mapping exercise to identify additional process measures. The process mapping exercise provided a visual of process steps and barriers to completing the AUDIT-C Clinical Reminder and resulted in the team's identification of clinic-specific practice changes.

The clinical reminder data outcome measures were obtained from a Clinical Reminder Due Report. This report provided the number of applicable patients and the number of reminders due for both the AUDIT-C and Positive Alcohol Follow-up. Measuring this data indicated if the piloted practice change(s) improved compliance with alcohol-related clinical practice guidelines.

Identified balancing measures were discussed as part of the PDSA cycle reviews and modifications to the practice change occurred accordingly.

Discussion of the Data Collection Process

The PACT LPN and RN team members distributed the initial staff questionnaire to PACT nursing staff during the November Primary Care PACT nursing staff meeting. These team members provided a brief introduction of the project, distributed and collected the initial nursing staff questionnaire. The follow-up questionnaire was distributed during the April Primary Care PACT nursing staff meeting. Aggregated results from the initial and follow-up questionnaires were displayed in a bar chart and discussed at the project conclusion.

The project lead and CAS project team member worked collaboratively to build a weekly Clinical Reminders Due Report that provided clinic-specific AUDIT-C and Positive Alcohol Follow-Up completion numbers. The weekly clinical data denominators were the number of AUDIT-C and Positive Alcohol Follow-Up Clinical Reminders due, and the numerators were the number of AUDIT-C and Positive Alcohol Follow-Up Clinical Reminders completed. Clinical data were tracked weekly for four months and recorded on an excel spreadsheet tracking tool (see Appendix E). The weekly clinical reminder data were aggregated by month and displayed on a bar chart with a targeted benchmark of 93% or higher.

Implementation Plan

The project lead developed the Project Charter and sought guidance for project team members from the site champion. During the first team meeting, the project lead facilitated a discussion regarding unhealthy alcohol use and its impact on health and well-being and literature findings, such as best practices and alcohol-related clinical practice guidelines and early screening and intervention recommendations. Following review and discussion of the initial and

follow-up staff questionnaire, the PACT LPN and RN requested permission to introduce the project to their PACT LPN and RN colleagues and collect and distribute the initial nursing staff questionnaire during a Primary Care PACT nursing staff meeting. Following a team discussion, the request was approved. The team members completed a current state process map to identify the process steps and barriers for completing the AUDIT-C clinical reminder. The project team met monthly for five months. The first four monthly meetings focused on project progress, data analysis, and PDSA cycle reviews. The team completed a PDSA cycle review during the first three monthly meetings and used the review to guide piloting practice change implementation for Clinics B, C, and D and, if indicated, modify piloted practice changes in clinics where implementation was underway. The team met for a fifth and final month to evaluate the project and piloted practice changes.

The practice change(s) was initially piloted in Clinic A in December, Clinic B in February, and Clinics C and D mid-March. At the outset of the pilot for each primary care clinic (A, B, C, and D), the project lead and team members provided staff education for the clinic PACT LPNs and RNs. The education topics covered unhealthy alcohol use and the impact on health and well-being, best practices and alcohol-related clinical practice guidelines and recommendations, and staff-engagement strategies for alcohol-related conversations. Additional discussion included staff's identification of barriers to completing the AUDIT-C and Positive Alcohol Follow-Up clinical reminders, and the practice change implementation strategies. A second clinic meeting was held four weeks following initial implementation. During this meeting, the project lead and team members presented and reviewed the AUDIT-C and brief intervention clinical data, and identified barriers to the piloted practice change, and, if necessary, modified practice changes. The project team's monthly data review guided practice change

implementation and modifications necessary to obtain and sustain a 93% AUDIT-C Clinical Reminder completion rate.

Timeline

The project timeline served as an implementation guide (see Appendix G). The project team met in November, January, February, March, and April. The project was implemented in Clinic A in December and a Clinic A meeting to review project process and data was held in January. The first meeting for Clinic B occurred in February, and the second meeting for Clinic B and the first meeting for Clinics C and D took place in March. In April, the project team held the second meeting for Clinics C and D and met for the final project team meeting to evaluate the project, and piloted practice change(s).

Section IV. Results and Findings

Results

The project aim was to improve compliance with alcohol-related clinical practice guidelines by increasing the completion of the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) and Positive Alcohol Follow-up Clinical Reminders during routine primary care appointments. The AUDIT-C is a standardized screening tool that compares the veteran's self-reported alcohol consumption patterns to the U.S. recommended alcohol limits. Scores of five or higher are considered a positive AUDIT-C screen and trigger the need for a brief intervention. The Positive Alcohol Follow-Up Clinical Reminder meets the brief intervention criteria and is due for completion by a licensed practitioner following a positive AUDIT-C screen.

Throughout the implementation phase, the number of AUDIT-C Clinical Reminder completions did improve, each clinic either met or exceeded the target of 93% (see Appendix H). The goal of 93% or higher for the Positive Alcohol Follow-Up completions was only obtained by one clinic in the final month of project implementation (see Appendix H).

The clinical reminder completion scores were outcome measures tracked weekly over five months. Over the five-month timeframe 3,515 veterans presenting for a routine primary care appointment had an AUDIT-C Clinical Reminder due at the time of their appointment. Out of the 3,515 clinical reminders due, 3,260 (92.7%) were completed. Of the 3,260 AUDIT-C clinical reminder completions, 107 (3.2%) screened positive for unhealthy alcohol use. Primary care providers completed a Positive Alcohol Follow-Up Clinical Reminder for only 75 (70%) of the positive screens. The monthly total clinical reminders due and completed are provided in Tables I1 and I2 (see Appendix I).

Comparison of initial and follow-up nursing questionnaire responses served as the project process measures (see Appendix J). Responses were compared to evaluate for a change in nursing knowledge related to the importance of alcohol screening and brief intervention, and comfort level in discussing alcohol use with veterans. The return rate of the initial questionnaire was 14 out of 20 (70%), and that of the follow-up questionnaire was 20 out of 20 (100%).

Demographics collected from the initial nursing staff questionnaire indicate that out of the fourteen, seven (50%) were LPNs and seven (50%) were RNs. All of the respondents reported being non-veteran employees; 10 (71.4%) indicated working as a LPN or RN for more than 10 years and six or more years of VA employment.

Of the 14 responses from the initial questionnaire, 11 (78.6%) responded "true" to the importance of alcohol screening and brief interventions compared to 19 (95%) of the responses from the follow-up questionnaire. Ten (71.4%) initial questionnaire respondents indicated as highly comfortable, and four (28.6%) as somewhat comfortable in discussing alcohol use with veterans compared to 13 (65%) highly comfortable, six (30%) somewhat comfortable, and one (5%) as not comfortable in the follow-up questionnaire.

Barriers identified by the initial survey respondents included time, dishonest veteran responses to the AUDIT-C screening, and COVID-19. Six (42.9%) of the respondents identified time, four (28.6%) dishonest veteran responses, and three (21.4%) COVID-19. Two of the three barriers were also identified by the follow-up questionnaire respondents. Time was identified as a barrier by 11 (55%), and dishonesty in veteran responses to screening questions was noted as a barrier by seven (35%) respondents.

Discussion of Major Findings

Throughout the implementation phase, the team reviewed the clinical reminder data and identified causes for the missed opportunities to completing the AUDIT-C and Positive Alcohol Follow-Up Clinical Reminders**.** During the first PDSA cycle, the team determined that most missed clinical reminders occurred with non-face-to-face appointments. The PACT nursing staff were not always notified of the non-face-to-face appointment; therefore, they missed the opportunity to complete any due clinical reminders. To mitigate this issue, a published clinic appointment schedule for non-face-to-face appointments was established. This allowed the PACT LPN and PACT RN to view all appointments scheduled for the PACT provider and resulted in improved AUDIT-C completions. To improve the provider follow-up for positive screens, nurses provided a warm hand-off to the provider, informing them of the positive alcohol screen. Despite this effort, the goal of 93% for Positive Alcohol Follow-up completion was only met by one clinic during the last month of project implementation.

Practice changes were modified to reduce workload, improve workflow, and address clinic-specific barriers. A non-face-to-face clinic schedule was developed and activated in the clinical scheduling software package to improve the PACT nurses' awareness of an upcoming virtual appointment. The PACT LPNs and RNs added the review of both face-to-face and non-face-to-face clinic appointments to their daily huddle discussion as well as reviewed clinic appointments a week in advance to plan and organize clinic workload and workflow.
Veterans with a due AUDIT-C reminder were highlighted on the daily clinic schedule and also discussed during the morning PACT huddle. Adding these components to the morning huddle allowed the PACT LPN and RN to coordinate workload and pre-plan for the veteran appointments. These types of clinic-specific practice changes were identified by Dzidowska et al.

(2020) and Hanschmidt et al. (2017) as effective tools for overcoming systems and implementation barriers.

The initial and follow-up nursing questionnaire responses indicate the PACT nurses find the AUDIT-C screen and brief intervention important to veterans' overall health and well-being, and the majority of the respondents reported feeling highly and somewhat comfortable discussing alcohol use with veterans. Providing education and support regarding staff's perception of the importance of alcohol screening and brief interventions and their comfort level completing the screen are effective strategies for overcoming implementation barriers (Williams et al., 2016; Hanschmidt et al., 2017).

Section V. Resource Management and Implications

Costs and Resource Management

The overall estimated cost of the project ($7,187.20) is minimal compared to the cost of not identifying and addressing unhealthy alcohol use (see Appendix K). The project lead devoted an estimated 120 hours to researching, developing, and implementing the project. The project team members gave an estimated five hours for team meetings and clinic meetings. During these meetings, the team members were away from their clinic duties. In addition to the five hours for team and clinic meetings, the Clinical Applications Supervisor (CAS) spent an additional four hours developing and generating electronic clinical reminder reports for the project lead.

Assigning a team or clinic champion to monitor weekly clinical reminder completions will offset personnel cost of implementing the project within other service-lines and sustaining the practice change in Primary Care. Generating a weekly clinical reminder report accessible to nurses completing the alcohol screening is an additional cost-effective action.

The benefit of early identification and intervention for unhealthy alcohol use outweighs the alcohol-related economic and healthcare expenditures. The hospital bed per day cost for a medical hospitalization is $2,377.06 and $1,709.72 for psychiatric hospitalization. An average length of stay related to alcohol-related conditions is typically greater than one day. Two crucial benefits of completing the AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder are the opportunities for educating veterans about the impact unhealthy alcohol consumption patterns can have on their health and well-being and engaging veterans in clinical decision-making to change a destructive health-related behavior.

Implications of Findings

The implications for providing evidence-based care and adherence to alcohol-related clinical practice guidelines are far-reaching. Preventive care measures are a win-win for the veteran, nursing practice, healthcare systems, and society. Screening and intervening for unhealthy alcohol use and alcohol use disorder are best practices for improving health and reducing alcohol-related mortality, comorbidities, dysfunctional psychosocial situations, and economic burden. Advanced practice nurses are the conduit for advocating, developing, and disseminating preventive care practices to improve outcomes.

Implications for Patients

Improving health care practices to address unhealthy alcohol use can improve patient health and well-being and reduce mortality. Screening for unhealthy alcohol use opens the door for a conversation with the veteran to discuss alcohol consumption patterns and the relationship of the pattern to health concerns. Educating the veteran on the U. S. recommended limits and the medical comorbidities associated with unhealthy use is not enough to change health behaviors. Helping the veteran connect their drinking patterns to their current health conditions or interpersonal situations is key to assisting the veteran in recognizing how alcohol may be impacting their health and the importance of making health-related behavior changes. Even if the veteran does not have current health conditions or interpersonal situations to connect to alcohol use, preventative measures, such as AUDIT-C screens, are crucial for maintaining health and well-being. Reducing or eliminating unhealthy alcohol use may decrease emergency department and urgent care visits, hospitalizations and improve employment and other social health factors.

Implications for Nursing Practice

The AUDIT-C and brief intervention for positive AUDIT-C screens are preventative measures proven to decrease the negative impact of alcohol-associated consequences (Curry et al., 2018). Advanced practice nurses are charged with leading change and transforming healthcare by implementing best practices to improve health and organizational outcomes. As indicated in the literature, best practices for eliminating systems barriers to completing an alcohol screen include determining staff knowledge, comfort level discussing alcohol use, and perception of unhealthy alcohol use (Williams et al., 2016; Hanschmidt et al., 2017). The staff education component of the DNP project is an example of this best practice. PACT nursing staff received training regarding unhealthy alcohol use and its effects on health. The purpose of the education sessions was to ensure nursing staff were informed and understood the importance of early identification and intervention and provided a venue for staff to discuss comfort level in completing the AUDIT-C. The project also highlighted the need for interprofessional collaboration, which is vital to enhancing patient care and patient outcomes. The PACT teamlet is an interprofessional team that practices team-based care. This practice model allows nurses the autonomy to function at the top of their licensure and incorporate implementation science into patient care and organizational duties. Having access and authority to complete the AUDIT-C and collaborating with a provider for follow-up with positive results can decrease missed opportunities to identify and intervene for unhealthy alcohol use.

Implications for Healthcare System(s)

The project site and other healthcare systems may experience improved organizational, employee, and patient outcomes by meeting performance metrics, empowering and engaging employees, and providing evidence-based care to the patient population. Health People 2020 and

Health North Carolina 2030 include metrics for reducing excessive and binge drinking through interventions such as early screening, early intervention, and care coordination (ODPHP, 2020; NCIOM, n.d.). Preventive measures, such as the AUDIT-C and Positive Alcohol Follow-Up, can reduce the healthcare system's burden of alcohol-related outcomes and improve the quality of care provided to veterans. Early identification and intervention may reduce emergency department visits and hospitalizations resulting from unhealthy alcohol use and improve chronic disease management.

Sustainability

The organization prioritizes compliance with alcohol-related clinical practice guidelines and relates this type of preventative care to its mission. As an organizational priority, project sustainability is possible with staff training and education, access to clinical reminder due reports, and weekly clinical reminder data tracking and reporting. Providing staff education regarding unhealthy alcohol use during new employee orientation and integrating evidence-based preventive practices, such as the AUDIT-C and brief intervention into the clinic workflow are additional components for project sustainment. In order to continue the project momentum, each primary care clinic at the project site will appoint a committed team and AUDIT-C compliance champion to continue monitoring and tracking the clinical reminder report, evaluating the report data for compliance, and sharing the results with front-line staff and the executive leadership. Having the technical support to maintain the clinical reminder report and database will also be required for project sustainment.

Dissemination Plan

The project findings will be disseminated throughout the project site's Mental Health Clinics and Primary Care Clinics, located on the main campus and at the two Health Care

Centers. The Unhealthy Alcohol Use presentation provided during project implementation will be developed as a webinar and presented to the nursing staff within these clinics, as well as added to clinic orientation. The project will be presented at the University College of Nursing and the project site. Following project completion, the project will be uploaded to the university's ScholarShip portal.

A project presentation will be developed and presented during one of the project site's Medical Ground Rounds and Mental Health Morbidity and Mortality Ground Rounds. The project presentation will also be shared with the Veterans Integrated Systems Network (VISN) 6 Mental Health and Primary Care Leadership, and if approved, will be shared with VISN 6 Mental Health and Primary Care Chief Nurses. This project is beneficial to primary care and mental health nurses. A poster presentation at the American Psychiatric Nurses and Ambulatory Care Nurses Associations Conferences would provide a platform for improving awareness and highlighting the impact nurses can have on preventive alcohol-related care.

Section VI. Conclusion

Limitations and Facilitators

The limitations noted throughout project implementation were the COVID restrictions of limited face-to-face meetings to groups of four or less and the cancelation of face-to-face routine clinical appointments. Except for the first team meeting, all project team and clinic meetings were held virtually. The project team, PACT LPNs, and RNs were engaged during the clinic meetings, but it is believed that engagement and interactions would have been greater if the sessions were face-to-face versus virtual. Telehealth appointments replaced face-to-face appointments during the project implementation period. The PACT nurses were not always aware or notified in advance of an upcoming virtual appointment; therefore, their ability to complete a due clinical reminder was hindered.

The COVID-19 pandemic created an additional limitation, a reduction of staff. PACT LPN and RN staffing were negatively impacted by absenteeism due to COVID or COVID exposure, and collateral duties, such as work assignments in COVID-zoned areas. Despite these challenging limitations, the project's aim of improving AUDIT-C completions was met.

The project team's commitment to the project and the site champion and project sponsors' support throughout the project implementation phase facilitated a successful project and outcome. The PACT LPNs and RNs take pride in their work and demonstrate genuine care for patients assigned to their panel. They are eager to practice according to clinical practice guidelines and provide preventive and chronic disease management. The AUDIT-C and Positive Alcohol Follow-Up Clinical Reminders embedded in the electronic health record facilitated accessibility of evidence-based screening and intervention tools. The project site's software

programs and information technology specialists supported the need to track and trend weekly clinical reminder data to monitor for practice compliance.

Recommendations for Others

Executive leadership support and a committed team that recognizes the need for and importance of identifying and intervening for unhealthy alcohol use and alcohol use disorder is recommended. Building a team committed to improving alcohol-related care will enhance the team's ability to work through practice implementation barriers. Utilizing technology to generate a seamless process for generating and extrapolating data is crucial for project sustainability. An easily accessible database for tracking and trending clinical reminder completions will allow for continuous monitoring and evaluation. Incorporating preventive alcohol-related care staff education into new employee education and providing support and training to nursing staff will assist with nurses understanding of the importance of alcohol screening and intervention, as well as provide a venue to discuss their comfort level in conversing with patients about alcohol use.

Recommendations for Further Study

Due to the inability to meet the project’s aim for the Positive Alcohol Follow-Up Clinical Reminder, further review of the current process is recommended. Developing a team consisting of nurses and providers to study the process for following up on positive AUDIT-C screens will benefit the veteran population and organization. Another recommendation for further study is to examine the ability and authority for registered nurses to complete the brief intervention for positive AUDIT-C screens.

Final Thoughts

Unhealthy alcohol use and Alcohol Use Disorder are complex public health problems impacting veterans, families, and society. Intervening early and preventing dire outcomes is essential to improving veteran care and healthcare outcomes. Screening for unhealthy alcohol use is a platform for providing patient education and awareness of alcohol consumption patterns compared to the U. S. recommended limits. A positive AUDIT-C screen provides an entry for addressing current alcohol use and the potential or actual impact it may be having on the veteran's health and well-being. Providing a brief intervention empowers the veteran with knowledge and creates a provider-veteran partnership to address and change negative health behaviors. Improving alcohol-related clinical practice compliance meets the VA mission of honoring veterans by providing exceptional health care to improve their health and overall well-being.

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Appendix A

Literature Matrix

Authors	Year Pub	Article Title	Theory	Journal	Purpose and take home message	Design/Analysis/ Level of Evidence	IV DV or Themes concepts and categories	Instr. Used	Sample Size	Sample method	Subject Charac.	Comments/critique of the article/methods GAPS
Bradley, K. A., Rubinsky, A. D., Lapham, G. T., Berger, D., Bryson, C., Achtmeyer, C., Hawkins, E. J., Chavez, L. J., Williams, E. C., & Kivlahan, D. R.	2016	Predictive validity of clinical AUDIT-C alcohol screening scores and changes in scores for three objective alcohol-related outcomes in a Veterans Affairs population	NA	*Addiction, 111(11), 1975-1984. https://doi.org/10.1111/add.13505*	Evaluate the association b/t AUDIT-C scores and 3 alcohol-related health outcomes	L III Retrospective Cohort Study	Categories: baseline AUDIT-C scores and scores 12 months later	NA	486,115	EMR data (2004-2007); VA outpatients with completed AUDIT-C screen	24 VAMC sites were used - EMR outpatient AUDIT-C screeing scoes of males with mean age of 68	the AUDIT-C scores were positively associated with HDL, traumatic, physical injuy and GI hospitalizations. Limitations: the number of VAs included in the study;
Higgins-Biddle, J. C	2018	A review of the Alcohol Use Disorders Indentification Test (AUDIT), AUDIT-C, and USAAUDIT for screening in the US:Past issues and future directions https://doi.org/10.1080/00952990.2018.1456545	NA	*American Journal of Drug & Alcohol Abuse 44(6), 578-586*	Looked at the structural and functional features of the AUDIT-C & methodological problems with validation of the tool	L III Narrative review of 4 studies	Comparing WHO AUDIT with USAUDIT	NA	4 studies	Reviewed and evaluated 4 studies	AUDIT Questions & USAUDIT Questions	Repsonse choices to the questions need to be based on US recommended standards (USDA Dietary Guidelines; CDC/NIAAA). - set recommendations to identify heavy and binge drinking
Tan, C. H., Hungerford, D. W., Denny, C., H., & McKnight, 0Eily, L.R.	2018	Screening for alcohol misuse: Practices among US primary care providers, DocStyles 2016 https://doi.org/10.1016/j.amepre.2017.11.008	NA	*American Journal of Preventive Medicine 54(2), 173-180*	estimated the prevalance of PCPs screening practices for alcohol misuse & looked at screening tools suggested by USPSTF	L IIICross-sectional analysis of DocStyle data	IV -screening tools used DV - provider assessment	DocStyles survey	1506 survey respondents	respondents were asked 3 questions to identify if they were aware of USPSTF recomm.; Select screening tool they used; if tool was	PCP providers - Internists, family practitioners, OB/GYNs, NPs	96% of the providers screened patients; 38% used a USPSTF tool USPSFT recommends using AUDIT, AUDIT-C and NIAAA single questions to screen for alcohol use and misuse
Huffstetler, A. N., Kuzel, A. J., Sabo, R. T., Richards, A., Brooks, E.M., Kashari, P. L., Villalobos, G., Arias, A. J., Svikis, D., Bortz, B. A., Edwards, A., Epling, J., Cohen, D. J., Parchman, M. L., Winter, J., Wessler, Pl., Yu, T. J., & Krist, A. H.	2020	Practice facilitation to promote evidence-based screening and management of unhealthy alcohol use in primary care: A practice-level randomized controll trial	AHRQ - Evidence Now Practice Facilitator	*Family Practice, 21(93) https://doi.org/10.1186/s12875-020-01147-4*	Promote routine screening and counseling for unhealthy alcohol use & assess practice components pertinent to changing care delivery	L IVInitiatiion of a clinic-level RCT	**IV - practice faciliations and education sessions DV -providers' use of screening tool and interventions**	Practice Facilittion	125 Primary Care Practices	125 from ACORN will receive practice facilitation	Primary Care Providers	Interesting to reach the results of this study and if the hypothses were supported/not-supported
O'Donnell, A, Hanratty, B., Schulte, B., & Kaner, E.	2020	Patient's experiences of alcohol screening and advice in primary care: A qualitative study	Normalization Process Theory (NPT)	*Family Practice, 21(68); https://doi.org/10.1186/s12875-020-01142-9*	Understand patient's perception of engagemnet in alcohol screening and brief alcohol advice	L II Qualitative - thematic content of structured interviews	**Structured interviews**	NPT theorectical framework to help explain "work" involved in implementing a set of healthcare	22	7 PC practices in England Subjects selected by Coding of EMR that indicated alcohol screen/brief alcohol advice	primary care patients , White, British and between ages of 25-75	Patients did not mind discussing alcohol use, but heavy drinkers minimized the amount/frequency. Patients appreciated the topic being discussed in a non-judgmental manner and felt comfortable when they trusted their provider important to have training for PCP to enhance thier understanding of the relevance and impact of providing alcohol screening and advice to patients.
Naps, M.S., Maass, D., Kranzier, H.R., Smith, R. V., Ingram, E., & Oslin, D. W.	2018	Predictors of treatment referral after AUDIT-C screening for heavy drinking	NA	*Addiction Disorders Their Treatment, 17(3), https://doi.org/10.1097/ADT.0000000000000134*	identify influening factors for patients with an elevated AUDIT-C score receiving appropriate PCMHI care	L III descriptive analysis for demographics. Multivariate binary logistic regressionws	Audit-C score and if patietnt was referred/not referred for alcohol advice/counseling		1885 veterans	EHR data - 4 year retrospective study (7/1/2010-6/30/2014) for veterans screening positive for alcohol misuse	predominantly male population, mean age was 57.8, mean AUDIT score was 9.3	provider barriers to recommending txt - lack of adherence to standard guidelines and discomfort and avoidance of discussing with their patients, the topic of drinking. Less than 1/3 were referred for alcohol counseling THe influence of provider's perception regarding veterans benefit from counseling - impacts it the veteran is/is not referred

Susan J. Curry, PhD; Alex H. Krist, MD, MPH; Douglas K. Owens, MD, MS; Michael J. Barry, MD; Aaron B. Caughey, MD, PhD; Karina W. Davidson, PhD, MASc; Chyke A. Doubeni, MD, MPH; John W. Epling Jr, MD, MSEd; Alex R. Kemper, MD, MPH, MS; Martha Kubik, PhD, RN; C. Seth Landefeld, MD; Carol M. Mangione, MD, MSPH; Michael Silverstein, MD, MPH; Melissa A. Simon, MD, MPH; Chien-Wen Tseng, MD, MPH, MSEE; John B. Wong, MD.	2018	Screening and behavioral counseling interventions to reduce unhealthy alcohol use in adolescents and adult	NA	*Journal of American Medical Association, 320(18); 1899-1909; https://doi.org/10.1001/jama.2018.16789*	U. S. Preventive Services Task Force Recommendaton Statement - importance of screeing for alcohol use; benefit is moderate/B recommendation	L IV systematic evidence review to update 2013 recommendations	Categories: Screening Tests and Interventions	N/A	N 277, 881 (45 studies)	reviewed studies addressed screening tools; 28 were fair quality/17 good quality	Studies addressing alcohol screening and interventions	AUDIT-C had aspecificity (0.73-0.97) for early detection of AUD ; NIAA single question - 0.73-0.83 sensitivity & specificity was 0.74-100.0
Kuitunen-Paul, S, & Roerecke, M.	2018	Alcohol use disorders indentification test (AUDIT) and mortality risk: A systematic review and meta analysis		*Journal of Epidemiology Community Health, 72, 856-863, https://doi/org/10.1136/jech-2017-210078*	Systematic review of the association between AUDIT scores and mortality	L IV systematic review			7 observational studies	Systematic reivew and meta analysis was completed via Preferred Reporting Items for SR& M-A guidelines	Studies that used a cohort study design; assessed drinking by AUDIT-C; reported all cause mortality	Audit C screening scores were associated with mortality risk -
Doroud, N., Fossey, E. & Fortune, T.	2018	Place for being, doing, becoming, and belonging: A meta-synthesis exploring the role of place in mental health recovery		*Health & Place, 52, 110-120; https://doi.org/10.1016/j.healthplace.2018.05.008*	describe how place is defined and related to recovery and impacts health and well-being	L III meta-ethnographic approach	concept of place	N/A	12	extracted, coded/synthesized data from 12 qualitative studies research - that defined recovery as a subjective process; focused on place from pt with lived experience perspective; explaind place as normal environment encountered daily	qualitative studies	Place influences recovery - sense of security, belonging and stability. Increase in self-esteem and identity and sense of connectedness and belonging -becoming/doing/belonging and being
Lan, C.W., Fiellin, D. A., Barry, D.T., Bryant, K. J., Gordon, A. J., Edelman, E.J., Gaither, J.R., Maiston, S.A., Marshall, B. D	2016	The epidemiology of substance use disorders in US veterans: A systematic review and analysis of assessment methods	NA	*American Journal of Addiction 25(1), 7-24; doi. 10/111/ajad.12319*	Epidemiology of SUD among veterans compared to SUD prevalence base on diagnostic coding	L IV systematic review Comprehensive electronic database search level 4	Studies sampling US veterans and reporting prevalence, spread and assessment for AUD/SUD	NA	72 studies	Review of electronic databases to	published between 1995 & 2013; 72 studies sampled a total of 18, 466, 328 veterans - 91% of which were men	SUD/AUD are common among veterans and AUD is the most commonly diagnosed SUD Review of the studies indicate a need to design programs to screen/treat AUD/SUD; limitations: studies were selected based on diagnostic coding, eclectic studiy designs were included in the reiw, the authors did not complete a meta-analysis d/t changes in the target population.
Dalum, H. S., Pedersen, I. K., Cunningham, H., & Eplov, L. F.	2015	From recovery programs to recovery-oriented practice? A qualitative study of mental health professionals' experiences when facilitating a recovery-oriented rehabilitation program.	Illness-Management Recovery Program (IMR) & Recovery-based care	*Archives of Psychiatric Nursing, 29, 419–425. https://doi.org/10.1016/j.apnu.2015.06.013*	Examined changes experienced by practitioners who have implemented recovery-oriented programs	L II Qualitative - semi-structured interviews	Concepts implementation of recovery-based programming - Categories: provider attitude and skillset	Situational analysis was used to analyze interview content	16 health care professionals	selective sampling of community MH providers	outpatient MH providers, RNs, OTs, psychiatrist and Case Managers, who had implemented or experience working with recovery-based programming	Skills and attitude changes occurred for most of the providers, but not all. The lack of change may be due to the lack of comfort or resistance to the recovery-model three themes emerged: a new focused dialogue with patient, a hopeful attitude and a person-centered role -
Stacy, M. A., & Rosenheck, R.	2019	The association of recovery orientation and stigmatizing beliefs.	NA	*Journal of Mental Health, 28(3), 276-281. https://doi.org/10.1080/09638237.2017.1417573*	examined the relationship between recovery-oriented care and de-stigmatization	LII qualitiative survey	RAS - 5 recovery domains: Life goals, Involvement, Diversity of treatment options, Choice and Individually Tailored Services	RAS Survey (Recovery Assessment Survey)	122 Veterans 98 Clinicians	Conneticutt VA - inpt/oupt MH and Veterans, Clinicians /Veterans volunteered to complete the anonymous survey	MH inpatient/outpatient clinicians and Veterans at the	Stigma of mental illness was reduced by use of recovery-oriented programming and services. Limitations: anonymous nature of the survey - may not be truly representative of a different sample of veterans and clinicians.

Appendix B

Project Charter

Unhealthy Alcohol Use: Improving Practice Compliance

Project Team Leader: Gwen Hampton, PMHCNS, RN
Process Owners: Chief Nurse Ambulatory Care, Primary Care Nurse Manager
Project Sponsors: DNP Project Faculty,, Deputy ADPCS, Project Site Champion

Problem Statement

According to the EPRP August 2020 data extraction, the organization's compliance scores of 86.7 for AUDIT-C screening completion and 39.0 for brief interventions provided during routine outpatient visits, fell below the national benchmark of 93.23. The AUDIT-C and brief intervention completion scores and gap in treatment are indicators of missed opportunities for identifying veterans with unhealthy alcohol consumption patterns and the provision of brief interventions aimed to promote behavior change and prevent or reduce alcohol-related outcomes.

Purpose Statement

The purpose of the DNP project is to increase the compliance of alcohol-related clinical practice guidelines by improving AUDIT-C and brief intervention clinical reminder completions during routine outpatient visits and bridge the treatment gap by providing interventions for veterans screening positive for unhealthy alcohol use or AUD. Arming veterans with knowledge and change strategies to assist them in their fight against unhealthy alcohol use or AUD fulfills the VA mission of honoring veterans by providing nationally recommended alcohol-related care to improve their health and well-being.

AIM Statement

Improve AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder Completions to 93 or higher.

Team Members

PACT RN
PACT LPN
PACT Coordinator
Quality and Performance Coordinator
Clinical Application Supervisor

Measures & Metrics

Pre-Post Nursing Staff Questionnaire
Number of scheduled routine primary care appointments/Number of AUDIT-C clinical reminder completions
Number of positive AUDIT-C screens/Number of Positive Alcohol Follow-Up clinical reminder completions

Project Scope

The project scope is to complete AUDIT-C clinical reminders with veterans presenting for a routine primary care appointment.
Project Start Date: November 2, 2020
Project End Date: April 28, 2021

Appendix C

Nursing Staff Initial Questionnaire

Staff Questionnaire I

Thank you for taking the time to complete the questionnaire. The purpose of this questionnaire is to measure nurses' knowledge, skills, and attitudes toward screening for unhealthy alcohol use, and to identify barriers for completing the AUDIT-C clinical reminder during a routine outpatient appointment. Your participation is voluntary, and your responses will remain anonymous.

1. What is your professional title?
   __ LPN __ RN

2. What are your years of work experience in the role you identified in Question # 1?

3. How long have been employed by the Department of Veterans Affairs?
   ____ Months ______ Years

4. Are you a Veteran?
   ___Yes ___ No

5. Alcohol-screening and brief interventions are important to veterans' overall health and well-being.
   ____True ____False
   If you answered true, describe how alcohol-screening and brief interventions are important to veterans' overall health and well-being.

6. What is your comfort level with talking with Veterans about alcohol use?
   ___Not comfortable ____Somewhat comfortable ____Highly comfortable

7. Identify barriers for completing the AUDIT-C clinical reminder for veterans presenting for a routine outpatient appointment.

Appendix D

Nursing Staff Follow-Up Questionnaire

Staff Questionnaire II

Thank you for taking the time to complete the questionnaire. The purpose of this questionnaire is to measure nurses' knowledge, skills, and attitudes toward screening for unhealthy alcohol use, and to identify barriers for completing the AUDIT-C clinical reminder during a routine outpatient appointment. Your participation is voluntary, and your responses will remain anonymous.

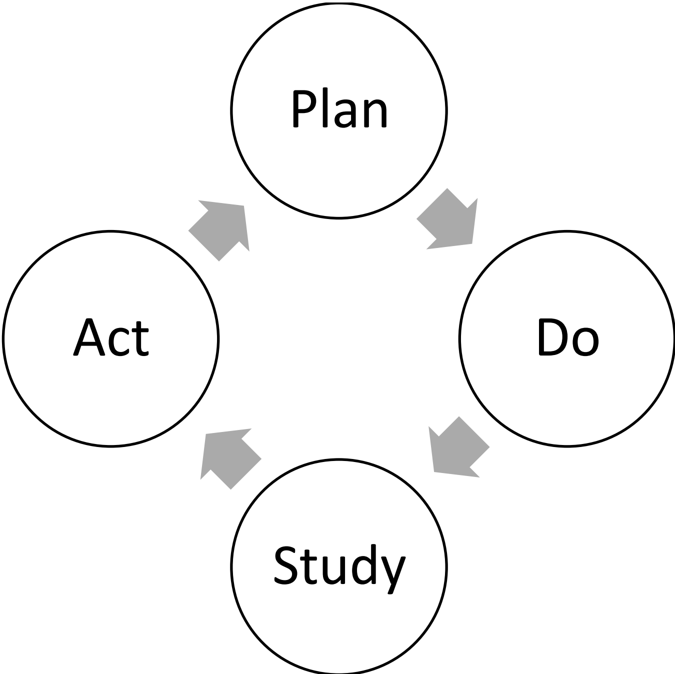
1. Alcohol-screening and brief interventions are important to veterans' overall health and well-being.
   ____True ____False
   If you answered true, describe how alcohol-screening and brief interventions are important to veterans' overall health and well-being.

2. What is your comfort level with talking with Veterans about alcohol use?
   ___Not comfortable ____Somewhat comfortable ____Highly comfortable

3. Identify barriers for completing the AUDIT-C clinical reminder for veterans presenting for a routine outpatient appointment.

Appendix E

Plan-Do-Study-Act (PDSA) Model



Appendix F

Clinical Data Weekly Tracking Tool

	Week 1	Week 2	Week 3	Week 4
Number of AUDIT-C Reminders Due				
Number of Applicable Patients				

	Week 1	Week 2	Week 3	Week 4
Number of Positive Alcohol Follow-Up Reminder Due				
Number of Applicable Patients				

Appendix G

DNP Project Timeline

Date Proposed	Action/Deliverable	Notes	Date Completed
Aug	Complete CITI Modules	VA does not require ethics training if project is QI	8/23/20
Sept	Implementation Tool Worksheet	9/22 Reviewed the Implementation Tool Worksheet with Site Champion. The Site Champion gave input and approved the proposed implementation plan.	9/22/20
Sept	Develop Tracking Tools	9/24 Developed Excel tracking spreadsheet for weekly data collection	9/24/20
Sept	Develop Questionnaires	9/23 Modified questionnaires based on Dr. Marshburn's feedback	9/25/20
Oct	Develop training presentation	9/23 Modified the outline of the presentation based on Dr. Marshburn's feedback 10/16 Continuing to modify presentation	11/3/20
Oct	Project Assessment Tool	Submitted initial proposal 9/28 Approval received 10/13	10/13/20
Oct	Organization support letter	Submitted 10/7	10/7/20
Oct	DNP Paper Sections I, II and III submitted and approved	10/2 Will submit the assignment for review 10/25 Will submit for final review	10/25/20
Oct-Nov	VA Quality/IRB review process	9/24 Email sent to Ms. Morris asking for formatting clarification 9/28 VA forms submitted to Ms. Morris and Dr. Sexton (IRB Chair) 10/7 Received VA approval	10/7/20
Oct-Nov	ECU Quality/IRB review process	9/16 Revised and submitted the IRB/QI Self-Certification Tool paper copy. Awaiting final approval for the Qualtrics Self-Certification Tool 10/9 ECU IRB review process is complete	10/9/20
Oct-Nov	Project Team Member Selection	Selected team members Site Champion PACT Coordinator Chief Nurse Ambulatory Care Nurse Manager Primary Care LPN Primary Care RN Primary Care Quality Performance Improvement Coordinator Clinical Application Supervisor	10/10/20
Following VA and ECU DNP Project Approval			

Oct-Nov	Develop Project Charter	Completed and approved	10/12/20
Nov Jan. -Apr	Weekly Clinic Data to be collected # of scheduled routine appointments # of AUDIT-C CR completions # AUDIT-C score 5> # BI CR	Weekly clinical reminder data being collected	4/30/21
Nov	Project Team Meeting #1 PDSA #1	Introductions Project Team to review and discuss staff questionnaires Review Project Charter Provide training via PowerPoint presentation Map current process Identify process barriers Brainstorm practice change strategies	11/3/20
Nov	PACT Nursing Monthly Staff Meeting	PACT LPN and RN team member provided a brief project introduction, distributed and collected the initial nursing staff questionnaire	11/5/20
Nov.	Project Team Meeting #2	Continue process mapping exercise Review week 1 baseline data Discuss questionnaire – issuance *scheduled 11/12	11/12/20
Nov	Clinic A Meeting #1	Provide training via PowerPoint presentation Share current data Charge staff with practice change strategies	12/17/20
Jan.	Meeting with Site Champion	Reviewed current data Discussed project progress	1/7/21
Jan.	Project Team Meeting #3 PDSA #2	Review data –outcome measure Discuss barriers to clinical reminder completion Discuss process measures & practice change strategies	1/29/21
Jan.	Clinic A Meeting #2	Review data Discuss barriers to clinical reminder completions Discuss what went well & improvement opportunities	1/29/21
Jan.	Meeting with Site Champion	Reviewed current data Discuss project progress Plan to meet with Informatics team to discuss clinical reminder reports	1/29/21

Feb.	Meeting with Site Champion	Discussed and reviewed the Project Implementation Worksheet	2/4/21
Feb.	Project Team Meeting #3 PDSA #3	Review data –outcome measure Discuss barriers to clinical reminder completion Discuss process measures & practice change strategies	2/26/21
Feb	Clinic B Meeting #1	Provide training via PowerPoint presentation Share current data Charge staff with practice change strategies	2/12/21
Feb	Monthly meeting with Site Champion	Review current data Discuss project progress	2/18/21
Mar	Monthly meeting with Site Champion	Review current data Discuss project progress	3/4/21
Mar	Monthly meeting with Site Champion	Review current data Discuss project progress	3/18/21
Mar	Project Team Meeting #4 PDSA #4	Review data –outcome measure Discuss barriers to clinical reminder completion Discuss process measures & practice change strategies	3/12/21
Mar	Clinic B Meeting #2	Review data Discuss barriers to clinical reminder completions Discuss what went well & improvement opportunities	3/12/21
Mar	Clinic C & D Meeting #1	Provide training via PowerPoint presentation Share current data Charge staff with practice change strategies	3/10/21
Apr	Monthly meeting with Site Champion	Review current data Discuss project progress	4/9/21
Apr	Monthly meeting with Site Champion	Review current data Discuss project progress	
Apr	Clinic C & D Meeting #2	Review data Discuss barriers to clinical reminder completions Discuss what went well & improvement opportunities	4/12/21
Apr	Project Team Meeting # 5	Review data –outcome measure Discuss process measures & practice change strategies adoption Distribute Follow-Up questionnaire during April Primary Care Nursing staff Meeting	4/25/21
May	Project Wrap-Up	Data analysis, finalizing results & summarizing findings and implications	5/17/21

May	Monthly meeting with Site Champion	Review final project results Discuss next steps	5/20/21
May	Working on poster presentation		5/26/21
June	Working on poster presentation		6/14/21
July	Poster Presentation to ECU		7/14/21

Appendix H

AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder Completions

Figure H1

AUDIT-C Clinical Reminder Completions

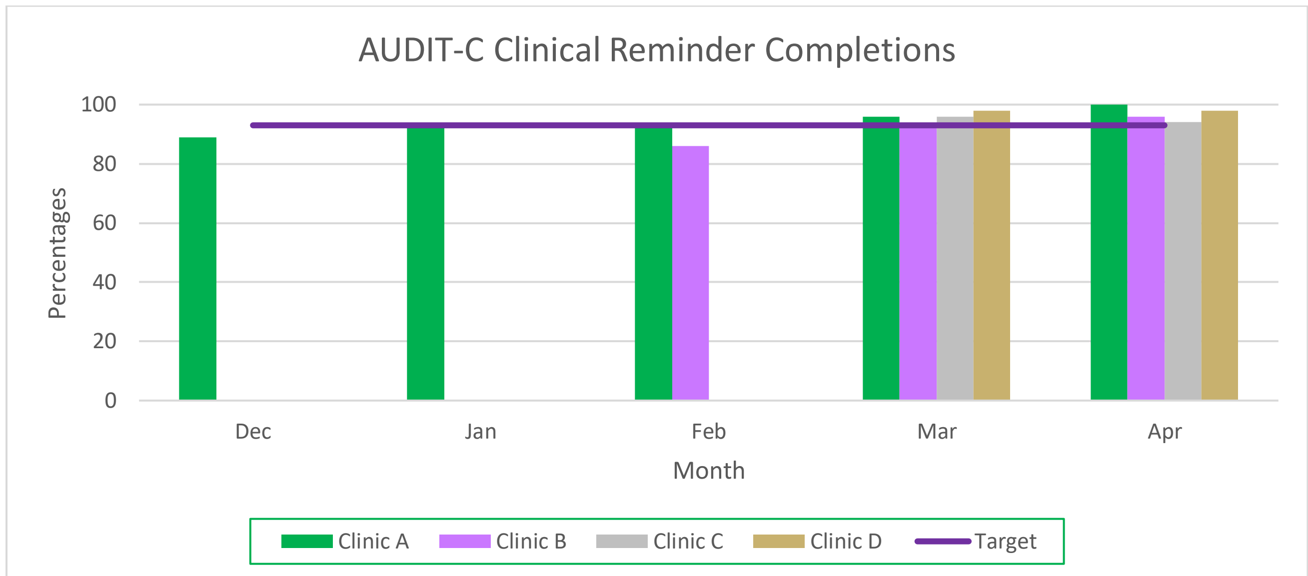
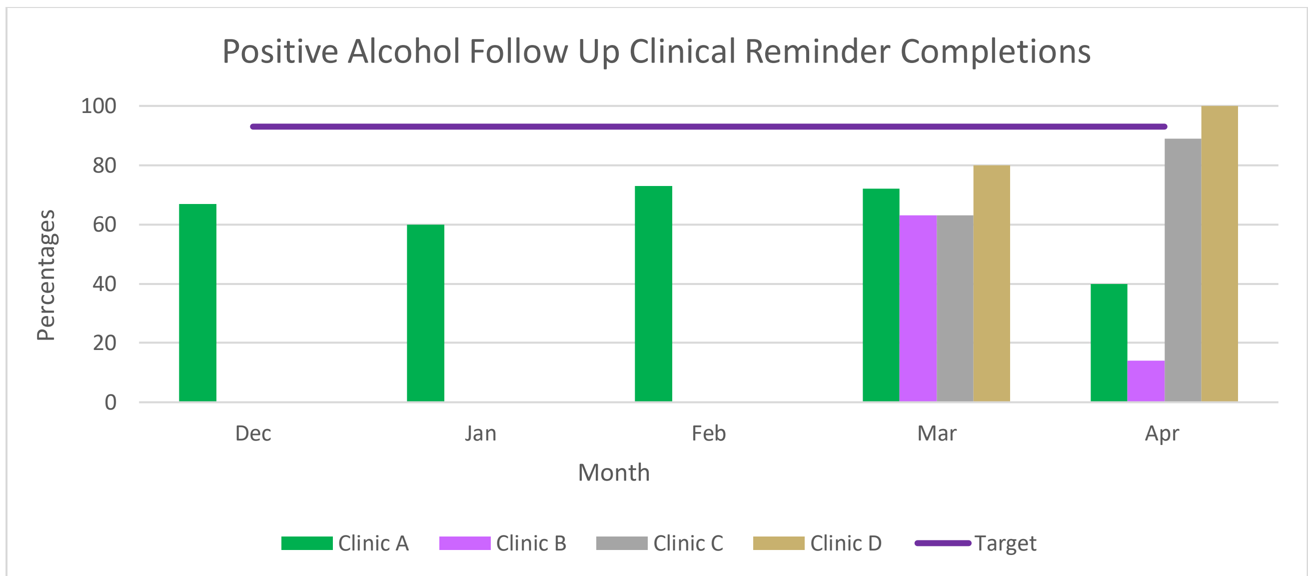


Figure H2

Positive Alcohol Follow-Up Clinical Reminder Completions



Appendix I

AUDIT-C and Positive Alcohol Follow-Up Clinical Reminders Due and Completed

Table I1

Total Number of Due and Completed AUDIT-C Clinical Reminders

	Clinic A			Clinic B			Clinic C			Clinic D		
	Due	Completed	%	Due	Completed	%	Due	Completed	%	Due	Completed	%
Dec	99	88	89	-	-	-	-	-	-	-	-	-
Jan	286	266	92	-	-	-	-	-	-	-	-	-
Feb	328	306	93	145	125	86	-	-	-	-	-	-
Mar	572	548	96	307	285	93	460	440	96	329	321	98
Apr	282	274	97	197	184	93	269	258	96	241	238	99
Total	1567	1482	95	649	594	92	729	698	96	570	559	98

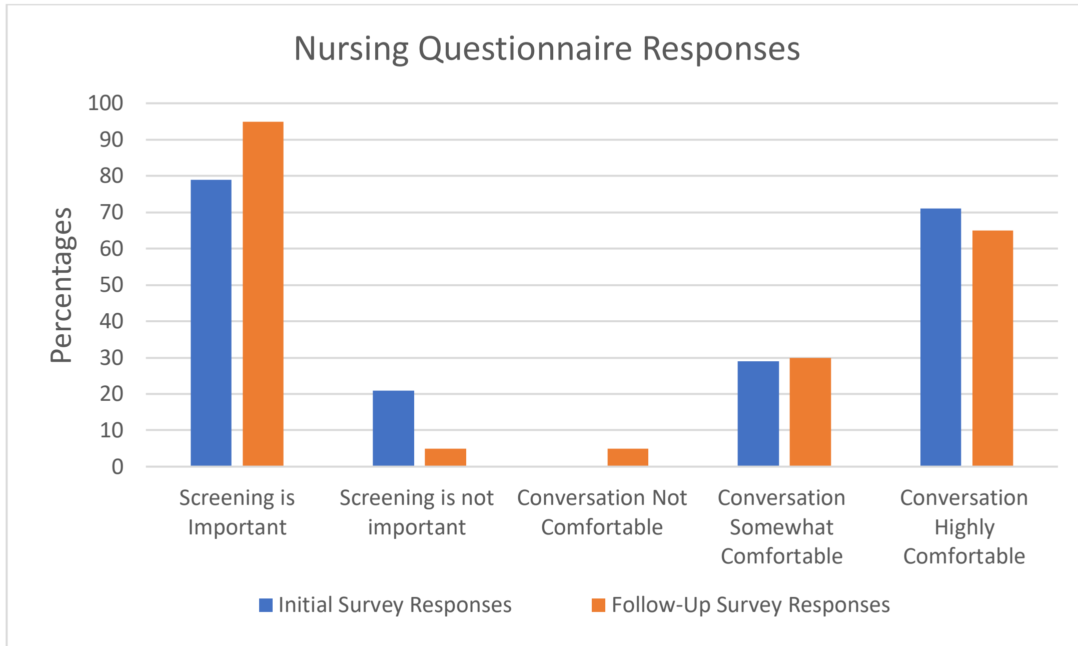
Table I2

Total Number Due and Completed Positive Alcohol-Follow-Up Clinical Reminder

	Clinic A			Clinic B			Clinic C			Clinic D		
	Due	Completed	%	Due	Completed	%	Due	Completed	%	Due	Completed	%
Dec	3	3	100	-	-	-	-	-	-	-	-	-
Jan	5	3	60	-	-	-	-	-	-	-	-	-
Feb	11	8	73	-	-	-	-	-	-	-	-	-
Mar	18	13	72	8	5	63	16	10	63	15	12	80
Apr	5	2	40	7	1	14	9	8	89	10	10	100
Total	42	29	69	15	6	40	25	18	72	25	22	88

Appendix J

Nursing Questionnaire Responses



Appendix K

Project Budget

Expense Items	Quantity	Unit Cost	Total Cost
Project Team Combined Salary	1		$7,000.00
Project Supplies			
Large Peel-N-Stick Poster Paper	1	$38.00	$38.00
Sticky Notes	4	$3.00	$12.00
Permanent Markers	1	$16.00	$16.00
40 copies of the 1-page Initial and 1-page Following Nursing Questionnaires	80 pages	$.14	$11.20
40 copies of a 5-page Unhealthy Alcohol Use PowerPoint Presentation	200 pages	$0.55	$110.00
			$7,187.20

Appendix L

Doctor of Nursing Practice Essentials

	Description	Demonstration of Knowledge
Essential I ***Scientific Underpinning for Practice***	**Competency** – Analyzes and uses information to develop practice **Competency** -Integrates knowledge from humanities and science into context of nursing **Competency** -Translates research to improve practice **Competency** -Integrates research, theory, and practice to develop new approaches toward improved practice and outcomes	The DNP project was based upon research and established alcohol-related clinical practice guidelines. Two change theories (IOWA-revised and Recovery-based care) were used for project implementation and management. New approaches for improving practice and outcomes were identified and implemented as a result of the DNP project.
Essential II ***Organizational & Systems Leadership for Quality Improvement & Systems Thinking***	**Competency** –Develops and evaluates practice based on science and integrates policy and humanities **Competency** –Assumes and ensures accountability for quality care and patient safety **Competency** -Demonstrates critical and reflective thinking **Competency** -Advocates for improved quality, access, and cost of health care; monitors costs and budgets **Competency** -Develops and implements innovations incorporating principles of change **Competency** - Effectively communicates practice knowledge in writing and orally to improve quality **Competency** - Develops and evaluates strategies to manage ethical dilemmas in patient care and within health care delivery systems	Leading the DNP Quality Improvement project required organizational and systems leadership knowledge, skills and abilities. Organizing a team committed to quality care was an essential step. As project lead, communication, coordinating of meetings, tracking, and trending data and leading PDSA discussions was crucial to the project success.
Essential III ***Clinical Scholarship & Analytical Methods for Evidence-Based Practice***	**Competency** - Critically analyzes literature to determine best practices **Competency** - Implements evaluation processes to measure process and patient outcomes **Competency** - Designs and implements quality improvement strategies to promote safety,	Critically appraising and synthesizing the literature to determine best practice and support of use of the AUDIT-C and brief intervention was completed throughout the DNP project courses. Informatics was used to track, trend and

	efficiency, and equitable quality care for patients **Competency** - Applies knowledge to develop practice guidelines **Competency** - Uses informatics to identify, analyze, and predict best practice and patient outcomes **Competency** - Collaborate in research and disseminate findings	analyze the project's outcome measures. The project findings were disseminated to the project team and will be disseminated through other venues in the near future.
Essential IV ***Information Systems – Technology & Patient Care Technology for the Improvement & Transformation of Health Care***	**Competency** - Design/select and utilize software to analyze practice and consumer information systems that can improve the delivery & quality of care **Competency** - Analyze and operationalize patient care technologies **Competency** - Evaluate technology regarding ethics, efficiency and accuracy **Competency** - Evaluates systems of care using health information technologies	The AUDIT-C and Positive Alcohol Follow-Up Clinical Reminder data was tracked weekly for five months. Use of the project site software package and having a Clinical Application Supervisor on the project team were two essentials for tracking and analyzing outcome measures. The outcome data, shared monthly with the Clinics was used as a feedback tool for evaluation practice change success or opportunities for change. Virtual technology proved valuable for team and clinic meetings and data tracking.
Essential V ***Health Care Policy of Advocacy in Health Care***	**Competency**- Analyzes health policy from the perspective of patients, nursing and other stakeholders **Competency** – Provides leadership in developing and implementing health policy **Competency** –Influences policymakers, formally and informally, in local and global settings **Competency** – Educates stakeholders regarding policy **Competency** – Advocates for nursing within the policy arena	Alcohol screening is available for all veterans enrolled in a primary care clinic. Advocating for early identification of unhealthy alcohol use for all veterans presenting to a primary care appointment is an example of equitable and ethical health care. Early detection and intervention for unhealthy alcohol use are processes outlined in Healthy People 2020 for reducing excessive

	Competency- Participates in policy agendas that assist with finance, regulation and health care delivery **Competency** – Advocates for equitable and ethical health care	and binge drinking. Providing exceptional care for veterans by complying with alcohol-related clinical practice guidelines will fulfil the VA mission.
Essential VI ***Interprofessional Collaboration for Improving Patient & Population Health Outcomes***	**Competency**- Uses effective collaboration and communication to develop and implement practice, policy, standards of care, and scholarship **Competency** – Provide leadership to interprofessional care teams **Competency** – Consult intraprofessionally and interprofessionally to develop systems of care in complex settings	Leading the DNP project required interprofessional collaboration. The interprofessional team created practice changes that increased the number of AUDIT-C and Positive Alcohol Follow-Up Clinical reminders. Virtual and face-to-face meetings with intra- and interprofessional teams improved communication and commitments to improving outcomes.
Essential VII ***Clinical Prevention & Population Health for Improving the Nation's Health***	**Competency**- Integrates epidemiology, biostatistics, and data to facilitate individual and population health care delivery **Competency** – Synthesizes information & cultural competency to develop & use health promotion/disease prevention strategies to address gaps in care **Competency** – Evaluates and implements change strategies of models of health care delivery to improve quality and address diversity	Early identification and brief intervention for unhealthy alcohol use are evidence-based health promotion strategies. The DNP project team worked to identify the missed opportunities and identified strategies to close or reduce the treatment gap.
Essential VIII ***Advanced Nursing Practice***	**Competency**- Melds diversity & cultural sensitivity to conduct systematic assessment of health parameters in varied settings **Competency** – Design, implement & evaluate nursing interventions to promote quality **Competency** – Develop & maintain patient relationships **Competency** –Demonstrate advanced clinical judgment and systematic thoughts to improve patient outcomes **Competency** – Mentor and support fellow nurses **Competency**- Provide support for individuals and systems experiencing change and transitions	Outcome measures were tracked weekly to monitor project progress. During clinic meetings, coaching was provided to nursing staff to increase their comfort level in discussing alcohol use with veterans. Throughout project implementation, the PACT RNs and LPNs were supported by phone calls and face-to-face rounding to discuss the practice change (s) being implemented.

	Competency –Use systems analysis to evaluate practice efficiency, care delivery, fiscal responsibility, ethical responsibility, and quality outcomes measures	