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## **Implementing a Practice Strategy in Primary Care Using an Assessment Tool to Screen for Depression**

Donna Snow

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IMPLEMENTING A PRACTICE STRATEGY IN PRIMARY CARE USING AN  
ASSESSMENT TOOL TO SCREEN FOR DEPRESSION

by

Donna Snow

A Doctoral Project  
Submitted to the Graduate School,  
the College of Nursing and Health Professions  
and the School of Leadership and Advanced Nursing Practice  
at The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Nursing Practice

Approved by:

Dr. Carolyn Coleman, Committee Chair  
Dr. LaWanda Baskin, Committee Member  
Dr. Carolyn Holloway, Committee Member

---

Dr. Carolyn Coleman  
Committee Chair

---

Dr. Lachel Story  
Director of School

---

Dr. Karen S. Coats  
Dean of the Graduate School

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## ABSTRACT

Increased efforts are being made to move individuals with co-morbid medical and psychiatric diagnoses toward integrated care. Lack of consistent screening in primary care has caused missed opportunities to identify depression during a routine healthcare provider visit. This project sought to implement a practice strategy in primary care using an assessment tool to screen for depression. Interviews were used to ask patients to answer two questions related to the frequency of depressed mood in the last two weeks. The project was seeking to show by screening patients in primary care for depression, the number of referrals to behavioral health would increase and early intervention could be initiated.

Integrating behavioral health services within primary care creates a continuum of care and improves both mental and physical health for adults. Screening and early intervention can positively change both medical and mental conditions. The population, Intervention, Comparison, Outcome and Time (PICOT) question for this project was, in a Native American population, does the use of a screening tool, Patient Health Questionnaire (PHQ2) during primary care visits, encourage patients to report mental health issues when compared to patients who are not being screened? The outcome of the project was for 343 patients seen in the clinic, 281 patients consented to be screened, and two patients were referred to behavioral health during the project. In comparison, only one patient was referred to as behavioral health from primary care in November 2019. A small improvement in screening patients in primary care for depression was noted during the project; however, more training is needed with the staff. More consistent policy and closer collaborations between the two departments can move the level of integration from

a level 3 to level 4 of the Integrated Practice Assessment Tool (IPAT). Creating an electronic system of referrals to behavioral health services promote effectiveness and timeliness. Native American patients in primary care are more likely to report depression when asked directly than those who are not asked. For the patients who score over 3 on PHQ2, a follow-up plan was in place.

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## DEDICATION

This doctoral project is dedicated to the memory of my beloved mother, Verna Mckee, for believing in me and pushing me to be the best I can be. To my dear husband, loving children, and precious grandchildren who had to do things without me because I was in school, yet they encouraged me to aim high. A special thanks to my church family who prayed for my strength and endurance.

With a feeling of gratitude, I dedicate this doctoral project to my biological family. You all were so instrumental in keeping me on track while looking forward to one day being what I desired to be. More importantly, I dedicate this doctoral project to my Heavenly Father who whispered daily in my ear, "I am with you, just trust me."

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## LIST OF ABBREVIATIONS

<i>AACN</i>	American Association of College of Nursing
<i>ACA</i>	Affordable Care Act
<i>APA</i>	American Psychiatric Association
<i>APA</i>	American Psychiatric Association
<i>CDC</i>	Centers for Disease Control and Prevention
<i>DMH</i>	Department of Mental Health
<i>DM</i>	Diabetes Mellitus
<i>DNP</i>	Doctor of Nursing Practice
<i>DSM5</i>	Diagnostic & Statistical Manual for Mental Disorders
<i>FNP</i>	Family Nurse Practitioner
<i>HHS</i>	Department of Health and Human Services
<i>HRSA</i>	Health Resources and Services Administration
<i>IHS</i>	Indian Health Service
<i>IPAT</i>	Integrated Practice Assessment Tool
<i>LCSW</i>	Licensed Clinical Social Worker
<i>LPC</i>	Licensed Professional Counselor
<i>LPN</i>	Licensed Practical Nurse
<i>MD</i>	Medical Doctor
<i>PD</i>	Project Director
<i>PHQ2</i>	Patient Health Questionnaire

<i>PICOT</i>	Population, Intervention, Comparison Outcome, Time
<i>PMHNP</i>	Psychiatric Mental Health Nurse Practitioner
<i>PRIME-MD</i>	Primary Care Evaluation of Mental Disorders
<i>PTSD</i>	Posttraumatic Stress Disorder
<i>RN</i>	Registered Nurse
<i>SAMHSA</i>	Substance Abuse & Mental Health Service Administration
<i>SIDS</i>	Sudden Infant Death Syndrome

## CHAPTER I - INTRODUCTION

A medically underserved population is a specific sub-group of people living in a defined geographic area designated by the Health Resources and Services Administration (HRSA) as having too few primary care services, high infant mortality, and high poverty or high elder population (HRSA, 2019). Native Americans are in the underserved category, and a Native American tribe located in Mississippi. Throughout history, Native Americans initiated treatment of a medical or mental illness by seeing a Native American doctor or using traditional methods. Evidence indicates that Native Americans have comorbid diseases and frequently do not seek treatment due to transportation problems, lack of health insurance, self-care intervention and no available extended clinic hours (Willie et al., 2017). According to the 2017 National Diabetes Statistic Report, 9.4% (30.3 million) of people in the United States population is affected by diabetes mellitus (DM). Cardiovascular disease is a major risk factor of DM. In the Native American population (which is 2 % of the United States population), DM is more than 2 times that of the general population (Poudel et al., 2018). Today, Native Americans are seeing health care providers both on and off the reservation. At times, mental disorders are overlooked in primary care mainly because of increased workload, lack of knowledge related to mental disorders, or staff not inquiring about mental issues. Patients needing mental health care present to primary care for illness and are found to have mental issues such as depression, anxiety, or suicidal ideations based on screening. In a study of Alaskan Native American, 77% of the patients who committed suicide visited a clinic to see providers one year before going through with the suicide and 32% were seen in behavioral health (Dillard et al., 2017).

Screening using a Patient Health Questionnaire (PHQ 2) is an effective intervention (American Psychological Association [APA], 2020). The PHQ2 is a screening tool used by healthcare providers to inquire about the frequency of depressed moods the patients may or may not be experiencing within the last 2 weeks (American Association of Colleges of Nursing [AACN], 2019). Multiple appointments can create confusion, causing some appointments to be missed and duplications of services. Holistic care is a form of integrated care that treats the whole person by having a collaborative relationship between primary care and behavioral health, which ensures medication and treatment compliance as well as effective disease management (APA, 2019).

### Significance

According to the APA (2017) report, more than one-fourth of the Native American population live in poverty, have little education, and have experienced some type of trauma. Native Americans are approximately 1.5% of the United States population and have lower life expectancies and higher infant mortality than the United States population. Native Americans die at a significantly higher rate from tuberculosis, DM, unintentional injuries, and alcohol-related causes six times more often than the national average (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018). In 2014, suicide was the second leading cause of death for Native Americans between the ages of 10 and 34. Substance abuse, sudden infant death syndrome (SIDS), teenage pregnancy, liver disease, and hepatitis are prevalent in Native Americans. Four out of 10 Native Americans use alcohol or drugs, four out 10 begin childbearing during adolescence, and liver disease is 2.3 more times likely than the general population (Department of Health and Human Services, [HHS] 2017). Social

norms and attitudes (e.g., racism and discrimination), language/literacy, and culture are social determinants of health. Coordinating physical and mental health care is important to achieve better outcomes for patients in the healthcare system, a better care experience for the patients and their families, and all at a lower cost of doing business (Mississippi Department of Mental Health [MDMH], 2017). Two common health risk factors in the Native American population are DM and obesity. Being able to manage DM with proper diet, exercise, and weight control has been a challenge. For all events and celebrations, food is the center and many times it is unhealthy foods that contribute to obesity. Bread and pork are included at mealtime. Exercise programs, gyms, and walking tracks are available but are not utilized by the population. A common practice for Native Americans is not to seek the help they need because of stigma, not trusting the staff, or denial about the diagnosis.

Native Americans have a life expectancy of 4.4% less than other groups (APA, 2017). An issue that makes it difficult to treat co-morbidities in the Native American population is understanding health literacy. The average Native American has an 8th-grade educational level. Present primary care practice usually involves the provider referring a patient to behavioral health when depression is reported; no screenings are performed. In November 2019, one patient was referred to behavioral health from primary care.

#### Indian Health Services and Affordable Care Act of 2010

In 1787, a relationship between the Federal Government and Indian tribes were established based on Article I, Section 8 of the U.S. Constitution. Indian Health Service (IHS), an agency with the HHS is responsible for providing federal health services to

Native Americans and Alaska Natives. In the State of Mississippi, Bill HR 4388 Behavioral Health Care Integration Act of 2016 sponsored by Representative David Loeb sack was introduced on January 13, 2016. The purpose of the bill was to ensure that the mental health status of individuals with significant co-occurring psychiatric and physical conditions will be supported through the integration of behavioral health into primary care settings (H.R. 4388 Behavioral Health Integration Act of 2016, 2016). IHS is the main provider and advocate for the Native American people to improve health status. Approximately 57% of Native Americans rely on the IHS for care even though it is underfunded. IHS spends about \$3000 per person annually as compared to the roughly \$8000 spent on health care per person in the general population (Almendrala, 2016). A key element of the provision of the Affordable Care Act (ACA) is dual-eligible patients, who appear to be among the sickest and poorest individuals, are covered by Medicare or Medicaid programs. The ACA introduced new and enhanced options to improve care for dually-diagnosed patients through better care integration, improved quality measures, and increased access to homes and community-based long-term services and supports (Kaiser Family Foundation, 2013). Integrated care allows healthcare providers to be more informed about patients with comorbidities (Kuramoto, 2014).

#### Needs Assessment

Currently, integrated care is not being utilized in primary care on the reservation. Important factors assessed and evaluated are education indicators, intimate partner violence, depression, obesity, alcohol usage, communicable disease, suicide, DM, and tuberculosis. The tribe in Mississippi has seven reservations. Four of the seven reservations provide education and have health clinics. Mental health therapists are in

three out of seven reservations once a week and a psychiatric provider is in three clinics once a month. The need for full health care and mental health care services on all seven reservations is substantial. Stakeholders who have the best interest of primary care are federal, state, and county health departments who has current or relevant data to the health need of the reservation. A suicide prevention team is needed on the reservation. A component of the needs assessment was an invitation or public notice for the business leaders and community residents to complete a survey providing input on the community health needs. A threat to the program could be caused by a lack of development and training, lack of structure, too many players at the table, and no strategic plan (Root, 2019).

### Synthesis of Evidence

Integrated care combines primary and behavioral health care to improve the overall wellbeing of the patient/client. Integrated care requires a high degree of collaboration and communication among healthcare professionals (APA, 2019). Native American adults struggling with mental health issues avoid getting treatments more than their white counterparts due to the trauma of historical oppression, discrimination, poverty, and violence (Moon et al., 2018). These events alone with limited resources contribute to higher rates of depression being reported by the Native American population. Nearly 20% of Native Americans receiving primary care reported psychiatric symptoms (Moon et al., 2018).

The National Indian Council on Aging (2019) reported suicide as the 8th leading cause of death among Native Americans at a rate of 16.93 per100,000 compared to an overall United States rate of 12.08 per100,000 (SAMHSA, 2017). Suicide rates are at

crisis levels in the Native American youth. Reports indicate that 40% of the Native American youth who committed suicide are between the age of 15 and 24. Compared to other young adults, Native Americans have a higher rate of suicide than the general population. Native Americans have higher rates of suicide than any other ethnicity. Mental illness is displayed in almost 90% of the suicides. Other health issues that are higher among Native Americans are alcohol-related deaths, DM, and tuberculosis. As a group, they have the highest rate of intimate partner violence, and Native American children are at double the risk for abuse and neglect (Almendrala, 2016).

Three key points were identified in a study by Starks et al., (2015) from a qualitative content analysis of interviews.

1. Native American patients were concerned about the stigma associated with depression and potential discrimination.
2. The patients wanted the assessment tool to include information about treatments, such as medications, talk therapy, and potential side effects.
3. Patients wanted the stories of Native American people told describing successful experiences with managing depression symptoms.

The stakeholders modified the assessment tool to ensure cultural preferences to patients and providers and promote integration into the clinic (Starks et al., 2015).

#### Focused Topics and Evidence-Based Findings

Database searches were performed to find evidence based on the PICOT question:  
PICO (T) Question: In a Native American population, does the use of a screening tool (PHQ2) during primary care visits encourage patients to report depression symptoms when compared to patients who are not being screened? A study by the American

Diabetes Association found significant and positive relationships among patient-centered care, medication adherence, and diabetes empowerment (Ratner et al., 2017). A growing body of literature suggests that patient-provider interactions influence patient medication use behaviors. Poor adherence to medication regimens is a root cause of worsening of disease, death, and increased health care costs, whereas better adherence is correlated with better clinical outcomes. Medication non-compliance can range from patients who refuse to take medications to patients who recognize the need for medication but are non-adherent (Neiman et al., 2017).

The goal is to have care centered on the person, to help those with complex issues receive the care they need. A person-centered model of care is similar to a “one-stop-shop”. Integrated care improved the quality of care in regards to clinical effectiveness, length of stay, medication errors, and the number of office visits (Wenke et al., 2013). Wenke et al. (2013) identified more favorable outcomes for patients being treated for chronic diseases such as DM, hypertension, depression, congestive heart failure, and asthma.

### Search

Searches of online literature were performed using databases and search engines such as Medline, EBSCOhost, Cochrane Reviews and Google Scholar to access peer-reviewed articles. The purpose of the searches was to find peer-reviewed articles related to integrated care and Native Americans health care. Major terms related to PICOT questions were searched such as integrated care, benefits of integrated care, collaborations, treatment team, healthcare delivery, managed care, holistic care, primary

care, behavioral health care, dually-certified nurse practitioner, evidence-based practice, suicide, implementation, warm handoff, and health homes.

During the literature search, 107 articles were retrieved related to coordinated care, and 54 articles were used in the review of the literature. Articles used were dated between 2013 and 2019 and published in the United States. Because the primary care setting is usually the first point of contact for patients with health needs, the primary care clinical assessment tools and scoring were researched as well.

Healthcare programs for Native Americans are underfunded, and care can be obtained off the reservation. Native Americans find it difficult to access care in the private sector due to high poverty and uninsured rates as well as living in rural areas with few healthcare providers.-The ACA gives lower-income people access to affordable insurance coverage outside of IHS. Many of the Native Americans who were not eligible for Medicaid before ACA can now be covered (Whitney, 2017).

Posttraumatic stress disorder (PTSD) prevalence in the United States general population is 6.6%, with 60% of the cases becoming chronic. The prevalence of PTSD depends on the trauma experienced. Native Americans are twice as likely as the general population to develop PTSD which can lead to depression. Interpersonal violence, including rape, physical assaults, and childhood sexual abuse are events prevalent in the Native American population and increase the risk for depression and PTSD (Bassett et al., 2014).

### Theoretical Framework

Kotter's change management theory was used for the project. The theory is divided into eight stages that focus on the response of people to change. Kotter observed

leaders for years as they implemented new strategies (Pollack & Pollack, 2014). During Kotter's observation of the leaders, he noticed important factors and created the eight-step process for leading change (Belyh, 2015). Eight stages of change are:

- Stage 1: Increased Urgency. The Project Director (PD) requested nurses to perform PHQ2 on all adults to diagnose depression at the mild stage with fewer symptoms than to when depression reaches severe.
- Stage 2: Build the Team. The integrated care team consisted of the staff who were comfortable managing patients with mental health issues and who wanted to participate in the project. primary and mental health providers have separate locations and systems. Providers were viewed as a resource and communicate periodically. behavioral health was viewed as a specialty area; therefore, both departments worked together to build a productive team.
- Stage 3: Get the Vision Correct. The vision of the project was screening for early identification and treatment of depression. Both primary care and behavioral health understood the desired outcome for each patient.
- Stage 4: Communicate. PD consulted with the staff and solicited their views of the assessment tool and integrated care. The team member must talk and collaborate with an effective treatment plan for the patient.
- Stage 5: Get Things Moving. Met with the clinic staff, explained the PHQ2 and answered questions, in addition, PD spoke with behavioral health regarding the best way to receive referrals. A flyer was placed at the front desk, making patients aware of the project which consisted of two questions about the patient's mood in the last two weeks.

- Stage 6: Focus on Short Term Goals. The first short-term goal was for the staff to ask the questions from PHQ2 to all consenting adults during the first two weeks of the project.
- Stage 7: Do Not Give Up. The PD was available during the project to encourage primary care staff to be patient while learning to implement the PHQ2 during medical visits.
- Stage 8: Incorporate Change. The PD suggested to nurses decrease the chances of not asking patients PQH2 questions, keep a paper form of PHQ2 on the clipboards to have readily available when checking patients in. PD encouraged MDs and NPs to ask nurses for scores when preparing to see patients if the scores were not noted in the chart or the PHQ2 form was not accessible.

The benefit of Kotter's change theory (Pollack & Pollack, 2014) is that it gives step-by-step instructions on how to may a change; however, no step can be avoided (Belyh, 2015). Practice change is a key factor in implementing full collaboration in a transformed practice. The Integrated Practice Assessment Tool (IPAT) was used to assess the level of integration in primary care. Once the assessment was performed, practice management strategies were implemented to reach the goal of close collaboration approaching an integrated practice (Heath, 2013).

#### Models

Lewin's change model can be used when implementing a screening process for depression in primary care and referring to behavioral health (Hussain et al., 2018).

Lewin's change model has three levels of change—unfreeze, change, and freeze (Belyh,

2015). The change model helps healthcare centers assess their current policies as related to assessment tools and to implement strategies to improve their policies. Another model is the referral model, which is an electronic method for referring patients to behavioral health once tested positive on the screener in primary care. eReferral is popular for using health information technology to connect different specialty providers, improve communications, and proper utilization of resources (Chen et al., 2013).

### Assumption to Develop the Intervention

Assumptions are a shared thought process that can lead to intervention development. Assumptions are important because they begins critical thinking, which can lead to a better understanding. Assumptions are shared thought processes that can lead to intervention development and are important because it begins critical thinking, which can lead to a better understanding. The process of developing a policy for primary care to screen patients for depression showed the value the interventions would have on patient health outcomes. By meeting the following assumptions, better outcomes can be obtained.

- Causes a More Effective Team. Discussing assumptions reveal personal and group values and are an effective way for misunderstandings to be resolved.
- Improves Designs and Innovations. By identifying assumptions, workers can move beyond the day as usual and be more effective in integrated care.
- More Coordinated and Focused Action. By restructuring the various ways in which the staff anticipate change will occur, negotiate and organize a strategy.
- Better Basis for Adaptive Management. Focusing on critical assumptions can help with risk management.

- More Focused Learning and Evaluation. Looking for critical pathways can help guide analysis in evaluations.
- Increased Credibility. Assumptions can increase trust among those who have invested. The presumption that the intervention will evolve is first that the facility can move towards integrated care. To develop the intervention, prioritize hurdles to getting started. Develop a team to identify priority areas. For example, employ a behavioral health provider in primary care. A key focus to develop the intervention is a process for screening and collecting clinical measures specific to assessing for mental health issues.

Screening patients in primary care and referring to behavioral health can reduce doctor appointments, decrease the need to seek frequent transportation, and avoid polypharmacy. The intervention will also cause a unified treatment plan between both primary and mental health providers. Being able to see both providers in one day or seeing a dually-certified nurse practitioner will improve access to care (Guijt, 2013).

#### Specific Aims

The goal of the project was increased screening, early detection, and treatment of depression for those patients who are seen in primary care. The new practice strategy will improve collaboration between primary care and behavioral health implementing integrated care. The benefit of integrated care is to decrease the cost of care, shorten the provider gap, and decrease mortality and morbidity in the Native American population in Mississippi.

Integrated care can improve physical activity, reduce depression and anxiety symptoms, and decrease hospital admissions related to both physical and mental

illnesses. A measurable objective was the client's depression symptoms on PHQ2 would be less at one month follow up. Medication and treatment compliance would be effective as reported by the patients.

### Doctor of Nursing Practice Essentials

The Doctor of Nursing Practice (DNP) Essentials outlines foundational competencies fundamental to advanced nursing practice roles. DNP Essentials include scientific underpinnings for practice; organizational and systems leadership for quality improvement and systems thinking; clinical scholarship and analytical methods for evidence-based practice; information systems technology and patient care technology for the improvement and transformation of health care; health care policy for advocacy in healthcare; interprofessional collaboration for improving patient and population outcomes; and clinical prevention and population health for improving the nation's health and advance the nursing practice (AACN, 2006). Although all eight elements are essential, Essentials I, II, IV, VI, and VIII were particularly addressed by this DNP project.

### Summary

The goal of integrated care is to improve healthcare outcomes for both primary and behavioral health needs. Advantages of integrated care are the collaboration between two departments, improvements in patients' health with the goal of patients living longer, and staying out of the hospital (Wenke et al., 2013). A disadvantage of integrated care is managed care may destroy the relationship between the patient and the provider (Wenke et al., 2013). By utilizing the PHQ2 in the primary care setting, the project was able to

screen the current mental health status of all consenting clients age 18 years old and older that see a healthcare provider in primary care.

## CHAPTER II – METHODOLOGY

### Introduction

This DNP project study was conducted in the Primary Care Clinic in rural Mississippi. The primary care clinic is an HRSA designated Federally Qualified Health Center in Mississippi. This facility is the main healthcare provider for Native Americans, in Mississippi that provides free medical services to this underserved population.

### Project Objectives

An assessment of the primary care clinic's current level of integration was conducted using the IPAT. Interventions were introduced based on the level of collaboration (Heath et al., 2013). The process and detailed explanation of each step are listed below.

#### *Staff Orientation*

After identifying the level of integration, a meeting was held with the registered nurses (RNs) and licensed practical nurses (LPNs) from primary care and therapist in behavioral health to provide information on the purpose of the project. A fact sheet was given to each nurse and therapist detailing the benefits and the need for integrated care. The PD discussed the current level of integration to gain insight into how the nurses view assessing patients for mental health issues.

#### *Intervention*

All RNs and LPNs in primary care were introduced to the PHQ2 and reviewed both questions and to ensure the nurses understood how to ask the questions. The two questions are:

1. “In the last two weeks, how often have you been bothered little interest or pleasure in doing things”? The response choices are Not at all, Several days, More than half the days, or Nearly every day.
2. “In the last two weeks, how often were you feeling down, depressed or hopeless”? Using a warm hands-off practice helped. The same answer choices were used for each question.

For the older Native Americans who have difficulty understanding English, translation by a Native American nurse was available. The nurses screened all patients age 18 and older using the PHQ2 and referred those patients with a score of 3 or greater on the same day to a behavioral health therapist for a more in-depth assessment using the PHQ9. Using a warm hand-hand practice helps to reduce patient stigma about behavioral health care. The patient has a right to refuse to answer the questions and refuses behavioral health service. The intervention was in place for 2 weeks, Monday through Friday.

#### *Data Collection*

The PHQ2 was in paper format and the completed forms were put in a locked box for privacy. The PD met with the staff after a week to discuss how many PHQ2 were completed, how many refused referrals, and how many were referred. Before the meeting was adjourned, the staff had an opportunity to discuss issues that occurred while administering the PHQ2.

#### *Improve Access to Care*

Communication was key to moving forward with integration efforts. The nurses started by screening all patients 18 years of age and above for depression using the PHQ2 and referred or collaborated with behavioral health for those that scored 3 and above.

Patients have a right to refuse to answer questions and refused to be referred. When a patient refused to be referred or to answer the PHQ2, detailed documentation is imperative.

### *Outcomes*

The project's goal was the early identification of patients needing behavioral health care while visiting the provider in primary care. Results of the management strategy were discussed with the stakeholders at the facility and included the implementation of referral processes and collaboration with behavioral health. Less than a month after completing the intervention, the PD, met with behavioral health staff to discuss the implementation of the referral process or hiring a psychiatric mental health nurse practitioner or a master's level therapist in the primary care clinic.

### Population of Interest

The population of interest was the Native Americans seeking medical help in primary care. The staff taking part in the project include a medical doctor (MD), psychiatrist, family nurse practitioner (FNP), psychiatric nurse practitioner (PMHNP), licensed clinical social worker (LCSW), RN, LPN, licensed professional counselor (LPC), and medical billing. The RN and the LPN were the main points of contact with the Native American patients coming into the clinic. The sample size consisted of all patients ages 18 years old and above coming to primary care to be screened for depression using PHQ2. The exclusion was those patients who refused to consent to treatment. Inclusion criteria for the staff members trained to screen and refer and who have an interest in integrated care. Exclusion criteria include staff who has not been trained or those who did not have direct contact with patients.

## Setting

The DNP project was conducted at the primary care clinic at a Native American reservation in Mississippi. The primary clinic is one of the five clinics located on the first floor of the health center. Each provider has a workstation with three exam rooms. The primary clinic is a new state-of-the-art health facility built five years ago.

## Measures and Data Collection

The PHQ2 has two questions, and patients 18 years of age and older were screened in primary care. If the score was 3 or greater, major depressive disorder is likely, and the patients were referred to behavioral health for a more in-depth assessment using PHQ9. The diagnostic validity of the nine-item PHQ2 was established in studies involving eight primary care and seven obstetrical clinics. PHQ9 scores  $> 10$  had a sensitivity of 88% and a specificity of 88% for major depressive disorder. The APA (2019) completed a study involving two different patient populations produced Cronbach alphas of 0.86 and 0.89. Criteria validity was established by conducting 580 structured interviews by a mental health professional. Results from these interviews indicated that individuals who scored high ( $\geq 10$ ) on the PHQ9 were between seven to 13.6 times more likely to be diagnosed with depression by the mental health professional. On the other hand, individuals scoring low ( $\leq 4$ ) on the PHQ-9 had less than a 1 in 25 chance of having depression.

## Analysis

The interview method was used. Qualitative methods uncover trends in thoughts and dive deeper into the problem. Common procedures used during qualitative studies are individual interviews and observation. The project sought to show the benefits of

assessing clients in primary care for depression. Variables that may have affected the results are situational issues that affect the depression screening such as a recent trauma or loss and lack of understanding of health literacy.

### Ethical Considerations

The DNP project involved staff for research, such as the nurses who completed the PHQ2. An Institutional Review Board (IRB) application was submitted and approved at The University of Southern Mississippi (Protocol number IRB-19-591). Participation in the project was voluntary. Informed consents were signed and secured safely to protect confidential information. Data collection and consent forms were only accessible by the PD.

Minimal risk of psychological distress to the participants is possible when answering questions about depressive symptoms with staff and the patient had the option to withdraw from the project at any time. The benefits of participating in the project were to be a part of the team that assisted the staff in implementing a “one-stop-shop” for receiving healthcare for dual diagnosis.

### Summary

Patient-centered care can be beneficial to patients with complex issues getting the care they need; integrated care is a person-centered model of care that would be favorable to the Native American population to assist with medication and treatment compliance. Studies of integrated health care showed improvement in clinical effectiveness, a decrease in length of stay in the hospital, lowering of medication errors, and a reduction in the number of clinic visits. Screening and early intervention should lead to positive

impacts on patient satisfaction, lower service utilization, and more timely resource allocation (Wenke, 2013.)

## CHAPTER III - RESULTS

The DNP project of implementing an assessment tool in primary care was step one in creating a policy for integrated care. The project focused on screening, early detection, referral, and treatment of depression for patients 18-year-old and older seen in primary care. Before beginning the project, the level of collaboration between primary care and behavioral health is level 3. Level 3 of the IPAT is basic collaboration onsite where both the primary and mental health care in the same facility, however, uses a different system. A referral system used, but how-collaboration should operate was not clearly defined. Communication is more frequent on level 3 of IPAT, however, decisions are made independently by each provider when treating patients (Heath et al., 2013). The goal of the project was to create a policy to implement a screening tool in primary care to increase the level of collaboration, early detection, intervention, and treatment of depression symptoms. The change from level 3 to level 4 included more frequent collaboration between primary care and behavioral health about the goals of treatment for the patients. Top priorities when advancing the level of collaboration are creating a shared vision; effective communication, and embrace team structure. Plans to create a policy to implement a screening tool in primary care for early identification, referral, and treatment of mental health needs were based on the current level of collaboration.

An action plan was needed to obtain the desired outcome of the project. The PD prepared a proposal to implement a screening tool in primary care. The task was obtainable using five strategic objectives.

### Objective 1: Staff Orientation

The first step was to orientate staff in primary care to the project. Contact was made with the staff who agreed to participate in the project to give them an overview of the purpose, goals, time frames, inclusions, and exclusion of the project. A fact sheet was given to the staff during orientation sharing information on the benefits of integrated care. The PD discussed the current level of integration is level 3 and what that means. During the meeting, the PD gained insight into how the nurses viewed screening patients for mental health issues. During staff orientation, a few nurses were observed checking patients into the clinic to see providers. The patients were escorted to the room, vital signs obtained, and chief complaints were stated. The providers completed their assessment, prescriptions were given, and patients exited the clinic. During the observation, no screenings for depression symptoms or referrals were observed. After the observation, PD had an encounter with the nurses to discuss the start of implementing PHQ2 when checking in patients and the available resources for referrals.

### Objective 2: Intervention

The next step was to place the noteworthy flyer at the sign-in desk to get the patient's attention about the upcoming questionnaire, consent form, and PHQ2 screening tool. The PD met with project participating staff to review the PHQ2. PD instructed the staff to be sensitive to the patients when asking how often they were bothered with the symptoms over the last two weeks. The time frame the symptoms were present should be within the last two weeks. If depression symptoms were exhibited more than two weeks ago, it is good practice to perform PHQ2. If the score is greater than three, offer

behavioral health services to the patient. The patients with symptoms before two weeks will be excluded from the study.

The PHQ2 is a version of the Primary Care Evaluation of Mental Disorders (PRIME-MD) screening tool for common mental health disorders administered by health care professionals. PRIME-MD is a one-page questionnaire consisting of 26 yes/no questions that screen for five groups of mental disorders commonly found in the general population. The PHQ2 is the first two items of the PHQ9 which inquiries about the degree of depression the patient experience. The PHQ2 attempts to inquire about the frequency of depressed mood with a score ranging from 0-6. The cut-off score is 3.0 as the optimal point for screening purposes. Patients who score 3.0 or above or screen positive should be further assessed with the PHQ9 to determine if they meet the guidelines for depression (AACN, 2019).

### Objective 3: Data Collection

A follow-up briefing was held with the project team after the project to tabulate the numbers of patients who met the criteria and consented to be screened for the project. The total number of patients presented to primary care in two weeks period was 343. The number of patients consenting to be screened was 281, and two were referred to as behavioral health.

Table 1

*Data Collection, Week 1*

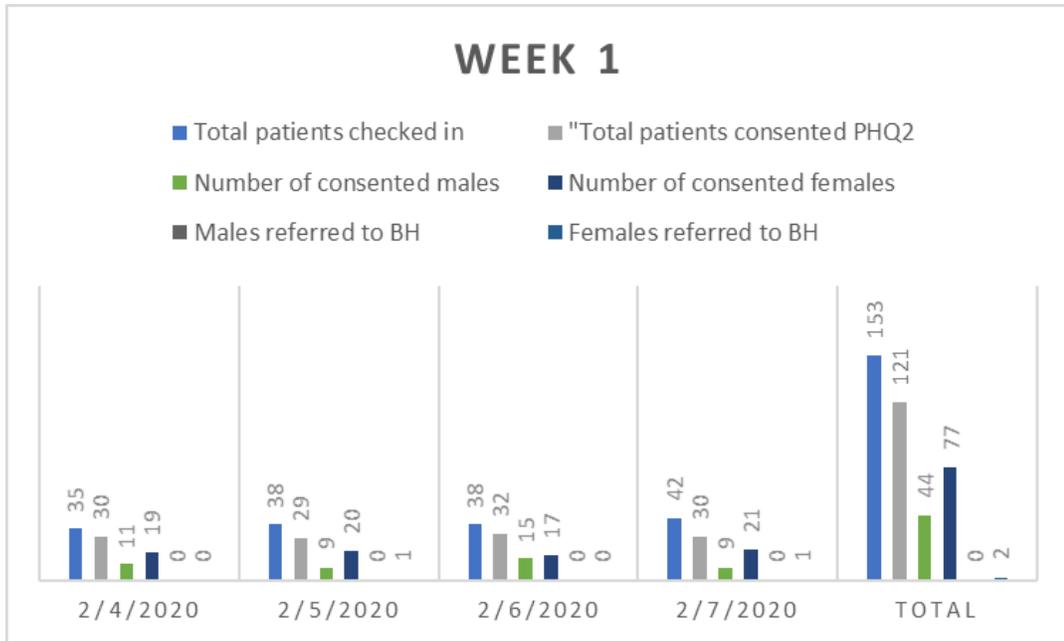
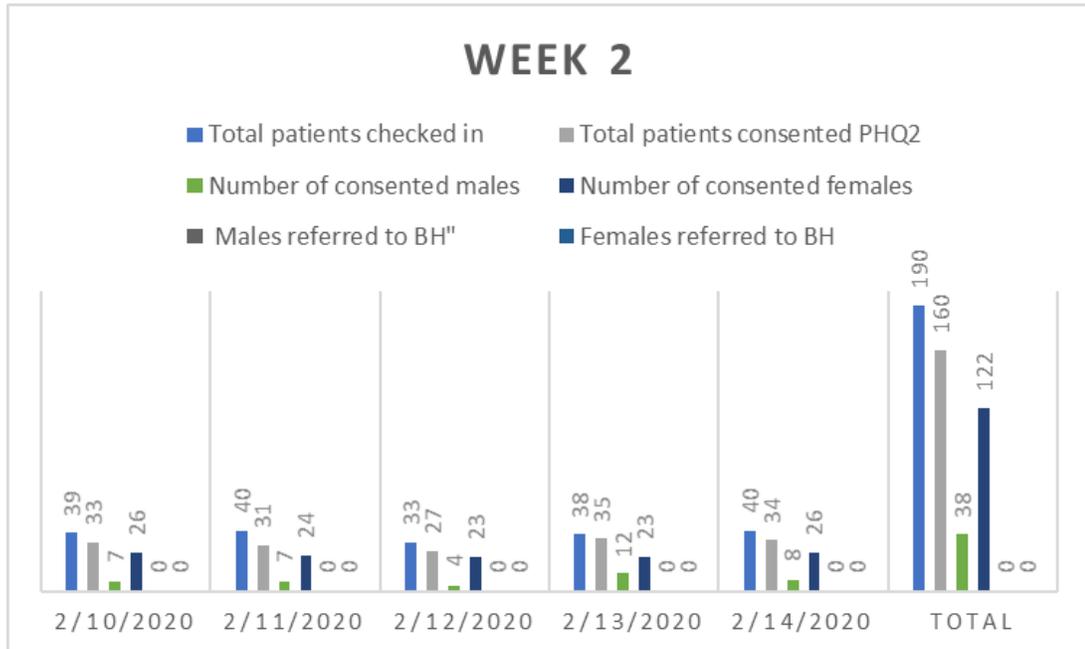


Table 2

*Data Collection, Week 2*



#### Objective 4: Improve Early Identification and Access to Care

Early identification and access to care decrease emotional burdens and reduce the chances of depression symptoms becoming severe. The next objective of the project was to inform medical staff and nursing service ways to identify, refer and treat mental health needs in primary care and improve the level of collaboration. PD made the following suggestions to primary care.

- Consistently perform (PHQ2) on all consenting patients over the age of 18.
- Improves communication between primary care and behavioral health
- Utilize other disciplines within the health center such as social services.
- Getting both primary care and behavioral health staff to buy into the referral process.

#### Objective 5: Evaluation

The last step of the project was to identify changes in the check-in process at primary care. A follow up with nurses and providers was performed to identify improvements which include:

- Improved communication between primary care and behavioral health care.  
Increased efforts are now being made by both departments to explain to their staff what changes are expected, roles of the nurses and behavioral health staff, and the benefits of the new task of increased collaboration.
- Consistent mental health screening. The nurses are more knowledgeable about PHQ2 and are making efforts to screen all consenting patients over the age of 18 who comes to primary care.

- Understanding staff roles. Walk-through primary care to introduce the behavioral health therapist to the nurses and providers and explain her role and the services she can provide.
- Utilizing behavioral health therapist. Primary care has improved the screening process by increasing the number of screenings for depression and referrals made to behavioral health. In November 2019, only one referral was made to behavioral health from primary care. During the project, two referrals were made in a week to behavioral health.
- Create an electronic referral form for primary care. The discussion was made with information technology to create a form in EHR to refer patients to behavioral health. If the score on the PHQ2 is 3 or greater and the patient consented to see behavioral health, the nurse would escort the patient to behavioral health using a warm handoff-

The overall goal of the project is early identification and referrals for the patients seen in primary care who are dealing with depression. To move to a level 4 of integrated care, increased skills and comfort-of nurses and providers in primary care making contact with patients with mental illness must continue to improve. Another improvement is to use resources, such as a therapist, as efficiently and effectively as possible and advocate to change attitudes, behaviors, and to eliminate stigma about mental illness (Aroll et al., 2018).

Level 4 of integrated care, both primary care and behavioral health, must work together to maintain an active and ongoing partnership. Both departments should understand one another and share planning and clinical goals. A collaboration between

the two departments can lead to improving health outcomes, patient satisfaction, and a rise in quality care.

During week one of the project, two females scored over three on the PHQ2 and were referred to behavioral health for further assessments. Neither of the patients scoring over 3 on the PHQ2 refused behavioral health. Primary care staff improved in screening patients for depression.

### Summary

To summarize the results, during week one of the project, two female patients scored over three on the PHQ2 and were referred to behavioral health for further assessments; no patients were referred week three. The results of the project indicated a small improvement in referrals to behavioral health. Consistent and coordinating care requires a team approach to improve the overall care of the patient. Each visit to the primary care clinic, the two questions on the PHQ2 can assist to diagnose depression.

## CHAPTER IV – DISCUSSION

The doctoral project promoted a combination of expertise from primary care and behavioral health staff to provide holistic care in the same setting. The goals of the project were to:

1. Determine the level of collaboration between primary care and behavioral health.
2. Implement a screening tool for depression and refer if needed
3. Integrate behavioral health into a primary care setting.

The Integrated Practice Assessment Tool (IPAT) was used to determine the current level of collaboration between the two departments. Changes were made in both primary care and behavioral health to increase the current level of collaboration/integration.

### Interpretation

The level of integration was determined by nurse practitioners and medical doctors using the IPAT assessment tool. The IPAT consists of eight questions with yes or no responses to determine which of the three categories and level primary care was operating at. The three categories are coordinated with the key element being communication, co-located with the key element being physical proximity and integrated with the key element being practice change. The results of the collaboration assessment tool for primary care indicated it was operating at a level 3, co-located. level 3 included coordinated services planning, shared training, team meetings, and the use of shared patient registries to monitor treatment progress. To increase the level of collaboration between primary care and behavioral health, some practice strategies changes needed to

take place (Heath et al., 2013). The level of collaboration as identified by the IPAT continues to be a level 3, basic collaboration onsite.

### Limitations

Limitations influence the explanations of the results of the project. The limitations noted in the project were:

1. Methods. Using a two-question interview, it was difficult for the patient to explain personal feelings to a stranger. The patient would give socially acceptable answers.
2. The data collection was a limitation asking questions about emotions may have been intimidating. Reporting of moods in the last two weeks may have been better if the questions were asked over the phone.
3. All staff in the clinic did not participate in the project. The patients seen by those staff members were not included in the study.
4. Time was a limitation. When asking the questions during a sick visit the patient would give a quick response. The two weeks was a short increment to collected data that caused a limitation.

A total of 17 providers in primary care at the health center. Four nurse practitioners, 3 medical doctors, and 6 nurses participated in the project. Three of the providers and their nurses were excluded since they mainly provide care to children and adolescents. One of the medical doctor's role was changed to the interim medical director during the time between the proposal and the project.

## Conclusions

The Diagnostic and Statistical Manual for Mental Disorders (DSM 5) (APA, 2013) grades depression as mild, moderate, and severe. Mild depression is five out of nine symptoms but mild in severity and functional impairment. Moderate depression is seven out of nine symptoms with moderate functional impairment. Severe depression is nine symptoms present with functional impairment, psychotic symptoms, and a recent suicide attempt or a plan (Tolentino & Schmidt, 2018). The project was useful in that it initiated primary care, PHQ2 screening of depression in primary care in hopes of identifying depression in the mild phase. The project also helped the primary care staff to see the benefits in assessing patients for depression during a clinic visit, and the project introduced the patients to the PHQ2 questionnaire that will be asked each clinic visit.

The sustainability of the project is that primary care has become the gateway for behavioral health in assessing patients for depression. Administering the PHQ2 is the first step to assist with diagnosing depression, which is one of the most prevalent mental health disorders in primary care. PHQ2 prevents providers from relying on a clinical judgment about referring patients to behavioral health. Screening for depression in primary care using a PHQ2 takes the liability of suicide away from the providers.

The project focused on screening patients in primary care for depression using PHQ2. Other departments can benefit from screening for depression using PHQ2 such as DM, women wellness, and emergency departments to name a few. The benefit of departments collaborating is consistently high-quality care. Quality improvement can be tracked using one indicator which is improvements of patients' depression symptoms. The PHQ2 can be used as a follow-up tool to assess for symptoms improvements.

## Implications for Practice and Further Study

The implications for practice and further study is needed. Both primary and behavioral health staff can learn from the mistakes made and improve screen skills.

Implications for practice include:

1. Increased training for clinical staff.
2. Increased level of collaboration between primary care and behavioral care by setting aside an hour each week to discuss shared patients.
3. Increased number of patients screened by primary care staff using the PHQ2 by including it in review of systems with the providers' assessment.
4. Implement PHQ2 using electronic health records.
5. Create a system of referrals and follow-up between primary care and behavioral health services.

Clinical staff can gain more insight by receiving more training in shifting from the traditional way of treating patients to more coordinated care. A strong point for primary care is to build professional relationships and treat the whole person. To increase the level of collaboration, primary care may consider some changes in practice strategies. The nursing staff needs to be consistent and perform PHQ2 on each consenting adult. Incorporating PHQ2 into the Review of Systems would be helpful when providers are assessing the mental health system. Another strategy that would be helpful is to place an integrated care therapist in primary care.

Moving to level 4 of integration is possible if the staff learned from their errors and is open to change. Scheduling another meeting with primary care to discuss expectations and timelines to get integrated care improved is a start. A designated person

from primary and behavioral health care can be appointed to monitor the progress towards improving the level of collaboration. Two staff members should meet weekly to share successes and failures. Each person needs to communicate with their department the results of the meeting to be successful.

A consistent policy related to screening for depression in primary care is needed. The administration is interested in meeting with PD to discuss findings and proceed with a policy. The use of a screening tool in primary care, when asked directly, can encourage patients to report depression. primary care and behavioral health care should be open to providing more holistic care to improve the patient's overall wellbeing.

APPENDIX A – PHQ2, Patient Health Questionnaire

PHQ2  
Patient Health Questionnaire

Instructions:

Please respond to each question.

Over the last **2 weeks**, how often have you been bothered by any of the following problems?

Give answers as 0 to 3, using this scale:

**1. Little interest or pleasure in doing things**

0=Not at all; 1=Several days; 2=More than half the days; 3=Nearly every day

**2. Feeling down, depressed, or hopeless**

0=Not at all; 1=Several days; 2=More than half the days; 3=Nearly every day

Instructions

Clinic personnel will follow standard scoring to calculate score based on responses.

Total score:

If the score is 3 or greater, major depressive disorder is likely.

Patients who screen positive should be further evaluated with the PHQ-9.

APPENDIX B – Doctor of Nursing Practice Essentials

Essential I: Scientific Underpinnings for Practice	Essential I. Primary Care and Behavioral Health. Nursing focused on the wellbeing of the patient and positive changes and was able to work in current practices and prepare for future changes related to evidence-based practice.
Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking	Essential II was used in the project to understand the outcomes of new policies. The project promoted early intervention and referral to improve access to care.
Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based for Practice	Essential III was used in the project to analyze data and present the information to the stakeholders. The DNP scholar presented evidence-based practice outlining the benefits of integrated care.
Essential IV: Information Systems/Technology and Patient Technology for the Improvement and Transformation of Health Care	Essential IV was included in the need for change. The clinic was using paper PHQ2 and a suggestion was made to include it in electronic health records to make it required to answer before the provider could move to the next step.
Essential V: Health Care Policy for Advocacy in Health Care	Essential V. The project advocated for improving access to care, attempting to provide both primary and behavioral health care into one clinic visit.
Essential VI: Interprofessional Collaboration for Improving Patient and Population	Essential VI. This project-centered around collaboration between 2 departments and improving health outcomes for the patients.
Essential VII: Clinical Prevention and Population Health for Improving the Nation’s Health	Essential VII. The overall purpose of this project is the early identification of depression. It is an attempt to treat symptoms before they become severe which may lead to suicide. (Suicide Prevention).
Essential VIII: Advanced Nursing Practice	Essential VIII. This project allowed the dually certified nurse practitioner to cross over and provide specialized assessments in a complex situation.

APPENDIX C – Literature Review

Reference	Design	Framework	Sample	Significance
Siantz, E., Henwood, B., Xu, Z., Sarkin, A., Gilmer, T. (2017, February, 1). Health care decisions among mental health services consumers in San Diego County: Implications for integrated care. <i>Health &amp; Social Work. 42(1), 48-56. doi: 10.1093/hsw/ hlw060.</i>	Cross-Sectional	Four-quadrant clinical integration model	N/A	Mental health client receives needed medical care from various service settings signifying there is no set venue for mental health clients to receive medical care
Mann, C. C., Golden, J. H., Cronk, N. J., Gale, J. K., Hogan, T., & Washington, K. T. (2016). Social workers as behavioral health consultants in the primary care clinic. <i>Health &amp; social work, 41(3), 196– 200.</i>	Detailed Account	Conceptual Contribution	N/A	Missouri Health System’s detail account of placing social workers in the primary care setting to implement behavioral health

<p><a href="https://doi.org/10.1093/hsw/hlw027">https://doi.org/10.1093/hsw/hlw027</a>.</p>				
<p>Ko, M., Murphy, J., &amp; Bindman, R. (2015, November 15). Integrating health care for the most vulnerable: Bridging the differences in organizational cultures between us hospitals and community health centers. <i>American Journal of Public Health</i>, 105(5), Suppl. 5:S676-9. doi: 10.2105/AJPH.2015.302931.</p>	<p>Qualitative /Interviews</p>	<p>N/A</p>	<p>Executives from hospitals and community health centers in five United States. cities</p>	<p>The study focused on barriers to delivery of health care to the uninsured, the DNP project will focus on the underserved population.</p>
<p>Vest, J.R., Caine, V., Harris, L.F., Watson, D.P., Menachemi, N., &amp; Halverston, P. (2018, May). Fostering local health department and health system</p>	<p>Qualitative /Interviews</p>	<p>N/A</p>	<p>Patients (adult and pediatric ) were at high risk and had unmet psychosocial needs</p>	<p>Including public health nurses into integrated care helps the provider to get a better understanding of the environment /social deterrents</p>

<p>collaboration through case conferences for at-risk and vulnerable populations. <i>American Journal of Health</i>, 108(5), 649-651. doi: 10.2105/AJPH.2018.304345.</p>			<p>and were drawn from predominantly urban and lower-income communities.</p>	
<p>Leavitt, R. A., Ertl, A., Sheats, K., Petrosky, E., Ivey-Stephenson, A., &amp; Fowler, K. A. (2018). Suicides among American Indian/Alaska natives - national violent death reporting system, 18 states, 2003-2014. <i>MMWR. Morbidity and mortality weekly report</i>, 67(8), 237-242. <a href="https://doi.org/10.15585/mmwr.mm6708a1">https://doi.org/10.15585/mmwr.mm6708a1</a>.</p>	<p>Retrospective Design</p>	<p>N/A</p>	<p>N/A</p>	<p>Suicide prevention strategies help to reduce completed suicides in the Native American population.</p>

<p>Huang, S., Fong, S., Duong, T., &amp; Quach, T., (2016, June 6). The affordable care act and integrated behavioral health programs in community health centers to promote the utilization of mental health services among Asian Americans. <i>Translation Behavioral Medicine</i>,6 (2), 309-315. doi: 10.1007/s13142-016-0398-4.</p>	<p>Multi-disciplinary</p>	<p>N/A</p>	<p>N/A</p>	<p>Patients with mental illness continue to face barriers when attempting to receive health care.</p>
<p>Stadnick, N.A., Sadler, E., Sandall, J., et al. (2019). Comparative case studies in integrated care implementation from across the globe: a quest for action. <i>BioMed Central</i></p>	<p>Multiple case study</p>	<p>Exploration, Preparation, Implementation, Sustainment (EPIS)</p>	<p>N/A</p>	<p>Understanding the goals to advance to integrated care are (1) funding at multiple levels, (2) meaningful collaboration and (3) clear communication</p>

<p><i>Health Services Research</i>, 899 19, 899.  <a href="https://doi.org/10.1186/s12913-019-4661-5">https://doi.org/10.1186/s12913-019-4661-5</a></p>				
<p>Thombs, B., Benedetti, A., Kloda, L. et al. (2014, October 27). The diagnostic accuracy of the patient health questionnaire-2 (PHQ-2), patient health questionnaire-8 (PHQ-8), and patient health questionnaire-9 (PHQ-9) for detecting major depression: protocol for a systematic review and individual patient data meta-analyses. <i>System Review</i>, 3, 124. doi: 10.1186/2046-4053-3-124.</p>	<p>Systemic review/Meta-Analyses</p>	<p>Descriptive</p>	<p>N/A</p>	<p>Reviewing the diagnostic accuracy of the PHQ2, PHQ*, and PHQ9</p>

<p>Suzuki, K., Kumei, S., Ohhira, M., Nozu, T., &amp; Okumura, T. (2015). Screening for major depressive disorder with the patient health questionnaire (PHQ-9 and PHQ-2) in an outpatient clinic staffed by primary care physicians in Japan: a case-control study. <i>PloS one</i>, <i>10</i>(3), e0119147. <a href="https://doi.org/10.1371/journal.pone.0119147">https://doi.org/10.1371/journal.pone.0119147</a></p>	<p>Case-Control Study</p>	<p>N/A</p>	<p>Patients from outpatient clinics in a medical university hospital in Japan.</p>	<p>The PHQ2 and PHQ9 are useful screening tools for major depressive disorder</p>
<p>Willging, C.E., Sommerfeld, D.H., Jaramillo, E.T., et al. (2018). Improving Native American elder access to and use of health care through effective</p>	<p>Qualitative and quantitative interviews</p>	<p>Seminal Socio-Ecological model (SEM)</p>	<p>Native American elders</p>	<p>The research allowed Native American elders to share their experience with health care and insurance. Native American elders have difficulty accessing health care due to a decrease in insurance coverage and</p>

<p>health system navigation.  <i>BioMed Central Health Services Research</i>, 464.  <a href="https://doi.org/10.1186/s12913-018-3182-y">https://doi.org/10.1186/s12913-018-3182-y</a></p>			<p>living in rural areas or on the reservation. Many culturally sensitive programs are available to improve healthcare practice for the (NA) elders,</p>
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## APPENDIX D – Fact Sheet

1. Primary care has become the gateway to behavioral health services.
2. Lack of consistent screening in primary care has caused missed opportunities to identify depression during a routine healthcare provider visit.
3. Overall improvement in patient's health can be attained with a collaborative relationship between primary care and behavioral health
4. In 2014, suicide was the second leading cause of death for Native Americans between the ages of 10 and 34. Substance abuse, sudden infant death syndrome, teenage pregnancy, liver disease, and hepatitis are prevalent in Native Americans.
5. Dual diagnosis is significant in the Native American population
6. The Affordable Care Act introduced new and enhanced options to improve care for dually-diagnosed patients through better care integration and improved quality measures
7. The PHQ2 is an assessment tool used by healthcare providers to inquire about the frequency of depressed moods the patients may or may not be experiencing within the last 2 weeks.

## APPENDIX E –IRB Approval Letter

### NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB-19-591

PROJECT TITLE: Doctoral Graduate Project

SCHOOL/PROGRAM: School of LANP, Leadership & Advanced Nursing

RESEARCHER(S): Donna Snow, Carolyn Coleman

IRB COMMITTEE ACTION: Approved

CATEGORY: Expedited

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

PERIOD OF APPROVAL: February 3, 2020



**Donald Sacco, Ph.D.**

**Institutional Review Board Chairperson**

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