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Increasing Adherence to Measurement-Based Depression Management in Primary Care

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INCREASING ADHERENCE TO MEASUREMENT-BASED DEPRESSION

MANAGEMENT IN PRIMARY CARE

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Abstract

Background and Review of Literature*.* Approximately 11 million Americans 18 years or older experienced a severe symptom of depression leading to impairment in 2017. The severity of depressive symptoms is often miscalculated in primary care as measurement-based tools for the diagnosis and ongoing reassessment varies. ***Purpose.*** The purpose of the project was to increase provider adherence in using the patient health questionnaire-9 (PHQ-9) for ongoing evaluation of the severity of depressive symptoms in patients with depression at a primary care clinic in San Antonio, Texas. ***Objectives****.* The main objective of this Doctor of Nursing Practice project is to improve provider assessment and use of a measurement-based tool to assess depressive symptoms. Another objective is to improve referral rates to behavioral health services for the treatment of depressive disorders that are not responding to their current treatment plan. ***Planned Intervention****.* Important intervention includes staff education on the importance of using reliable tools to measure depression severity, such as with the PHQ-9, in patients of the clinic. Additionally, assuring provider adherence to using the PHQ-9 to assess the severity of depressive disorders to guide treatment plans, follow-up care, establish medication regimen, determine psychotherapy needs, and refer to behavior health services. ***Results****.* Post-intervention there was a 50% (*N*=25) increase in PHQ-9 use for depression severity scoring and of those patients screened, 40% were referred to mental health providers post-intervention. ***Implication****.* The use of a measurement-based tool to assess depression severity allows for individualized and accurate disease management, making it an essential aspect primary care.

Keywords: PHQ-9, depression, primary care, measurement-based, depression severity

Increasing Adherence to Measurement-Based Depression Management in Primary Care

The National Institute of Mental Health identifies depression as a leading cause of disability worldwide with a U.S prevalence rate of 17.3 million adult cases in 2017 which is a 7.1% of the American adult population (2018). The prevalence of Major Depressive Disorder (MDD) is affected by factors such as age and gender, yielding a higher percentage in females than males by approximately 3.4% (NIMH, 2018). The disparity between males and females may be attributed to unique factors such as postpartum depression.

The World Health Organization (WHO) states that there are effective forms of treatment for depression, yet less than half of individuals in the world with MDD receive appropriate or any medical treatment (2018). The symptoms of MDD like malaise, tiredness, weight gain or loss, or sadness often go unnoticed, or are attributed to other illnesses by healthcare providers in the primary care setting. This trend is evident in patients with comorbid chronic illnesses such as Type II diabetes mellitus, heart disease, and hypertension (WHO, 2018).

The aim of this doctorate level quality improvement (QI) project was to increase primary care provider adherence to using the Patient Health Questionnaire-9 (PHQ-9) measurement-based tool, which itemizes each of the 9 DSM-5 depression diagnostic criteria in the assessment and diagnosis of depression severity. This intervention guided individualized care management of adult primary care patients with a diagnosis of major depressive disorder. The PHQ-9, when administered by the primary care provider to a patient with a previous diagnosis of MDD, can guide the follow-up care and changes in the current pharmacologic and nonpharmacologic care. Furthermore, through this project a process for patient psychotherapy referral has been simplified by using a list of near-by cost-effective mental health providers as a quick reference. Improvements in resource allocation and use of educational materials on recognizing depressive

symptoms, resources for treatment and management, and options for rehabilitation was the ultimate project focus.

Authors Kroenke et al. (2001), found that the higher PHQ-9 severity scores were associated with more functional status decline. Focus on the detection of depression and less on the degree of depression is needed to guide treatment modalities and strategies (Ng et al., 2017). Their study displayed a sensitivity and specificity of 88% for major depressive disorder in individuals who had a PHQ-9 measurement of greater than nine or equal to 10. They determined that the PHQ-9 is a valid tool in the diagnosis of depression and for ongoing monitoring as it is brief and cost-effective as well (Kroenke et al., 2001).

Since primary care providers diagnose 90% of all depression cases, there should be an emphasis on the use of measurement-based assessment and diagnosis for better detection of suicidal behavior, which increases mortality rates (Petersen et al., 2018). Depression leads to medical morbidity. Thus, increased healthcare costs, hospitalization rates, lack of treatment adherence, and higher rates of morbidity. The goal of depression care management in the acute phase is to induce remission of major depressive episodes and aid the patient in returning to their baseline functional status. Treatment modalities are based on the severity of depression, patient preference, comorbid conditions, ongoing treatment of depression or other health conditions, and prior treatment responses (American Psychiatric Association, 2010).

Statement of the Problem

Care management of depression in primary care requires the standardization of measuring depressive symptom severity during follow-up care to treatment response. However, it is delayed due to the nature of the disease process, long-term medication action, and time-consuming psychotherapy (Tadić et al., 2016). Regular use of valid measurement-based tools to

guide the treatment of depression is not currently the standard of care at the DNP project site.

The practice is a primary care (internal medicine), outpatient private practice in the South Texas

region. Currently, there is no policy or specific guideline on assessing patient depression severity

by the clinic physician, or a system for a referral to mental health providers for psychotherapy

options.

Inconsistencies in detecting medication nonadherence, changing antidepressant dosage,

or referring to psychotherapy can lead to a decline in the functional status of this clinic's patient

population. In the clinic, other disorders are quantified by measurement tools such as blood

pressure readings to manage hypertension treatment or hemoglobin A1C results to adjust

medication regimens for diabetic patients. References by the practicing physician are made

inconsistently on the monitoring of patients with depression. Depression severity can be

quantified using the PHQ-9 to assist in monitoring patient disease progression and response to

treatment modalities (Watzke et al., 2014).

Background and Significance

The Institute of Clinical Systems Improvement (ICSI) recommends the use of a tool, such

as the PHQ-9, to guide follow-up care for patients diagnosed with depression to adjust therapies

according to individual treatment response (Trangle et al, 2016). Stigmas surround MDD are

present in various cultures and societies (Ng et al., 2017). A holistic approach to patient care in

this population is important; therefore, resources should be offered to the patient to alleviate

feelings of discrimination by societal standards. Strong patient-provider rapport has been proven

to improve health outcomes. Antidepressants are often chosen over psychotherapy by providers

for their patients, but they both have been proven to treat depressive disorders equally.

Cognitive-behavioral therapy (CBT) is another treatment modality that works to modify behavior

and thoughts that cause depressive episodes and feelings (Watzke et al., 2014). When antidepressant medications are started, primary care providers must review side effects to assure medication safety, and the dosage is started at a subtherapeutic level, and reassessment is done after a few weeks to adjust dosages accordingly.

There are a multitude of factors that must be assessed after an initial diagnosis of MDD. Medical homes are expected to standardize accurate evaluation of the therapeutic effects of initial and continued treatment modalities to achieve remission with a minimally effective medication dose or other interventions (Ng et al., 2017). Currently, the remission of depressive episodes is at 75% with primary care treatment methods. With the adherence to measurement-based tools like the PHQ-9 to accurately assess depression, symptom severity treatment becomes truly tailored, and depression remission with the least invasive possible treatments can reduce disease-related disability (Trangle et al., 2016).

If the effects of depression on the health of adults in the United States is not compelling enough to drive reform of depression care management through structured follow-up, the billions of dollars in healthcare spent on complications of severe depression justifies the urgency in changing current primary care processes in the treatment of this condition (National Committee for Quality Assurance, 2019).

Assessment

This DNP project took place in an outpatient Internal Medicine clinic that serves as a primary care practice for approximately 1,200 adult patients in the South Texas region. There are a few pediatric patients who receive care as the physician accepts providing care to entire families. In this practice, patients receive care for acute conditions, physicals, annual health screenings, and chronic conditions. Patient follow-up appointments for chronic care management

are scheduled every 8 to 12 weeks. Greater than 70% of patients receiving care at this practice have Superior Medicaid or a form of Medicare. The clinic accepts approximately 15% self-pay patients. The rest of the patients have commercial, Health Maintenance Organization, or Preferred Provider Organization payment types.

The clinic currently uses the PHQ-9 for assessment of cognitive decline for patients requesting aid in the immigration process with a provider testament to qualify patients' cognitive impairment. The PHQ-9 is a 9-question tool based on the DSM-5 diagnostic and symptom identification for MDD. This validated tool is used for interview of the patient by the practicing physician during patient evaluation and has 86% and 89% sensitivity and specificity, respectively (Hanlon et al., 2015; Tandon et al., 2012). There were no tools used for universal depression screening or symptom severity to guide treatment in the clinic. The demographics of the clinic population consist of 56% female gender and lower socioeconomic status. Most patients are unfunded or receiving federal aid for healthcare, and many of the middle eastern patients hold refugee status. Some patients express depression stemming from experiences of war, death of family and friends, and being forced out of their homeland into a new environment. Events such as these are life-altering situations that can lead to psychological distress (Khaled, 2019).

The ICSI has clinical guidelines for the management of depression in primary care. They strongly recommend the use of the PHQ-9 to score depression severity during follow-up in patients diagnosed with MDD (2016). They suggest follow-up after 30 days of initial treatment, but there are no other established guidelines on the timeline for the monitoring of depression (Siu et al., 2016).   Pre-intervention, the patients in the clinic were diagnosed with depression based on provider interviews without the use of measurement-based diagnostic tools. Documentation of

depressive symptoms was limited, and follow-up care included asking the patient a general

question "How are you feeling?". The electronic health record was not used by the physician and

used inconsistently by the medical assistant. There were no built-in screening or assessment tools

in the electronic health record to prompt the medical assistant to screen a patient for depression

or other conditions. The paper chart did contain a list of preventative health measures to cover

during each visit in which the medical assistant and physician reviewed with each patient. These

measures included the latest dates of colonoscopy, mammogram, hemoglobin A1C,

microalbumin, lipid panel, influenza vaccine, and pneumococcal vaccine. Depression screening

was not listed on this intake sheet.

A needs assessment was completed through a review of all the paper-based charts from

October 1, 2019, to November 1, 2019, with the assistance of the office receptionist. This data

showed that out of 200 patients 50 patients (25%) had a diagnosis of depression and were taking

an antidepressant medication. None of the patients with depression had a PHQ-9 in their chart.

Of the 50 patients with depression listed as a diagnosis on their intake note, 6 (12%) of the

patients had symptoms of depression documented by the physician in the assessment; which near

parallels the national prevalence of depression according to the Center for Disease Control and

Prevention (Brody et al., 2018). None of the 50 patients diagnosed with MDD had a referral to a

mental health provider nor was depression severity rated in the patient charts. Therefore, the

severity of symptoms could not be averaged for the patient clinic population.

Clinical Practice Readiness for Change

The primary care practice staff was assessed for readiness for change. The Practice

Improvement Capacity Rating Scale (PICRS) was administered as a measurement-based tool.

The PICRS includes several practice assessments questions that address the organization's ability

to support a QI project. This primary practice PICRS score was 250, which meets readiness criteria for the implementation of a QI project according to the Aligning Forces for Quality (2014). The score was an average of the four staff members of the clinic, including: one office manager, one medical assistant, one receptionist, and one medical doctor. They all voice willingness and enthusiasm to participate in a QI project.

The clinic was evaluated using the Strengths Weaknesses Opportunities and Threats analysis. Some strengths of the practice are (a) the eagerness of the clinic staff including the physician to improve the quality of care, (b) the physician's 45 years in practice—giving him experience in interviewing patients with depression and the application of DSM-5 diagnostic criteria to patient care, and (c) a strong patient-provider rapport. Many of the patients have been seen at the practice for years and 80% of the clients speak Arabic as their primary language. The physician is fluent in Arabic as well as English.

A few weaknesses in the primary care practice that were found to contribute to noncompliance to recommended guidelines for depression treatment and follow-up pre-intervention were (a) the clinician declining to use the electronic health record, (b) inconsistent assessment of depression severity at follow-up visits for patients with MDD, (c) little to no adjustment of antidepressant medications, and (d) relatively low referral rates to mental health providers for psychotherapy and further evaluation (NCQA, 2019).

In this primary care practice, there were opportunities to implement the PHQ-9 for the measurement of depression severity. There were also opportunities to improve scheduling of follow-up care for the evaluation of treatment response and to increase referral rates to mental health services for standardization of MDD treatment protocol.

Stakeholder Engagement

The clinic physician and staff met with insurance representatives at their request in September of 2019 regarding patients seen in this clinic for depression and received treatment. In the meeting, the insurance representatives expressed concerns about the lack of provider supporting documentation for depression diagnosis, treatment, and follow-up care. The representatives requested the primary care physician provide adequate justification of depression severity for the prescription of antidepressants in patients with diagnosed depression. The outcome of the meeting was the physician and office manager discussed the need for timely and thorough documentation on depression severity for tailored care management of patients with depression.

Project Identification

Purpose

The purpose of this DNP project was to increase provider adherence to guidelines on diagnosing depression severity. This was done by the implementation of the PHQ-9 to measure depressive symptoms, standardizing follow-up evaluations for treatment efficacy, and increasing the mental health provider referral rates in a small primary care practice in South Texas.

Objectives

The first objective was to educate staff on the importance of follow-up on patients with MDD, the use of PHQ-9, cost-effective mental health services, and referrals. It was essential to address this objective before the implementation of the PHQ-9 for grading of depression symptom severity.

The second and primary objective of this study was to increase provider adherence to the use of the PHQ-9 for assessment and documentation of depression severity in patients with

MDD. Depression severity monitoring allows for adequate and appropriate medication and dosing. Psychotherapy through mental health provider referral and adjustment of therapy is made based on quantitative measurement of the patients' current illness.

The third objective was to increase the number of primary care provider referrals to behavioral mental health services for patients who met criteria for additional therapies that exceeded in-house capabilities.

Anticipated Outcomes

The anticipated aims were as follows:

1. All staff members will receive education on depression treatment guidelines, specifically on the evaluation of treatment during follow-up using the PHQ-9 by December 15, 2019.

2. By June 15, 2020, 100% of all adult primary care clinic patients diagnosed with MDD will have symptom severity calculated using the PHQ-9 measurement-based tool.

3. By June 15, 2020, the referral rate will increase from none to 25% in patients with depression that indicate a need for psychotherapy or additional support by mental health providers.

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Review of the Literature

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Depression for the past 20 years has been a focus of medical research, and the approach to treatment has moved from unimodal, such as administration of an antidepressant without combination therapy, to a collaborative care approach that is multimodal and individualized. A review of the literature was completed using key search terms in the following databases: CINAHL, PLOS, Cochrane Library, Google Scholar, Science Direct, PubMed, Springer Link,

PsychInfo, and MEDLINE. Keywords used to narrow down search results were depression, PHQ-9, depression severity.

Guidelines for depression care management can be found through the American Psychiatric Association (2010), which details aspects of all the phases of MDD. The APA outlines measurement-based care using measurement tools that are either self-administered or clinician-administered aid in the projection of individualized disease trajectory, which enhance the quality of care and improve patient outcomes. Rating scales should be used to systematically evaluate patients for initial and ongoing depression severity (American Psychiatric Association, 2010).

The NCQA reports ICSI depression guidelines and the Healthcare Effectiveness Data and Information Set (HEDIS) depression measures both outline the importance of universal screening for depression in primary care with adequate follow-up care and continuity of treatment. The clinical recommendation statement on the 2018 HEDIS reports that the standardization of measurement-based tools by clinicians will result in a meaningful improvement in clinical outcomes. The adult guideline emphasizes the need for monitoring through adequate follow-up care and continued use of the PHQ-9 to monitor depression symptom severity. There are specific guidelines for the use of electronic clinical data systems on the use of the PHQ-9 for monitoring symptoms of depression in both adolescents and adults (NCQA, 2019).

Another study described the importance of using measurement-based tools in monitoring patients with depression through a primary care cluster randomized control trial that included 74 different practices and a total of 626 participants. A collaborative approach is achieved by including case management and behavioral health services. The primary care clinics

administered the PHQ-9 to assess depression symptom severity for the primary outcome. Two

trajectories were recognized after a 12-point measurement of the patients at baseline. Patients

were identified fast-improvers or slow-improvers. Higher mean scores on the PHQ-9 were found

in fast-improvers, which is related to low suicide attempt rates and low somatic symptoms

(Petersen et al., 2018). In contrast, the slow improvers had more somatic depressive symptoms

and higher rates of suicide. The study concluded that symptom severity graded by PHQ-9

allowed the primary care team to understand the intensity of treatment each patient needed

(Petersen et al., 2018). This study can be used to justify developing care plans according to PHQ-

9 scores and clinical judgment to identify the best method for depression remission.

Separately, a study by O'Brien and colleagues focused on the effects of negative and

positive coping mechanisms on psychological distress. The study was conducted in an adult

population in which psychological distress was measured with tools that assess for depression,

anxiety, and worry severity (2019). They used multiple linear regression models to determine the

association of religious coping with each measure of psychological distress. (O'Brien et al.,

2019).

In the clinic, patients often reported experiencing distress after immigrating to the U.S as

refugees surviving war and they use prayer as a means of coping. The assessment of depression

severity is especially important in a predominantly Muslim patient population in the clinic.

Another cross-sectional study, with 339 Muslim participants who were randomly selected, were

screened to identify whether they had positive or negative religious coping mechanisms. The

participants then answered questions from the Death Depression Scale. The results revealed that

individuals with negative religious coping had higher rates of depression. The study findings

support the need to encourage positive religious coping to reduce depression severity and other

psychological distress (Mohammadzadeh & Najafi, 2018).

Method

Manual data collection by the DNP student from adult patients over the age of 18 years

presenting to the project clinic for routine or follow-up care with a previous diagnosis of

depression or presenting with depressive symptoms. The data collected assessed:

1. The rates of measurement-based calculation of depressive symptoms using the PHQ-9.

2. The outpatient or inpatient referrals to treatment by mental health providers for patients
   with depression.

Modifications to data collection to abide by social distancing standards related to the 2020

pandemic included data collection via phone or pre and post office hours.

Project Intervention

The DNP project implementation period was from February 10, 2020, to June 15, 2020.

Patients with new visits or follow-up clinic appointments were identified to either have a prior

diagnosis of depression or not. If the patient had a medical history of depression, then a PHQ-9

was used to assess depression symptom severity and guide depression management and

treatment. The project interventions include:

1. Staff training and education on measurement-based treatment and management of
   depression symptoms and the PHQ-9 components as well as the importance of
   referral to behavioral health services.

2. Increasing provider adherence to use of the PHQ-9 depression severity monitoring
   tool in compliance with practice guidelines and improve documentation on patient
   progress by implementing the use of the PHQ-9.

3. Implement the use of a behavioral health referral resource sheet for quick

     reference for patients needing additional treatment options for depression

     management and to increase mental health provider referral rates.

 A single 30-min session was held with the three staff members, including the

receptionist to provide education about the basis for using the PHQ-9 for monitoring depression

symptom severity and review current presentation of patients with depression and how each of

the nine questions are important in providing empirical assessment data that guides treatment.

The measurement-based standardized PHQ-9 scoring system was discussed in this staff

education session. The DNP student answered all staff questions on the PHQ-9 after the

educational session. A folder with the PHQ-9, a copy of the behavioral health resources referral

list, and an algorithm for step-by-step actions to take for a patient with a diagnosis of depression

were given to the staff and clinician. The team was updated with the DNP project objectives and

the implementation period.

The clinic is a small private practice with only four treatment rooms and one medical

assistant who participates in patient care. There are no written policies that the clinic follows for

clinical practice guideline adherence. The office manager, who is a non-clinical medical

assistant, was included in the educational session to understand DNP project objectives. The

clinician was separately educated on the importance of using measurement-based tools to assess

and monitor symptom severity in patients with depression. These measures aided in the

documentation expectations of legal and financial entities. An algorithm for the diagnosis of

depression severity and outcome measures was given to the clinician for reference. The clinician

expressed an understanding for the need of reassessment of patients with depression for

symptom severity to guide individualized care.

All staff members were aware that starting February 10, 2020, all patient charts will be reviewed upon arrival for an appointment related to a diagnosed history of depression. If there was a past medical history of depression identified, then the color-coded PHQ-9 was placed into the patient progress note for the clinician to complete with the patient. The PHQ-9 was printed on blue paper to distinguish the new process improvement project as it was previously green when used for immigration paperwork and documentation.

The single clinician of the practice was prompted to address the patient's depression symptom severity with the use of the PHQ-9. Depression severity can be scored mild, moderate, moderately severe, or severe based on the PHQ-9 scores of 5, 10, 15, and 20 respectively. With this measure, the provider then adjusted the current patient depression care plan. If the patient was not currently taking medications or receiving psychotherapy, treatment was initiated. If treatment modality was already in place but symptom severity was unchanged or worse, then the provider used depression treatment clinical guidelines to gauge changes in medication dosage and referral to a mental health care provider. The clinic staff and the clinician emphasized to patients the importance of reporting depression symptoms. The receptionist made a 30-day follow-up appointment on patients diagnosed with depression, who showed persistent or worsening symptoms with treatment adjustment or mental health provider referral. The provider suggested referrals to mental health care providers for qualified patient, and referrals were made by the clinical medical assistant with the use of the behavioral health services resource and referral list given to the staff.

Patient referral to mental health services aimed to increase the use of these resources for patients with depression. During the pre-intervention period, 40 patients were identified to have a depression diagnosis at some point in their medical history. Only 12% of patients with

depression had symptom severity documented by the clinician. None of the charts reviewed had

a measurement-based tool used for depression symptom severity monitoring. None of the

patients in the pre-intervention period of October 1st, 2019 to November 1st, 2019, were referred

to mental health services. A list of mental health resources and clinics that the project site staff

can use to ease the referral process was made by the DNP student to increase the rates of patient

referral to mental health providers for the management of depression.

Setting Population

The clinical project site is in a private internal medicine practice with a single clinician

and three staff members serving patients across the lifespan. Most patients are older adults, and

primary care services are offered Monday through Friday from 8 a.m. to 5 p.m. The patients

included in this QI project were patients with a past medical history of depression seeking

follow-up or routine care. Patients expressing thoughts of suicide or homicide were arranged

with a higher level of care through emergency care. The protocol was to call the local police

department or emergency medical services for patients with acute risk of harm to self or others,

particularly on patients who answer yes on the 9th question of the PHQ-9.

Organizational Barriers/Facilitators

Before the start of the DNP project, consideration for an empirical reassessment of

depression symptom severity or even adequate documentation of patient assessment of

depressive symptoms was not happening in the project site. There were recent warnings from

insurance providers who conducted chart audits that depression monitoring documentation was

lacking.

Pre-intervention the clinician provided depression care based on personal preference and

without uniformity through adherence to depression management guidelines. Outside the clinical

setting, the clinician is considered a religious leader among Muslim and Iraqi community, and this community makes up majority of his patient population. Additionally, the clinician is fluent in Arabic which enables a good rapport with the Middle Eastern patient population. Cultural and spiritual beliefs about depression can be a significant barrier to adherence of treatment plans. Patients often expressed resistance to depression symptoms due to the perceived relationship that one has become dissociation to one's religion. These factors underly the subjective approach to care, lack of individualization, and disregard of symptom severity. There is limited time to document patient interactions and depression monitoring, and assessment results by the clinician as the clinic's primary charting method remains handwritten. This left the provider with numerous patient charts to back-chart on in his office space, at times for over a week.

Additionally, it has not been commonplace to refer patients with depression to mental health care providers for additional support such as multimodal treatment like counseling, psychotherapy, and psychopharmacotherapy in the DNP project site. There is no reference list of mental health resources or providers to refer patients in need to. Again, the clinic staff consists of three individuals including the receptionist, office manager, and the medical assistant. Therefore, there is no designated QI team. Process change and improvement efforts in the clinic usually takes place by adhering to new orders, the physician of the clinic places.

Facilitators had supportive attitude towards clinic staff, clinician, and the management who were happy to accommodate a QI project. There were high engagement levels in the data collection with information volunteering. The practice manager, although hesitant about whether the clinician would comply with using a measurement-based tool to guide monitoring depression and treatment, was reassuring that with time, the initiative would become commonplace. Buy-in

and support were obtained early on as there was a need for modification of depression

monitoring due to noncompliance with insurance supportive diagnostic documentation standards.

Ethical Considerations

The University of the Incarnate Word Institutional Review Board reviewed this DNP QI

Project and approved it as non-research December 5th, 2019. Patient data collected for the project

has been secured at the DNP project site with the rest of the clinic's patient information. The

student completed all required HIPAA training before the start of the DNP project.

Results

Before the start of the project implementation period, aggregate data were collected through a

manual review of 238 charts from patient visits on October 1st, 2019, to November 1st, 2019.

Through this data on clinic depression, prevalence, age, gender, and insurance were collected.

The demographic data is outlined in table 1.

Table 1

Patient Language Demographics

Primary Language	Patients Seen	Patients Diagnosed with Depression
English	123	33
Arabic	83	15
Spanish	14	2
Total	220	50

The project implementation period was from February 10, 2020, to June 15th, 2020,

approximately 17 weeks. During the implementation period, there was a total of 220 patients

seen in the clinic. Of the total number of patients, there were 50 patients identified with a

previous diagnosis of depression. The charts were reviewed for all 50 patients and 100% of the

patients with a depression diagnosis had a PHQ-9 in the chart placed there by the clerk or

medical assistant for review by the physician with the patient to calculate depression severity. Out of the 50 patients with a past medical history of depression, 25 (50%) of them were assessed with the use of a PHQ-9. Of the 25 PHQ-9 tools completed, 15 (80%) of them were conducted in Arabic by the physician for Arabic speaking only patients.

Staff Education

Objective one was met on December 15, 2019, when all staff received education on: a) the use of the PHQ-9 for depressive symptom severity, b) the referral process to mental health providers, c) patient education on signs and symptoms and depression treatment, and d) the follow-up plan for patients with positive PHQ-9 results. 100% of the staff including the physician attended the educational session and signed the sign-in sheet.

Open communication between the staff, physician, and the DNP student throughout the project aided in minimizing complications. Individual questions were answered in a timely fashion by the staff and the student. Measurement of learning took place immediately after the educational session through teach-back. The didactic session consisted of proper billing for PHQ-9 use, PHQ-9 scoring, and referral process to behavioral health persons. The DNP student measured staff understanding weekly on billing and referral understanding using weekly chart audits and review of patients with depression log. Weekly staff meetings and chart audits were done to assess the rates of mental health services referrals and the use of the PHQ-9 for depression monitoring.

PHQ-9 Use Rate

The second objective of this study was to increase provider adherence to the use of the PHQ-9 for assessment and documentation of depression severity in patients with MDD by 75%. After the 17-week implementation period, PHQ-9 use for the screening and continued symptom

severity calculation went from 0% at baseline to 50% tool use rating. Although the anticipated

outcome was not met, the finding yielded a successful rate of 50% adherence to using a tool

never used before. In addition, the results also showed that 40-50% of patients with chronic

depression were being given the PHQ-9 (see Figure 1).

Figure 1

PHQ-9 Use Post-Intervention

Number of PHQ-9 Assesments Administered by Week
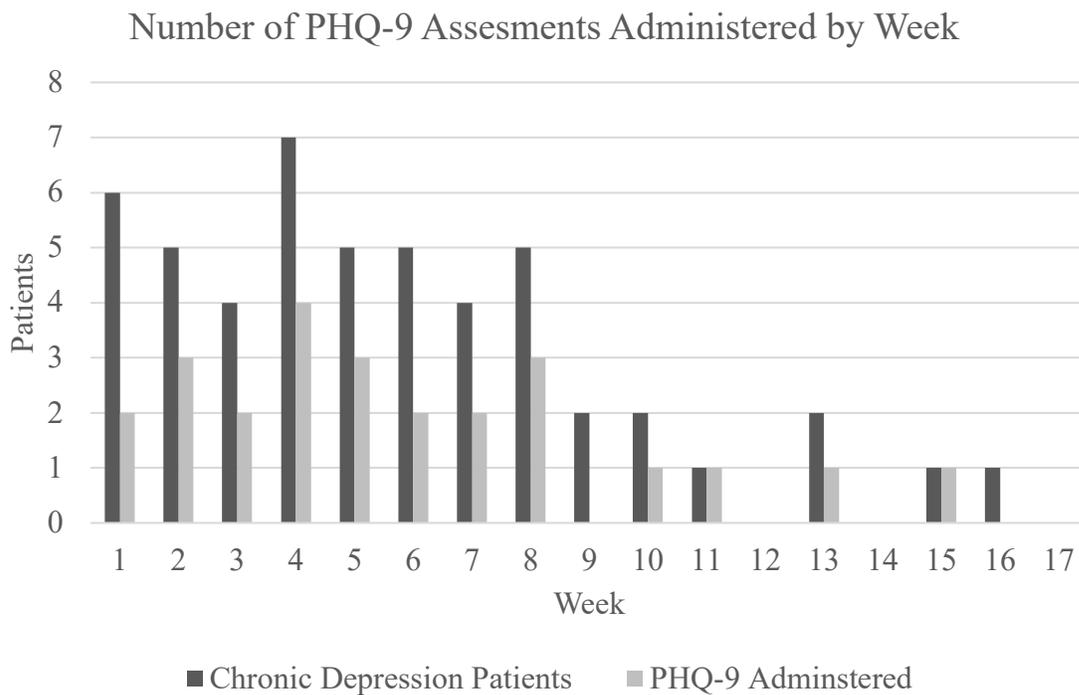
Mental Health Provider Referral Rate

The third object was met at the outcome of 40% of patients who were assessed for

symptom severity were referred to mental health services. Pre-intervention, the mental health

referral rate for the treatment of patients with depression was 0%. After implementation of using

a customized listing of local mental health providers who accepted Medicaid and Medicare and

had access to language services, the referral rate increased to 40% of all patients with depressive

symptoms based on PHQ-9 scores (see table 2).

Table 2

Mental Health Provider Referral Rate for Patients Administered a PHQ-9

	Pre-Intervention		Post-Intervention	
Intervention	Patients	Percentage	Patients	Percentage
PHQ-9 Administered	0	0%	25	50%
Mental Health Provider Referrals	0	0%	10	40%

Discussion

The main goal of this DNP project was to increase the ongoing assessment and treatment of depression in primary care patients by improving adherence to the use of the PHQ-9 and increase referrals to mental health providers. Not all the objectives were met, but there were significant changes and improvements in the assessment and tailored treatment of patients with depression as well as exponentially higher rates of referrals to mental health providers for patients with positive PHQ-9 scores.

Before the intervention, the clinician did not have supporting documentation for the diagnosis and treatment of depression in his patient population. This was evident in past insurance audits where supplemental documentation was requested, and none were available to be to support the patient treatment modalities. The negative effects on patient care led to a failure to refer patients to mental health providers for the treatment of depression. Follow-up appointments ranged from 6 to 12 weeks instead of the United States Preventative Services Task Force (USPSTF) in 2016 recommended 30-day follow-up. Patients with apparent severe depression were only receiving pharmacotherapy without concurrent psychotherapy and with follow-up at the patient's discretion. This QI project allowed the provider to actively use a screening tool to assess patients with depression to promote early treatment that can lead to

depression resolution and improve patients' quality of life. From no use of a measurement-based tool to continue assessment and treatment modification to 57% PHQ-9 use rate is statistically significant change.

The clinician found using the Arabic PHQ-made addressing depression severity during the interview more empirical and less judgmental. The clinician reported feeling a sense of defense when asking Arabic speaking patients depression assessment questions. Using the tool and standardizing the survey has made it simple. Language specific measurement-based tools have proven sustainable and should continue and progress to being available to patients online.

The project was proven sustainable during the grace period where the project continued without intervention from the DNP student. The new process is expected to be maintained as the staff continued the use of the PHQ-9 to assess depression symptom severity, refer patients to mental healthcare providers, and provide patients with educational and treatment resources.

Limitations

SARS-CoV-2 emergence caused a pandemic in 2020 affecting San Antonio starting early March. This was less than 1 month after the project implementation period start. The pandemic caused closures of all non-essential services, limitation on travel, and shelter in place orders locally, nationally, and even globally. Until now, there is uncertainty on transmission and reinfection possibilities. In response to the pandemic, the project site clinic began limiting patient visits starting the 2nd week of March indefinitely. Additionally, less than 10 people in total were allowed in the clinic at one time which included the 3 staff members and 1 clinician. Patient clinic visits were limited to a total of less than 10 each day with 30 min to 1 hr in between each visit to allow time for the medical assistant to thoroughly disinfect examination rooms.

The physical presence of the project student was limited due to social distancing recommendations by local authorities and mainly by the clinic management. Communication on implementation progress, questions that arose from staff or patients, and data collection were handled virtually for most of the implementation period. The limited time the DNP student had to physically be present was unforeseen and required modification of data collection techniques. The staff was asked to assist with providing data on the number of patients with depression, the number of PHQ-9 tools used, the number of referrals to mental health services, and patient education rates each week. This is an additional strain on the clinic staff although they were open to providing this data.

Relation to Evidence

The findings of the DNP project correlate with the significant evidence supporting PHQ-9 use for improving primary care depression management (Watzke et al., 2014). Patients received more individualized care with use of PHQ-9 for continuation assessment and diagnosis of depression severity. Minority patients like those of the project clinic patient population suffer from stigmas related to mental health like viewpoints highlighting depression as a character weakness (O'Brien et al., 2019). Using the measurement-based tool to assess depression severity worked as a liaison to aid the provider to use an unbiased and standard questionnaire and eliminate condemnatory wording. This was proven with the natural increase in patient referral rates in response to PHQ-9 severity scores.

Recommendations

Post-intervention it was determined there was a significant increase of PHQ-9 use in assessing patients with depression. Also, a subsequent increase in the rate of mental health provider referrals. However, there needs to be additional counseling and training on the

importance of integrating an electronic health record and virtual patient visits. With this, time

will be saved, trends in healthcare are more measurable, and social distancing measures can be

respected without compromising patient continuity of care. As described by depression care

guidelines by the NCQA (2019). Online based depression assessments and symptom severity

with virtual meetings and referrals to virtual mental health providers and online self-help

resources like PTSD coach.

Another recommendation would be the separation of provider roles from spiritual

community leader and the health care provider. There are intrapersonal stressors for the Arabic

speaking patient population and since the provider is seen as their medical provider and also as a

spiritual leader. This makes the delicate subject of depression, symptom severity, and treatment

at times difficult to discuss. Role separation is important and the quantification of symptom

severity using a screening tool can aid to alleviate bias and social pressures. Other considerations

are to further evaluate patients for post-traumatic stress disorder as most of the patients who were

diagnosed with depression also express traumatic events leading to their refugee to the United

States.

Implications for Practice

Current evidence-based guidelines by credible bodies such as the USPSTF, ICSI, and

HEDIS measures are in agreeance that not only should adults over the age of 18 be screened for

depression in the primary care setting, but also the continuity of care using a measurement-based

tool to reassess symptom severity during future visits is vital to patient health. The quantification

of depression severity allows for medication management and adjustment, treatment changes,

and referral to mental health services with tailored care for those with progressive depressive

symptoms.

This DNP project has outlined the need to have a clinic process for the use of the PHQ-9 for the assessment and documentation of patients with depression current disease state and justification for treatment modalities. The project has provided a means to guide tailored treatment and follow-up care as well as appropriate consultation with mental healthcare providers. Primary care providers should have policies that outline the specific use of depression management evidence-based guidelines.

DNP prepared advanced practice registered nurses are equipped with the knowledge and experience to conduct QI projects in healthcare organizations to create change and better patient outcomes. The DNP prepared primary care provider can influence systems with the patient's best interest by assessing the system's function and need and implementing new processes based on research and patient population needs.

The staff expressed that the project process has become routine and improvements in the assessment of their patient population condition can be proven through the documentation the PHQ-9 has allowed for. The project displays the importance of conducting a microsystem assessment, staff education, assessment of barriers and facilitators, and the development of practice policies for the care of patients with depression in a primary care practice.

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Appendix A

PHQ-9

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)				
Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING ___*0*___ + _____ + _____ + _____

=Total Score: _____

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استبيان عن صحة المرضى - 9
(PHQ-9)

خلال الأسبوعين الماضيين، آم مرة عانيت من أي من المشاآل التالية؟

(ضع علامة "☺" للإشارة لجوابك)

تقريبا آل يوم	أآثر من نصف الأيام	عدة أيام	ولا مرة	
3	2	1	0	**1** . قلة الاهتمام أو قلة الاستمتاع بممارسة بالقيام بأي عمل
3	2	1	0	**2** . الشعور بالحزن أو ضيق الصدر أو اليأس
3	2	1	0	**3** . صعوبة في النوم أو نوم متقطع أو النوم أآثر من المعتاد
3	2	1	0	**4** . الشعور بالتعب أو بامتلاك القليل جدّاً من الطاقة
3	2	1	0	**5** . قلة الشهية أو الزيادة في تناول الطعام عن المعتاد
3	2	1	0	**6** . الشعور بعدم الرضا عن النفس أو الشعور بأنك قد أخذلت نفسك أو عائلتك
3	2	1	0	**7** . صعوبة في الترآيز مثًلأ أثناء قراءة الصحيفة أو مشاهدة التلفزيون
3	2	1	0	**8** . بطء في الحرآة أو بطء في التحدث عما هو معتاد لدرجة ملحوظة من الآخرين / أوعلى العكس من ذلك التحدث بسرعة وآثرة الحرآة أآثر من المعتاد
3	2	1	0	**9** . راودتك أفكار بأنه من الأفضل لو آنت ميتا أو أفكار بأن تقوم بإيذاء النفس

_____ + _____ + _____ + __0__ = **Total Score:** _____ (FOR OFFICE CODING)

Appendix B

Letter of Approval

Letter of Support

The p̶̶̶̶̶̶̶̶̶̶̶̶̶̶̶ es P.A., supports the University of the Incarnate Word DNP Student, Renad Saadat, in completing a quality improvement project at this site. The clinician and clinic staff support increasing depression severity monitoring and documentation of symptoms as well as to optimize appropriate mental health provider referral rates. There are no conflicts of interest between the clinic, student, or project advisor.

12/10/19 .

Manager/ or Clinician Signature   Date