

**Improving Depression Screening and Management in Primary Care by Utilizing an
Evidence-based Protocol**

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Table of Contents

Abstract	4
Background.....	5
Project Question	6
Search Methods.....	7
Review of Study Methods	8
Review Synthesis.....	8
Project Aims	15
Project Objectives.....	15
Theoretical Framework.....	16
Historical Development of the PDSA Theory.....	16
Application of Major Tenets to Project.....	17
Setting.....	18
Population of Interest.....	18
Stakeholders.....	19
Interventions.....	19
Tools.....	20
Study of Interventions/Data Collection.....	24

Ethics/Human Subjects Protection.....	26
Measure/Plan for Analysis.....	27
Analysis of Results.....	29
Discussion of Findings.....	32
Significance/Implications For Nursing.....	34
Limitations.....	35
Dissemination.....	38
References.....	39
Appendix	
A. Plan Do Study Act Framework.....	45
B. Permission Letter.....	46
C. Depression Management Protocol.....	47
D. Article Permission Letter.....	51
E. Pre-post Depression Management Test.....	52
F. Depression Management Protocol Training.....	55
G. Chart Audit Tool.....	64

Abstract

Providers in the primary care setting play a critical role in preventing suicide. Therefore, the proposed depression management protocol (DMP) was developed to improve the identification and management of depression in the primary care setting to positively impact suicide rates. The DMP included an educational session aimed to improve staff attitudes/skills regarding depression and depression management. Pre and post questionnaires were administered to determine the efficacy of the educational session. There was a significant 27.4% increase between pre and post questionnaire scores from 34.4% to 61.7%. Also, provider compliance with utilizing the DMP was measured through a retrospective chart audit over a four-week period. Provider compliance with the DMP was significant at 89.4%. In conclusion, the DMP results suggest that a depression educational session helped to increase provider compliance with the identification and management of depression in the primary care setting. The clinical site intends to continue to utilize the DMP to positively impact suicide rates.

Introduction

Suicide is the tenth leading cause of death in the United States (US); suicide occurs every 12 minutes (Park & Zarate, 2019). Additionally, it is estimated that the lifetime risk of a major depressive episode is approximately 30% in the US (Que et al., 2020). There are 25 attempts for each completed suicide, which means there are many opportunities to intervene. Suicide was the reason for the death of 48,000 people in the US in 2018. In 2018, 10.7 million American adults

seriously considered suicide, 3.3 million actually made a plan, and 1.4 million attempted suicide. Suicide is the second leading cause of death for people 10 to 34 years old, the fourth leading cause of death among people 35 to 54 years old, and the eighth leading cause of death among people 55 to 64 years old (Centers for Disease Control and Prevention [CDC], 2020). Providers in the primary care setting play a critical role in preventing suicide because of the fact that 83% of those who committed suicide visited a primary care provider in the prior year and 50% visited a primary care provider within 30 days of their suicide (Stone, et.al, 2018). Primary care providers are essential in the early identification and management of depression. The overarching aim of this doctor of Nursing Practice (DNP) project is to reduce the rate of suicides. (Stone et al., 2018). More than 70 randomized trials have demonstrated the effectiveness of collaborative care models, which combine depression screening with a care manager, depression monitoring and tailoring of treatment under the supervision of a mental health specialist (Richards et al., 2019).

Background

In America, the estimated lifetime risk of a major depressive episode is almost 30% (Que et.al., 2020). The incidence of suicide, which is associated with a diagnosis of depression more than 50% of the time, has been increasing. Therefore, screening for depression and for suicidal risk is important in the primary care setting (Ryan & Oquendo, 2020). Primary care practices may have physical health screening protocols in place, and may only need to incorporate depression screening tools into existing protocols. Some changes in primary care practice (e.g., training protocols, workflow adjustments) may still be necessary to implement an effective depression

screening protocol. Effective recognition and management of depression is essential to success as the health care system continues to evolve (Mulvaney-Day et al., 2018).

Federal Initiatives

There are several health initiatives in the US that are helping to address depression and suicide. The 2012 National Strategy for Suicide Prevention (NSSP) is one initiative meant to combat suicide. A few NSSP goals include promoting awareness that suicide is a public health problem that is preventable, implementing strategies to reduce the stigma associated with being a consumer of mental health, and supporting research on suicide and suicide prevention (Sullivan, 2015). The NSSP calls for integrating suicide prevention into services because it is crucial to reduce suicidal ideation, attempts, and deaths (Sullivan, 2015)

Depression Screening

The United States Preventive Services Taskforce (USPSTF) depression recommendations are part of another health initiative. As of June 1, 2018, the USPSTF (2018) recommends depression screening as part of the adult preventive health care schedule as there is a likely benefit (Rhee et al., 2018). Commonly used depression screening includes the use of the PHQ-2 and PHQ-9. Use of integrated care models will also help to promote depression care (Olfson et al., 2016).

Since mental health screening is not routinely a part of the primary care health screenings, the project lead will develop a protocol that focuses on early depression screening to be completed at every visit in the primary care setting. This protocol could be used within the nursing profession and carried out with the help of nursing leadership, whether in a primary care clinic or larger health care system. The depression protocol will include depression screening,

pharmacological and nonpharmacological interventions, and referrals to a mental health specialist will be implemented in the primary care clinic over a four-week period. Using this proposed depression protocol as above will improve early depression identification, will improve depression management, and will help decrease suicides.

Project Question

Will primary care providers improve the management of depression with the use of a depression management protocol compared to current practice without a protocol in four weeks?

Population - Primary care Providers (physicians, nurse practitioners, physician assistants) make up the population in this case.

Intervention - A depression management protocol.

Comparison - No protocol.

Outcome - Improve management of individuals diagnosed with depression in primary care.

Timeline - Four weeks.

Search Methods

The Touro University Library (Sexter) was the portal used to access search engines. The following search engines were utilized for literature review: Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, and MEDLINE. The following search terms used were: depression screening, primary care, mental health, mental health screening tools, PHQ, suicide, national guidelines for depression, depression protocols, nursing protocol for depression, and suicide risk assessment. Criteria for inclusion of studies in the literature review were depression in adults, primary care patients in the United States, depression protocols, nursing protocol for depression, and depression screening tools. Criteria for exclusion of studies in the literature

review were patients under the age of 18 years old and patients not in the United States. The search was narrowed down to include full articles, scholarly and peer review, and studies done within the past five years.

The search yielded 601 articles, but 570 were excluded due to the title of the article and abstract review. Forty articles were reviewed for eligibility based on the inclusion criteria. Fifteen of the articles were further reviewed to include the importance of depression management in primary care. Eight articles supported the use of PHQ screening tools in the management of depression. Five articles support the importance of national guidelines for the management of depression. Three articles supported the importance of SSRI medication, collaborative care, and psychotherapy in the management of depression. Focus was placed on a total of thirty-one articles, the majority of which were systematic reviews and meta-analyses. Each of the studies had a different level of evidence (LOE).

Review of Study Methods

The literature review included randomized controlled trials, retrospective and observational studies, integrative review, randomized studies, systematic review of peer reviewed research studies, retrospective cohort studies, meta-analysis, and interventional trials. The literature review included the rationale for using the PHQ-2 and PHQ-9 as depression screening tools, applying recommendations from the United States Preventive Task Force (USPTF) for depression screening in primary care, and including a suicide risk assessment as part of depression screening. The methodology of the studies are valid and reliable as most were systematic reviews and meta-analyses which have the highest LOE; therefore, the methodology provided valid evidence. Common themes included the importance of depression management in primary care, the suc-

successful use of depression screening tools such as the PHQ-2 and PHQ-9, the importance of collaborative care, and the importance of initiation of an SSRI and psychotherapy when indicated.

Review Synthesis

Patient Health Questionnaire

All depression screenings should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up (Maurer, 2018). The two-item and nine-item Patient Health Questionnaires (PHQs) are commonly used validated screening tools. The PHQ-2 has sensitivity comparable with the PHQ-9 in most populations; however, the specificity of the PHQ-9 ranges from 91% to 94%, compared with 78% to 92% for the PHQ-2. If the PHQ-2 is positive for depression, the PHQ-9 or a clinical interview should be administered (Maurer, 2018; Park & Zarate, 2019; Ryan & Oquendo, 2020).

National Guidelines/Recommendations

United States Preventive Task Force. The USPSTF upgraded its recommendation for screening for depression in primary care in 2016. Previously, they had recommended screening when a systematic method of managing depression was available. Currently they recommend universal screening. Despite these recommendations, there are low rates of screening in community-based physician practices for common behavioral health conditions, such as depression/anxiety. The reasons for the low rates include behavioral health financing challenges and lack of adequate behavioral health infrastructure to ensure referral and diagnostic follow up (Mulvaney-Day et al., 2018). USPSTF guidelines for depression include screening for depression in the general adult population, including pregnant and postpartum women and screening for depression in children 12 to 18 years of age with a "B" grading (Ebell, 2017). The grading of "B" means the

following: the USPSTF recommends the service, and that there is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.

National Quality Forum. The National Quality Forum (NQF) is a not-for-profit, nonpartisan, membership-based organization that works to catalyze improvements in healthcare (Schaeffer & Jolles, 2019). Mental illnesses continue to be a leading cause of disability and premature mortality in the US. "Improving behavioral health services and outcomes is a national priority, given the significant number of people dealing with mental health and substance abuse conditions," said Christine K. Cassel, MD, President and CEO at NQF (Weireter, 2014, paragraph 3). "NQF has endorsed only a few behavioral health measures in the past, so these measures-rigorously reviewed by a diverse panel of experts-will give providers new tools to help them provide high-quality, effective care to patients in need" (Weireter, 2014, paragraph 3).

Screening, Brief Intervention, and Referral to Treatment (SBIRT). The PHQ-9 is one of the few tools endorsed by the NQF for behavioral health screening. Screening for depression and documenting follow-up is a NQF-endorsed measure. Yet only seven states report depression screening and follow-up, making it the fourth-least-reported measure on the Medicaid Adult Core Set. In 2016, a multicultural health center found that only 9.1% of clients were screened and followed up for depression. This quality improvement project was conducted to increase the efficacy of SBIRT for depression to 75% for screen-positive clients (Schaeffer & Jolles, 2019). The provision of evidence-based care increased to 71.4%, and adherence to follow-up increased from 33.3% to 60.0%. Screening in the client's preferred language increased the rate to 85.2%, identifying a positive PHQ incidence of 45.5%. Rapid-cycle improvement with a population health focus demonstrated improved depression screening and follow-up within a multicultural

community health center. Outcomes were attributed to team engagement and the use of standardized tools. These processes can be applied to other primary care settings (Schaeffer & Jolles, 2019; Park & Zarate, 2019).

Impact of Depression

Depressive disorders are common mental disorders that affect over 300 million people worldwide, which is equivalent to 4.4% of the world's population. (Engel et al., 2018). Depressive disorders are a leading cause of burden, and the condition is a major determinant of suicide and ischemic heart disease. Besides these major disability and mortality impacts, depressive disorders are also associated with substantial direct health care cost and economic consequences, mainly due to lost economic productivity (Engel et al., 2018; Park & Zarate, 2019; Richards et al., 2019). Given the high clinical and economic burden of depressive disorders, implementing cost-effective interventions to reduce its burden has become a global focus (Engel et al., 2018).

There is increasing evidence that indicates early recognition and treatment of behavioral health disorders can help prevent complications, improve quality of life, and help reduce health care costs. One study by Krause et al. (2020) sought to investigate factors closely linked to depression outcome and summarize existing and novel strategies for improvement. The results in this study show that early recognition and treatment of depression are crucial, as duration of untreated depression correlates with worse outcomes (Kraus et al, 2020). Early improvement is associated with response and remission, while comorbidities prolong the course of illness. Although enormous progress has been made in measuring, predicting, and improving outcomes, depression remains a relentless disease that places a heavy burden on both individuals and society. The research in this study indicates that early recognition and early adequate treatment at

illness onset are preferable to watch-and-wait strategies (Kraus et al., 2020; Jackson & Machen, 2020; Maurer, 2018).

Depression affects approximately 8% of people in America and accounts for more than \$210 billion in health care costs annually. USPSTF and American Academy of Family Physicians (AAFP) recommend screening for depression in the general adult population (2016). Additionally, the USPSTF recommends screening children and adolescents 12 to 18 years of age for major depressive disorder. The USPSTF and AAFP also recommend screening of all postpartum women for depression. In addition, women should be screened for depression at least once during the perinatal period using the PHQ-2, PHQ-9, or Edinburgh Postnatal Depression Scale. In older adults, the Geriatric Depression Scale is also an appropriate screening tool for depression. If screening is positive for depression, the diagnosis should be confirmed using Diagnostic and Statistical Manual of Mental Disorders, 5th ed., criteria (Maurer, 2018). When screening is positive for possible depression, the diagnosis should be confirmed using DSM-5 criteria (Maurer, 2018).

Effective care for any chronic condition, including depression, requires ongoing monitoring and management often includes switching or adding multiple drugs, or utilizing various adjunctive therapies (Cozine & Wilkinson, 2016). The ultimate goal of depression treatment should be remission of symptoms, rather than simply improvement. Persistent depressive symptoms, even if relatively mild still result in significant impairments in relationships, work place productivity, and overall health.. In contrast, when remission is the endpoint, providers and team members are more fully focused on optimal stepped care and a common target treatment (Cozine & Wilkinson, 2016; Engel et al., 2018; Jackson & Machen, 2020).

Evidence-based Collaborative Care

Programs in which primary care providers and mental health specialists collaborate effectively using principles of measurement-based stepped care and treatment to target can substantially improve patients' health and functioning while reducing overall health care costs (Belsher et al., 2018; Bonvoisin et al., 2020; Sederer, 2016; Park & Zarate, 2019). One report reviewed a partnership between the New York State (NYS) Department of Health and Office of Mental Health that delivered the full integration of depression care into primary medical care. Called the NYS Collaborative Care Initiative (NYS-CCI), nineteen NYS academic medical centers participated. Fidelity was ensured by measuring screening rates, diagnosis, enrollment, and improvement among those in treatment for 16 weeks (Sederer, 2016).

Collaborative Care (CC) refers to an evidence-based model for delivering quality depression care in a primary care setting. Developed at the University of Washington CC focuses on detecting depression in primary care using a specific validated screening test, then medical diagnosis of the disorder, followed by tracking those with the illness through a registry, with the use of a measurement-based depression care path that identifies needed changes in treatment if a patient does not improve. CC has now been tested in more than 70 randomized controlled trials in the United States and in other countries, in a variety of treatment settings, in both urban and rural environments and with diverse patient groups. Evidence suggests that collaborative care for depression not only improves consumer outcomes for depression but also for common co-occurring general medical conditions such as diabetes, hypertension and hyperlipidemia. It has been shown to lead to better patient and provider satisfaction. In addition, CC has demonstrated cost savings in long-

term studies when compared to conventional care (Belsher et al., 2018; Bonvoisin et al., 2020; Sederer, 2016).

Depression Treatment

All treatments must be regularly assessed for effectiveness and proactively modified in a timely manner. Whether initially recommending medication, psychotherapy, or both, timely follow-up of all patients, beginning within a few days to confirm that they have started treatment, and to check for adverse effects, improves treatment adherence over time (Cozine & Wilkinson, 2016). Regular assessment with the PHQ-9 is important. Although most interventions for depression may take several weeks to reach full effectiveness, there is no advantage to waiting longer than the recommended intervals before trying a next step. This degree of follow-up, assessment, and treatment modification is not possible without an organized system involving a trained and empowered staff, a workable registry, and the routine use of a standardized rating scale. The patients themselves must be actively engaged in their treatment and progress. With the support of a consulting psychiatrist, primary care providers become more experienced and more comfortable with a greater variety of medications and more intensive interventions in providing the best possible evidence-based care to complex patients (Cozine & Wilkinson, 2016). For mild-to-moderate depression, psychotherapy and pharmacotherapy are equally effective, but of limited benefit (Cozine & Wilkinson, 2016). For more severe depression, a combination of psychotherapy and pharmacotherapy is more effective than either one alone. If the starting dose is low, and changes are made slowly, most symptoms will resolve. If patients know what to expect and are proactively contacted by office staff for timely reassurance, this is often all that is needed to keep the patient from stopping treatments prematurely. With most antidepressants, it takes three to four weeks to achieve the full benefit of any dose; if there is no significant improvement

after that time, increase the dose. However, if the patient seems to be improving, it is reasonable to wait for up to eight to twelve weeks before making any changes (Cozine & Wilkinson, 2016).

Use of short message service (SMS) text messaging. In one validity study, (SMS) text messaging is discussed as an inexpensive, private, and scalable technology-mediated mental health assessment tool that can alleviate many barriers faced by the safety net population to receive depression screening (Jin & Wu, 2020). Depression screening conducted using the PHQ-9 scale via SMS text messaging demonstrated good internal consistency, test-retest reliability, and concordance with the gold standard INTW assessment mode (Jin & Wu, 2020). Further regression analysis supported that a technology-mediated assessment, such as SMS text messaging, may create a private space with less pressure from the stigma of depression and encourages self-disclosure of depressive symptoms (Jin & Wu, 2020). This study indicates the importance and validity of using the PHQ-9 as part of depression management.

Cognitive-behavioral therapy (CBT). CBT is one of the best established nonpharmacological treatments for major depressive disorder (Thase et al., 2018; Weitz et al, 2017; Bro et al., 2016). CBT also may significantly improve treatment outcomes when used in combination with pharmacotherapy, especially for patients with more severe or treatment resistant depressive disorders (Thase et al., 2018). Despite compelling justification for widespread use of CBT, there are significant barriers to providing this form of therapy in everyday practice. One barrier to broader dissemination is an insufficient number of trained therapists, particularly in rural and public mental health settings. Other constraints are the cost of treatment and difficulties in scheduling and attending a large number of 50-minute therapy sessions across three to four months. These limita-

tions help explain why antidepressant pharmacotherapy, not CBT, continues to be the most commonly used treatment for depressive disorders (Thase et al., 2018).

Project Aims

The proposed depression protocol is a quality improvement project to improve the identification and management of depression in the primary care setting to positively impact suicide rates.

Project Objectives

1. Create a standardized depression management protocol for the primary care setting.
2. Educate the participants in the use of the depression protocol.
3. Improve providers' attitudes and skills in identifying and managing depression.
4. Monitor staff compliance with depression protocol utilization, which can be measured through a retrospective chart audit.

These objectives will be completed in the timeframe of the DNP project, which is four to five weeks.

Theoretical Framework

The Plan-Do-Study-Act (PDSA) methodology is a four-step process, which is one of the most widely used tools in healthcare quality improvement (QI) projects (Christoff, 2018). The QI project is based on scientific methods and the key to its successful use is to ensure each cycle has a well stated prediction or plan. The "plan" includes predictions of outcomes that are well defined and tasks are assigned such as who, what, when, and where. The "do" is the implementation of the plan. Data collection and result analysis are in the "study" phase. The "act" phase is

where the plan is adapted, adopted, or abandoned based on the results of the study phase (Christoff, 2018).

Historical Development of the PDSA Theory

The PDSA method originates from industry and Walter Shewhart and Edward Deming's articulation of iterative processes, which eventually became known as the four stages of PDSA (Taylor et al., 2013). Plan-Do-Check-Act (PDCA) terminology was developed following Deming's early teaching in Japan. The terms PDSA and PDCA have become interchangeable (Taylor et al., 2013). Users of the PDSA method follow a prescribed four-stage cyclic learning approach to adapt changes aimed at improvement (Appendix A).

The purpose of the PDSA method lies in quickly learning whether an intervention works in a particular setting such that adjustments can be made accordingly to increase the chances of delivering and sustaining the desired improvement. In contrast to a controlled trial, a PDSA method allows new learning to be built in to this experimental process (Reed & Card, 2015). If problems are identified with the original plan of a PDSA, then the theory can be revised to build on this learning and a subsequent experiment conducted to see if it has resolved the problem. In the complex social systems of healthcare, the flexibility and adaptability of PDSA are important features that support the adaption of interventions to work in local settings (Reed & Card, 2015).

Application of Major Tenets to the Project

Plan

In the “plan” stage of the PDSA, a change aimed at improvement is identified. The "plan" tenet of the PDSA theory will be to educate the clinic staff at a primary care clinic (front desk staff, medical assistants, nurses, and providers) on the depression management protocol,

depression screening tools, and the importance of the protocol.

Do

The "do" tenet will be the implementation of a depression management protocol at the clinic project site. The implementation will include educational sessions, initiation of the depression management protocol, and data collection.

Study

The "study" tenet will include the compilation of data, analysis of data using appropriate statistical testing, and dissemination of results.

Act

The "act" tenet will determine if the depression management project will be sustained and integrated into routine practice.

Setting

The practice setting is an outpatient primary care clinic in Southern California that opened in 2008. This clinic is privately owned, has a patient population of approximately 3,500 patients, employs eight full time staff, and is located in a middle-income area. The patients are primarily adults with the majority of whom are from minority groups including Asians, African Americans and Latinos. This clinic uses an electronic health record (EHR) called Practice Fusion.

Population of Interest**Direct Population**

The direct population includes providers, nurses, medical assistants, and clerks. The providers consist of one physician, two nurse practitioners (NP), one registered nurse (RN), two medical assistants (MA), and two clerks. The majority of the providers have at least five to ten

years of medical experience and have been in the same clinic for at least five years. Turnover of all disciplines is low. All staff mentioned above will be included in this project as they provide direct patient care. Those who will be excluded are providers who do not work at the primary care clinic and the ancillary staff such as billers as they have no direct patient contact.

Indirect Population

The indirect population of interest includes all adult patient seen in the primary care clinic during the implementation period. These patients will benefit from the implementation of the depression screening protocol as it will improve the quality of care they are receiving. Every adult clinic patient who is seen during the implementation period will be screened for depression. Those adult patients who are identified as having depression will receive the appropriate interventions. Those patients who are seen before and after the implementation period will be excluded from participating in the project. Also excluded are patients who is less than 18 years of age.

Stakeholders

The stakeholders are everyone who is employed at the primary care clinic. The key stakeholders are those who provide direct patient care. The front desk staff members are important in providing the depression screening tools to every patient. The back-office staff (medical assistants, nurses, providers) are important in the identification and management of depressed patients per the protocol. The clinic site administrator signed the permission letter, and no affiliation agreement was needed (Appendix B). The clinic administrator will be notified of all aspects of implementation.

Interventions

The purpose of this DNP project is to implement an evidence-based depression screening and management protocol. During the first week of the implementation phase, a depression pre-test will be administered immediately before a depression training session. To meet the clinical objectives of the project, an outline of the depression management protocol training session for the clinic staff (physician, nurse practitioners, clinic manager, and medical assistants) was created. The educational session will be 30 to 45 minutes in length and will be administered to all twelve staff members during a staff meeting. For those staff members who happen to miss the training session, the power point, pre-test, post-test will be emailed to them. A post-test will be administered on the same day following the training session, at which point the test data will be collected. The proposed depression management protocol will be implemented after the staff has received the training. During weeks two to four of the implementation phase, the project lead will be present at the primary care clinic for the purpose of monitoring the implementation of the depression management protocol. The project lead will be present to provide support and address any issues that might arise.

The project lead will conduct a retrospective chart audit to measure staff compliance with depression protocol utilization. Charts will begin to be audited by the end of week two. Starting in weeks two to four, 30% of the patient charts will be randomly audited to see if each provider was compliant with the depression protocol. By the end of week 4, all chart audit data will be compiled and analyzed using the Statistical Package for the Social Sciences software (SPSS).

Tools

The success of this DNP project will be dependent upon accurate data collection. Various tools will be utilized to capture accurate data that will measure the specific objectives in order to

achieve the overall aim of this DNP project. These tools consist of the Depression Screening and Management Protocol, pre and posttest, power point presentation, and chart auditing tool.

Depression Screening and Management Protocol

The depression screening and management protocol consists of patient screening, education, treatment, and referral. The depression management protocol was designed to meet the needs of the adult patient population in a primary care clinic setting (Appendix C). The first part of the protocol is for participants to administer the PHQ-2. The MA then collects the PHQ-2 form and completes the scoring based on the answers the patient provided. If a patient's score is three or greater on the PHQ-2 questionnaire, then the PHQ-9 is administered. The score of the PHQ-9 will dictate if the provider will refer the patient to psychiatry/psychology for further management and/or initiate pharmacotherapy.

There are a variety of practice interventions the provider will perform based on the score range of these screening tools. According to the 2015 American Psychiatric Association Guidelines for the Psychiatric Evaluation of Adults, an antidepressant medication is recommended as an initial treatment choice for patients with mild to moderate major depressive disorder and definitely should be provided for those with severe major depressive disorder (American Psychiatric Association). Because the effectiveness of antidepressant medications is generally comparable between classes and within classes of medications, the initial selection of an antidepressant medication will largely be based on the anticipated side effects, the safety or tolerability of these side effects for the individual patient, pharmacological properties of the medication (American Psychiatric Association). Most patients tolerate a selective serotonin reuptake inhibitor (SSRI), sero-

tonin norepinephrine reuptake inhibitor (SNRI), mirtazapine, or bupropion (Gelenberg et al., 2010)

The combination of psychotherapy and antidepressant medication may be used as an initial treatment for patients with moderate to severe major depressive disorder (American Psychiatric Association). In addition, combining psychotherapy and medication may be a useful initial treatment even in milder cases for patients with psychosocial or interpersonal problems. In general, when choosing an antidepressant or psychotherapeutic approach for combination treatment, the same issues should be considered as when selecting a medication or psychotherapy for use alone.

Patient Health Questionnaire 2 (PHQ-2)

The PHQ-2 is a brief screening tool used to identify individuals that are experiencing major depression. It consists of the first two questions that target core symptoms of depression. Depression can present with an array of symptoms. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, diagnostic criteria for major depressive disorder (MDD) are (1) low or sad mood or (2) anhedonia, or both, and 4 or more of the following: alterations in sleep and eating patterns; increased or decreased psychomotor activity; decreased energy or fatigue; feelings of guilt, worthlessness, or decreased self-confidence; indecisiveness or poor concentration; or persistent death or suicide thoughts (Richardson & Brahmbhatt, 2021). The PHQ-2 will be administered during each patient visit. If a patient has a PHQ-2 score of three or greater, then the PHQ-9 is administered by the medical assistant (Kroenke et al., 2018). The provider will score the PHQ-9 and be responsible for initiating mental health referral and/or initiating an antidepressant medication (American Psychiatric Association).

Patient Health Questionnaire 9 (PHQ-9)

The PHQ-9 is a depression module, that consists of the nine DSM-IV criteria, which the patient completes by answering how often symptoms may be experienced using a binary format. A score of zero means the patient does not experience the symptom or a score of three indicates the patient experiences the symptom daily or nearly every day (Bonvoisin et al., 2020). The diagnostic validity of the 9-item PHQ-9 was established in studies involving eight primary care and seven obstetrical clinics. PHQ-9 scores > 10 had a sensitivity of 88% and a specificity of 88% for Major Depressive Disorder. Reliability and validity of the tool have indicated it has sound psychometric properties. Internal consistency of the PHQ-9 has been shown to be high (“Patient Health Questionnaire (PHQ-9 & PHQ-2)”), It is used to monitor the severity of depression and a patient’s response to treatment. The PHQ-9 will be administered each time a patient scores three or higher on the PHQ-2. The PHQ-9 may be scored by the medical assistant and/or provider.

Depression Management

The provider collects the PHQ-9 screening tool from the patient and calculates the score based on how the patient answers the nine questions. The provider continues with his/her examination to include a discussion of the screening results. The provider and patient will determine how to proceed with managing the depression based on examination findings and adhering to the new evidence-based protocol. For the implementation of the depression management protocol, the front desk clerk will provide the PHQ 2 and PHQ 9 questionnaires to each clinic patient who is over 18 years old. The medical assistant (MA) will enter the scores from the depression screening tools into the Practice Fusion Electronic Health Record (EHR). If the PHQ-2 is posi-

tive, then the PHQ-9 will be administered. The healthcare provider will determine the diagnosis of depression based on the depression screening score and will subsequently provide appropriate interventions in accordance with the protocol. PHQ-9 scores will determine whether a patient is referred to psychiatry/psychology and whether pharmacotherapy is indicated.

Pre and Post Test

With permission from Dr. Julie Beaulac (Appendix D), a depression pre-test and post-test was developed to test attitudes and skills in identifying and managing depression (Appendix E). A depression pre-test will be administered to all twelve staff members prior to a 30–45-minute depression power point session (Appendix F). A depression post-test, which is the same as the pre-test, will be administered immediately after the power point session. The pre-test and post-test will be multiple choice for simplicity. The tests will consist of sixteen questions regarding depression attitudes and skills. The purpose of the test is to improve attitudes and skills in identifying and managing depression.

Depression Presentation

A power point presentation will be administered during a clinic staff meeting, which will last for 30-45 minutes (Appendix F). The training session will consist of a power point presentation that includes a discussion on depression, a discussion on the depression screening tools (PHQ-2 and PHQ-9), and a discussion about the significance of depression management in preventing suicide. The presentation will also stress the importance of appropriate interventions in the form of mental health referrals and /or pharmacotherapy.

Chart Audit Tool

The chart audit tool will be completed on 30% of the weekly patient charts (Appendix G). The chart audit tool will consist of the following questions: 1) Is the provider compliant with the depression management protocol (Yes/No); 2) Does the chart show that the PHQ-9 scores are documented (Yes/No); 3) Does the chart show referral to psychiatry/psychology and/or initiation of pharmacotherapy if PHQ-9 score is 10 or greater (Yes/No).

Study of Interventions/Data Collection

The data collection process for this DNP project will consist of administering a pre and post questionnaire before and after the educational intervention. Measuring protocol compliance will be completed through a retrospective chart audit. Confidentiality will be observed throughout this process. The Health Insurance Portability and Accountability Act (HIPAA) rules will be maintained during the extraction of information from the chart audit.

Chart Audit

A retrospective chart audit will be conducted to assess provider compliance with the depression management protocol. The chart audit will be completed on patient charts per provider per week to determine adherence to the screening portion of the protocol as well as the management portion. Only patient charts that were seen during the implementation period will be audited. A list of these patient charts will be provided to the project lead by the medical assistant. The patient charts will be separated by provider on the list. The project lead will then randomly choose the appropriate patient charts from the list to audit.

HIPAA rules will be maintained throughout the audit. Only information pertaining to whether the protocol was utilized will be extracted. No patient information will be extracted for this project. The chart audit will begin after the second week of protocol implementation. Those

charts that show a PHQ-9 score of three or greater will be audited to see if the provider referred for psychotherapy and/or initiated an SSRI per the protocol.

Pre and Post Questionnaire

Baseline (pre) and post rates of completion will be compared to ascertain if there was an improvement in rates of improvement in the providers' skills and attitudes on depression management. There will be no identifying staff information in order to maintain confidentiality of collected data. The scores from the pre- and post-questionnaires will be entered on the score sheet. Scores for pre-test and post-test will allow the project lead to measure the skills and attitudes prior to/after the power point presentation.

Data collected from the chart audit tool and from the pre and post questionnaires will be compiled and entered into an excel database. The data will then be transferred and analyzed using Statistical Package for Social Sciences (SPSS) version 23 to compare data scores and provider compliance rates before (pre) and four weeks after (post) the educational intervention. A statistician will be consulted to ensure appropriate statistical testing is utilized.

Ethics/Human Subjects Protection

An Institutional Review Board (IRB) is a committee that has been formally designated to review and monitor biomedical research involving human subjects (Center for Drug Evaluation and Research, 2019). In accordance with the Federal Drug Administration (FDA) regulations, an IRB has the authority to approve, require modifications in (to secure approval), or disapprove research. This review serves an important role in the protection of the rights and welfare of human research subjects. The purpose of IRB review is to assure, both in advance and by periodic review, that appropriate steps are taken to protect the rights and welfare of humans participating

as subjects in the research. To accomplish this purpose, IRBs use a group process to review research protocols and related materials (e.g., informed consent documents and investigator brochures) to ensure protection of the rights and welfare of human subjects of research. An (IRB) determination form was submitted to determine if an IRB review is required.

In order to ensure that ethical conduct and human subjects' protection is achieved, the project lead has completed all of the required Collaborative Institutional Training Initiative (CITI) program modules. This proposed DNP project will not involve any direct patient care activities or human subjects. If the project is categorized as QI, then it does not require IRB review as QI is by definition not research (Chair, 2019). Neither attendance of the educational training, nor the completion of the pre-test and post-tests will be a condition of employment or benefits to which the staff are currently entitled. No monetary compensation will be provided to participants.

As an effort to maintain staff and patient confidentiality, no identifying data will be asked or collected from the staff or patient records. Participants will be identified by a randomly generated three-digit number, which will be placed on the pre-test and post-test to allow for a matched t-test analysis without using a name or any other personal identifier.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) is a federal law that required the creation of national standards to protect sensitive patient health information from being disclosed without the patient's consent or knowledge (CDC, 2018). All HIPAA laws will be adhered to for the protection and privacy of patient information.

Data will be analyzed and reported only in the aggregate. All data will be stored in a secured cabinet and flash drive to which only the project lead will have access and destroyed three

years after the project has been completed.

Measure/Plan for Analysis

The QI project addresses two major areas: improvement of depression management and improvement in providers' attitudes and skills regarding depression. The utilization of the depression management protocol will be evaluated over the period of four weeks as well as pre and post intervention assessment of depression attitudes and skills. The outcome data (screening, pre and post-tests and chart audits of protocol utilization) will all be analyzed using the SPSS version 23 for data analysis. Pre and post test results will be measured and compared utilizing a paired samples t-test. Paired samples or repeated measures techniques are utilized when the same set of people are tested more than once (Pallant, 2016). A simple percentage of compliance with a 95% CI will be utilized to measure the frequency of provider compliance with the depression management protocol. In the clinic of choice, only 30 percent of patients had depression screening in the last 2 months. For this reason, a simple percentage of compliance will be utilized.

Assumption one is the creation of an evidence-based depression management protocol for the clinic staff and healthcare providers at the practice site. The depression management protocol will begin to be implemented during week one. The independent variable is the depression management educational protocol. The dependent variable is the understanding/use of the protocol by the healthcare staff members.

Assumption two is to improve attitudes and skills in identifying and managing depression. The power point session will include a pre- and post-test to assess the efficacy of the provided depression session. The independent variable is the depression management session that is provided. The dependent variable is the efficacy of the provided power point session in improv-

ing attitudes and skills in depression management. The depression management protocol, outline of the power point session, and pre- and post-education test was developed by the DNP student with expert consultation from the stakeholders and project team.

Assumption 3 is to monitor staff compliance with the depression management protocol. The independent variable is the adherence of the healthcare provider, which will be determined through a random chart review. The dependent variable is the percentage of adherence to the depression management protocol. The depression management education was developed by the DNP student with expert consultation from the stakeholders and project team.

Analysis of Results

The project results were analyzed utilizing the recommendation of a statistician in order to ensure appropriate statistical testing. All appropriate assumptions were checked for each test and violations were handled accordingly. The pre and post-depression management session tests were analyzed using the paired t-test. Paired samples or repeated measures techniques are utilized when the same set of people are tested more than once (Pallant, 2016). The assumptions for the paired t-test are the two groups are paired, there are no outliers between the two groups, and there was normal distribution of test scores. Therefore, the project aligned with assumptions of the t-test and there were no violations noted.

A simple percentage was utilized since there was no protocol in place prior to the implementation of the DMP. There was nothing to compare the usage with before implementation. There are three assumptions made in order to build a confidence interval. The assumption of homogeneity of variance or the two populations have the same variance. The populations were

normally distributed. Each value was sampled independently from any other value. There were no violations noted.

Pre and Post Test Attitude Scores

The efficacy of the depression management session (dependent variable) was evaluated using a paired-test, which assumes that change scores follow a normal distribution. On average, clinic staff attitudes/perceived skills towards depression and depression management improved significantly pre-intervention to post-intervention by 27.4 points (95% CI 23.5, 31.3), $t_{(df=9)} = 15.808$, $p < .001$, (N=10) (Table 1).

Table 1

Average Change in Staff Attitudes/Perceived Skills Towards Depression and Depression Management, (N=10).

Outcome	PRE Mean (SD)	POST Mean (SD)	Difference (post-pre) Mean (95% CI)	Paired T Test (df)	P-val
Attitude score	34.3 (6.7)	61.7 (1.5)	27.4 (23.5, 31.3)	15.808 ₍₉₎	<0.001 *

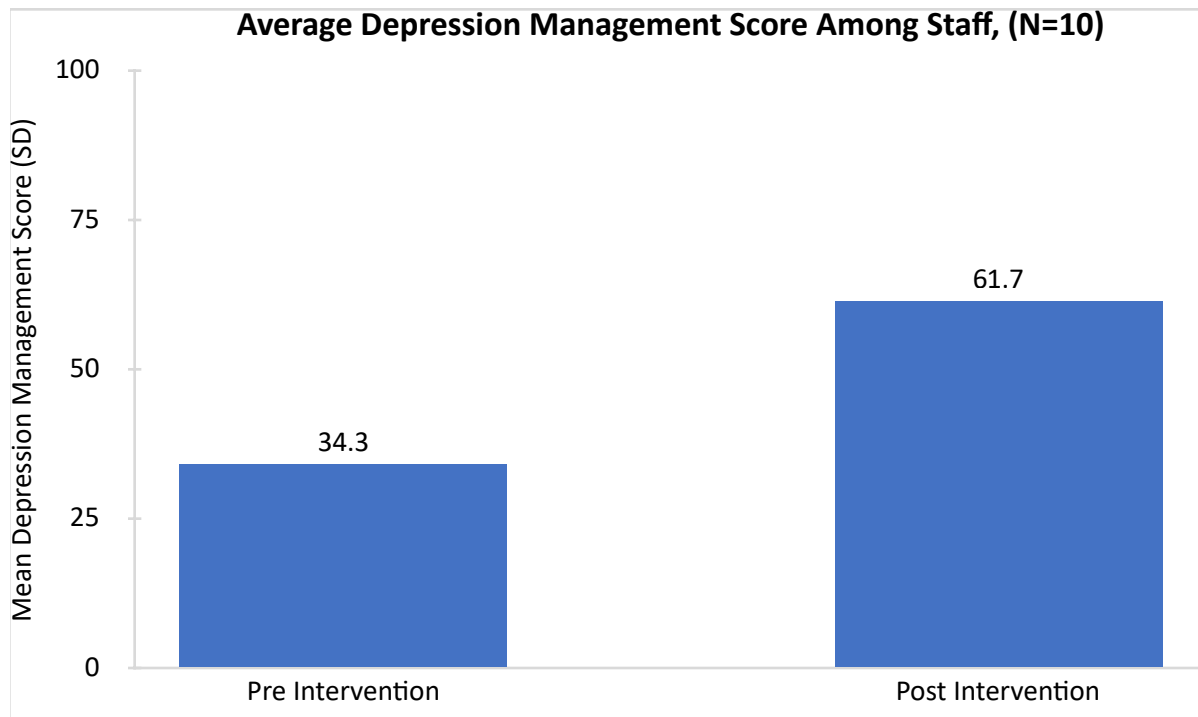
* *Note.* There was an improvement in clinic staff attitudes/perceived skills towards depression and depression management from 34.3 (pre-intervention) to 61.7 (post-intervention). $P < .05$ based on paired t-test.

A total of ten clinic staff members attended the DMP educational training session. Respondents completed a sixteen-item pre- and post-test to evaluate their attitudes and perceived skills in recognizing and treating depression. After the depression management session, there was

a significant improvement in the average of staff attitudes/perceived skills towards identifying and managing depression (Figure 1). The improvement of the average from 34.3 (pre-test) to 61.7 (post-test) is significant.

Figure 1

Average Depression Management Score Among Clinic Staff



Note. On average, staff attitudes/perceived skills towards depression and towards the management of depression improved significantly pre to post intervention by 27.4 points (85% CI 23.5, 31.3), $t_{(df=9)}$, $p < .001$, (N=10).

DMP Compliance

Provider compliance with the DMP was analyzed by utilizing a simple percentage with a 95% confidence interval. The pre-implementation data collection revealed that only 30 % of patients were screened for depression in the two months prior to initiation of the DMP. A total of

N=75 adult patient charts were audited during weeks two through five. Overall, the total compliance of providers in using the DMP was 89.3% of the 75 charts that were audited (Table 2).

Based on the results, there was a high percentage of compliance with the DMP by the clinic providers, which is significant.

Table 2

Provider Compliance with the Depression Management Protocol

	Compliance	
	N (%)	%
Overall	75 (100.0%)	89.3%
Patient age, years:		
<30	14 (18.7%)	100.0%
31-39	17 (22.7%)	82.4%
40-49	20 (26.7%)	85.0%
50+	24 (32.0%)	91.7%
Patient gender:		
Female	44 (58.7%)	84.1%
Male	31 (41.3%)	96.8%

Note. Overall, provider compliance with the depression management protocol was significant at 89.3% (N=75).

Discussion of the Findings

The implementation of the DMP was successful in meeting its objectives of improving the attitudes/perceived skills of clinic staff regarding depression and depression management, and of monitoring provider compliance with the DMP. The average scores of the participants increased from 34.4% (pre depression educational session) to 61.7% (post depression educational session). The 27.4 % increase in staff attitude was statistically significant (85% CI 23.5, 31.3), $t(df=9) 15.808, p<.001$. The improvement in scores for attitudes/perceived skills suggests the objective to improve providers' attitudes and skills in identifying and managing depression has been met.

This quality improvement project also proposed to monitor provider compliance with utilization of the DMP. The chart audit revealed an overall result of 89.3%. Eight of the 75 audited patient charts were missing the depression screening. The project lead inquired as to why the depression screening was not completed: the providers stated they had either forgotten to comply or did not have enough time during the appointment. The improvement in the staff attitude scores may have influenced the high provider compliance with the DMP. The DMP was intended to create an easy workflow to improve depression screening in the primary care setting. The use of a step-by-step flowchart proved to be beneficial at improving depression management. The DMP provides an efficient method to improve depression management. After implementation of the DMP, it was noted that patients who were positive for the PHQ-9 were treated and/or referred to a mental health specialist. The high compliance rate after the chart audit suggests that the project's objective to improve the identification and management of depression in the primary care setting was met. Improvement in the identification and management of depression will help decrease suicide rates.

Significance/Implications for Nursing

Providers in the primary care setting play a critical role in preventing suicide. This is because 83% of those who committed suicide visited a primary care provider in the prior year and 50% visited a primary care provider within 30 days of their suicide (Stone, et.al, 2018). In addition, the use of the DMP has proved to be an essential component in numerous trials, proving that depression can be identified and treated in primary care (Maurer, 2018).

Implementation of the DMP at the primary care clinical site created a positive change in the workflow of the clinic. Prior to the project lead's proposal of a DMP, the clinic did not have a depression management protocol in place. Therefore, the clinic staff was not screening every adult patient for depression. The opinions and advice of the stakeholders and project team allowed for the successful completion of the DMP. There is increasing evidence that indicates early recognition and treatment of depression can help prevent complications, improve quality of life, and help reduce health care costs (Krause et al., 2020). Early recognition and treatment of depression are crucial, as duration of untreated depression correlates with worse outcomes (Kraus et al, 2020). The findings of this quality improvement DNP project are consistent with evidence-based studies that support the need for primary care providers to identify depression early and manage this condition (Stone et al., 2018). Educating healthcare staff about the effective use of a depression management protocol is significant for the improvement in the quality of life of depressed patients and for the possible prevention of suicide.

The significance of the findings of the DMP project for the nursing profession is that nurses have become leaders in translating reliable evidence from current literature into practice in order to improve patient outcomes. This quality improvement DNP project demonstrates how

a nurse-led intervention can positively impact depression management by educating providers and implementing a protocol. The hope is that the simplified depression educational session and depression management protocol may be used by other primary clinics to improve depression management at a larger scale. The ultimate goal is to utilize the DMP to improve the quality of life of depressed patients and to decrease suicide rates.

Limitations

Some limitations were identified during the implementation of this QI project. One significant limitation for this DNP project was that stakeholders and clinical staff preferred to meet via zoom video conferences versus face-to-face meetings at the project site due to the COVID-19 virus and state regulations. In addition, the project lead contracted the COVID-19 infection and was forced to quarantine. This development meant several weeks of project implementation had to be virtual to accommodate the DNP program schedule.

Project Design

Another limitation for this project was the small sample size of clinic staff (N=10) who received the depression management training. Most statisticians agree, the minimum sample size to procure any kind of meaningful result is 100 (Clancy, 2019). A small sample size may make it difficult to determine if a particular outcome is a true finding and in some cases a type II error may occur. For example, the null hypothesis is incorrectly accepted and no difference between the study groups is reported (Clancy, 2019). This was not the case with this project's results; however, a larger sample size of clinic staff may change the difference between pre and posttest questionnaire scores.

In addition, selection bias occurs when the selection of individuals, groups, or data for analysis is

not randomized (Clancy, 2019). All of the clinic staff received the depression educational session and there was no randomization in this DNP project. Staff may have been influenced by feelings of work obligations. Therefore, the results of the pre and post tests may be unintentionally skewed.

Data Recruitment

Primary and administrative data each have unique and complementary strengths. Primary data, collected during this DMP project, measures processes and outcomes, which are important for evaluation, and are often not captured in administrative data. In contrast, administrative data represents a secondary data source which, although routinely collected for purposes other than research, can serve as a source of readily available information that lends itself to further analyses (Mendlowitz, 2020). Data recruitment was limited to the project site staff, which consisted of only ten clinic staff members. Data recruitment for the retrospective chart audits was limited to only patients who are seen at the project site. In addition, retrospective chart audits were only completed over a four-week period.

Collection Methods

The utilization of pre and posttest questionnaires allowed for the ease of collection and analysis of data. Pre and posttest questionnaires are often used in QI projects. However, this method of data collection has disadvantages, such as the inability to fully capture emotions and possibly different interpretations of the questions (Valcheva, 2020). The project lead is unsure if any of the above occurred.

In addition, there are limitations with the use of retrospective chart reviews (RCR). Medical charts are valuable resources for essential clinical information; however, limitations include the

possibility of incomplete or missing data within the medical record, records lacking explicit patient information, and difficulty in inferring or validating documented information (Barick, 2018). It was determined that 10.7% of the audited patient charts were missing the depression screening for this DNP project. The project lead spoke with each clinic provider to reinforce the importance of depression screening/management for each patient. None of the audited patient charts had partial screening completion.

Data Analysis

With respect to data analysis, paired t-tests may be limited by the amount of data that was provided. Samples of larger amounts of values would more accurately represent the population (Clancy, 2019). Ten clinical site staff members received the depression educational training and had a 27.4% increase in attitudes/skills regarding depression management. There is room, then, for data analysis of a larger staff size. The DMP may be transferred to other primary care clinic sites. However, the results of the project may not be repeated at other primary care sites due to different variables, volume of participants, patient population seen, general demographics and location.

Sustainability

A fourth limitation is that only short-term changes were tested by the project lead. The difference between short-term change and sustainable change is critically important within the context of health care. Short-term change reflects immediate changes in knowledge, but may not reflect sustainability. For healthcare clinics to make progress in sustainability, it is important to take a practical, feasible approach that aligns with budget considerations (Clancy, 2019). Thinking strategically about incorporating the DMP can help clinics to save resources and become more

efficient. This is so because of the simplicity of the educational session and simplicity of the DMP flowchart. Sustainability of the DMP project can be achieved by the following steps: 1) education regarding depression management should be updated and offered to the clinic staff at least annually, 2) assign DMP training for each new staff member, 3) perform quarterly quality improvement chart audits to ensure that every patient is screened for depression and that identified patients are managed accordingly, and 4) use quality reporting for the Healthcare Effectiveness Data and Information Set (HEDIS). There is a need in primary care clinics to improve depression management. The practice did not have a depression management protocol in place and plans to keep the DMP as an official clinic policy. The project lead will assist the project site in the development of the official depression management policy.

Dissemination

Dissemination of the project findings and outcomes plays a significant role in informing healthcare providers and stakeholders at the project site. Sharing the results of QI projects in a DNP project repository is important as it allows DNP graduates to share ideas and outcomes. The final QI project will be filed with the Doctoral Project Repository (<https://www.doctorsofnursingpractice.org/doctoral-project-repository>). In addition, the results of QI projects should be considered for publication in a peer reviewed nursing journal. An abstract will be submitted for publication consideration to the *American Journal of Nursing* (AJN), which is the oldest and most honored broad-based nursing journal in the world. The AJN is peer reviewed and evidence-based

and is considered the profession's premier journal (The American Journal of Nursing [AJN], 2019). The project lead will also tentatively present a poster at the Internal Medicine for Primary Care Conference in Las Vegas, Nevada in October 2021.

The project lead intends to disseminate the findings of this QI project to health care professionals and stakeholders at the project site since the project proved to be successful at improving depression management in primary care. Finally, the project lead will share the entire QI project with students and instructors in the Doctor of Nursing Practice program at Touro University, Nevada.

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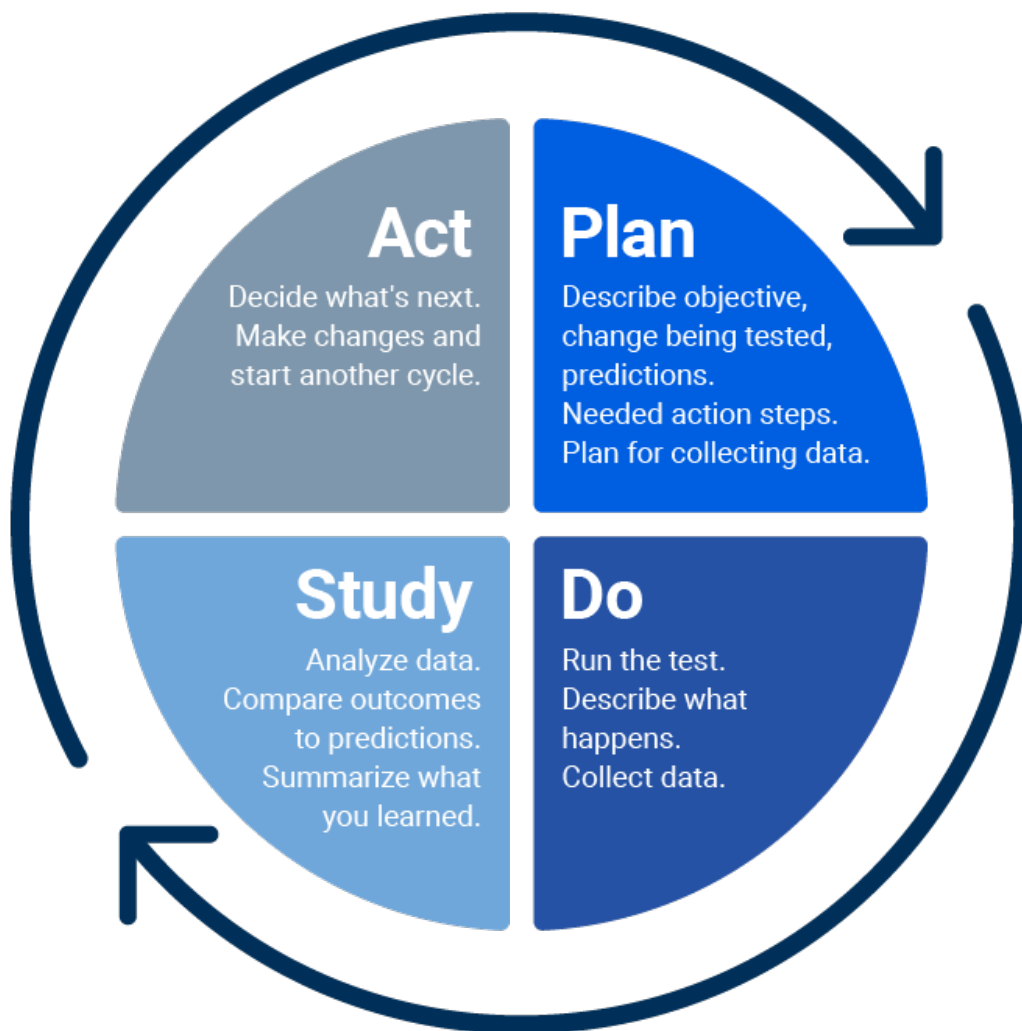
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Appendix A

The Plan Do Study Act Framework



Appendix B

Permission Letter

Reddy Care Medical

1196 N. Park Avenue

Pomona CA 91768

Phone (909) 623-4050

Fax: (909) 620-5259

Certification

To Whom It May Concern:

Dear Sir/Madam

December 14, 2020

This is to certify ELAINE ESGUERRA is permitted to conduct her clinical project at this clinic.

An affiliation agreement/ alignment is not required.

Reddy Care Medical
Ruth Reddy Administrator



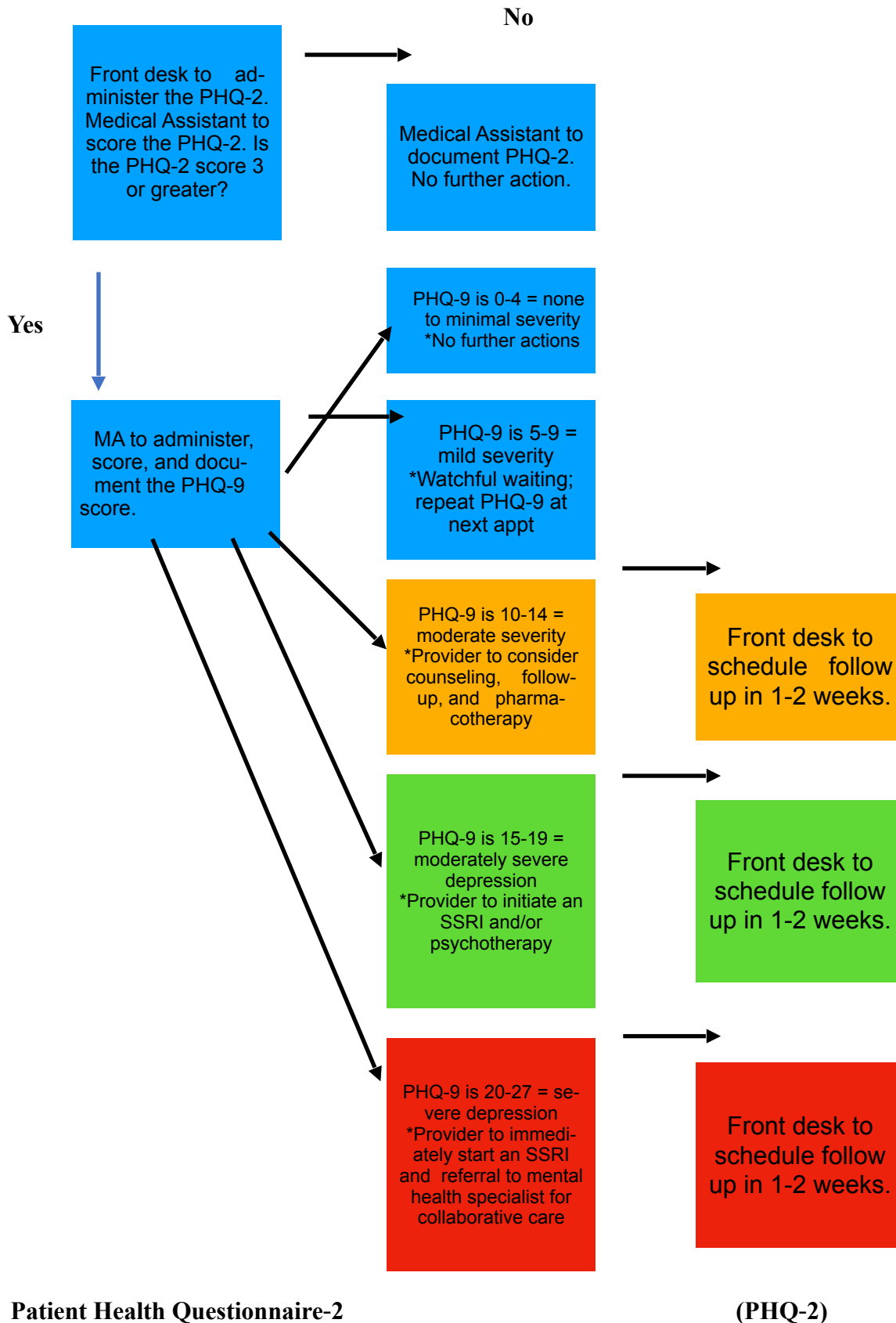
Depression Management Protocol

1. Front desk staff to follow the Depression Management Protocol Flowchart below.
2. First, administer the PHQ 2. If the PHQ-2 score is three or higher, then administer the PHQ 9, (Kroenke, 2018). Refer to attached PHQ-2 and PHQ-9 questionnaires below.
2. For PHQ 9 scores (0-4 = no depression; 5-9 = mild; 10-14 = moderate; 15-19 = moderately severe; 20-27 = severe), use below Depression Severity Scale for actions:

<u>PHQ-9 Score</u>	<u>Depression Severity</u>	<u>Proposed Treatment Actions</u>
0 – 4	None-minimal	None
5 – 9	Mild	Watchful waiting; repeat PHQ-9 at follow-up
10 – 14	Moderate	Consider counseling, follow up, and/or pharmacotherapy
15 – 19	Moderately Severe	Active imitation of an SSRI and/or psychotherapy
20 – 27	Severe	Immediate initiation of an SSRI and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and collaborative management (American Psychiatric Association).

3. Refer to psychology/psychiatry based on PHQ-9 scores (American Psychiatric Association).
4. Initiate pharmacotherapy based on PHQ-9 scores (American Psychiatric Association).
5. Schedule follow up appointments as needed.

Depression Management Protocol Flowchart



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

(Use 0, 1, 2, or 3 for each below - NOT AT ALL = 0, SEVERAL DAYS = 1, MORE THAN HALF THE DAYS = 2, NEARLY EVERY DAY = 3)

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless

FOR OFFICE CODING 0 + _____ + _____ + _____ = TotalScore: _____

***PHQ-2 Scores and Proposed Treatment Actions**

The PHQ-2 consists of the first two questions of the PHQ-9. Scores range from zero to six. The recommended cut point is a score of three or greater. Recommended actions for persons scoring three or higher are one of the following:

*Administer the full PHQ-9

*Conduct a clinical interview to assess for Major Depressive Disorder

Patient Health Questionnaire-9 (PHQ-9)

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

(Use 0, 1, 2, or 3 for each below - NOT AT ALL = 0, SEVERAL DAYS = 1, MORE THAN HALF THE DAYS = 2, NEARLY EVERY DAY = 3)

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
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
9. Thoughts that you would be better off dead or of hurting yourself in some way

FOR OFFICE CODING 0 + _____ + _____ + _____ = TotalScore: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult Somewhat difficult Very difficult Extremely difficult

Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute.

Appendix D

Article Permission Letter

- ELAINE ESGUERRA <twintacular11@yahoo.com>
- To:
jbeaulac@toh.on.ca

Tue, May 25 at 9:03 AM

Good Morning Dr. Julie Beaulac,

I am a DNP student at Touro University Nevada and came across your article "Formative evaluation of practice changes for managing depression within a Shared Care model in primary care". I am writing to see if I may get permission to utilize the Tables in your article to incorporate into my DNP project on Depression Screening and Management. Thank you for your assistance.

- Elaine M. Esguerra, FNP-C (DNP student)

Julie Beaulac <jbeaulac@toh.ca>

To:
ELAINE ESGUERRA

Tue, May 25 at 10:00 AM

with credit to my work, certainly.

- warmly.

Dr. Julie Beaulac, C. Psych.
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Appendix E

Pre-Post Depression Management Test

Test your attitude and perceived skills in recognizing and treating depression by taking this quiz. Please circle your answer for each number. Thank you.

1. Depression is overemphasized as a problem.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

2. Depression is a frequent problem.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

3. Treating depression is time consuming.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

4. Patients are better off treated by mental health specialists.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

5. Drug treatment is very effective.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

6. Counseling/therapy is very effective.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

7. Self-help approaches to depression are very effective.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

8. I am more comfortable treating physical disease than emotional disorders such as depression?

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

9. The benefits of screening for depression outweigh the costs.

- A. Strongly disagree
- B. Disagree
- C. Agree
- D. Strongly agree

10. Can recognize depression.

- A. Very uncertain
- B. Uncertain
- C. Certain
- D. Very certain

11. Can recognize suicidal patient.

- A. Very uncertain
- B. Uncertain
- C. Certain
- D. Very certain

12. Effectively treat with medications.

- A. Very uncertain
- B. Uncertain
- C. Certain
- D. Very certain

13. Effectively treat with counseling.

- A. Very uncertain
- B. Uncertain
- C. Certain
- D. Very certain

14. Effectively treat by encouraging self-management.

- A. Very uncertain
- B. Uncertain
- C. Certain
- D. Very certain

15. Understand the mental health treatment system.

- A. Very uncertain
- B. Uncertain
- C. Certain
- D. Very certain

16. Have access to timely treatment from a mental health specialist.

- A. Very uncertain
- B. Uncertain
- C. Certain
- D. Very certain

Personal 3-digit code for both the pre and posttests. _____

Appendix F

Depression Management Protocol Training

- I. Introduction (see attached power point).
- II. Distribution of depression management pre-test. Collect completed tests
- III. Review of depression
- IV. Discussion of the depression management protocol/distribute depression management handout
 - A. What is a depression management protocol?
 - B. Depression management tools (PHQ-2 and PHQ-9)
 - C. Health benefits of depression management
- V. Strategies to get started on depression management
- VI. Distribution of depression management post-tests. Collect completed tests.

Depression Management Protocol in Primary Care

Presented by: Elaine M. Esguerra (DNP Student, Touro University Nevada)

Introduction to Depression

Suicide is the tenth leading cause of death in the United States (US); suicide occurs every 12 minutes (Park & Zarate, 2019). Additionally, it is estimated that the lifetime risk of a major depressive episode is approximately 30% in the US (Que et al., 2020). There are 25 attempts for each completed suicide, which means there are many opportunities to intervene. Suicide was the reason for the death of 48,000 people in the US in 2018. In 2018, 10.7 million American adults seriously considered suicide, 3.3 million actually made a plan, and 1.4 million attempted suicide. Providers in the primary care setting play a critical role in preventing suicide. This is so because 83% of those who committed suicide visited a primary care provider in the prior year and 50% visited a primary care provider within 30 days of their suicide (Stone, et.al, 2018). Patients who are screened for depression have lower suicide rates (American Psychiatric Association).

Review of Depression in Primary Care

- u In America, the estimated lifetime risk of a major depressive episode is almost 30% (Que et.al., 2020). The incidence of suicide, which is associated with a diagnosis of depression more than 50% of the time, has been increasing. Therefore, screening for depression and for suicidal risk is important in the primary care setting (Ryan & Oquendo, 2020). Primary care practices may have physical health screening protocols in place, and may only need to incorporate depression screening tools into existing protocols. Some changes in primary care practice (e.g., training protocols, workflow adjustments) may still be necessary to implement an effective depression screening protocol. **More than 60% of primary care patients are identified as needing further depression screening** (Mulvaney-Day, 2018). Effective recognition and management of depression is essential to success as the health care system continues to evolve (Mulvaney-Day et al., 2018).
- u Depression is an important issue in this clinic as according to the clinic owner, approximately 20% of clinic patients per month have been identified as being depressed. As described above, there may be more clinic patients who are not being accurately diagnosed as being depressed. For this reason, a depression management protocol may prove to increase the identification of depressed patients such that treatment may be started sooner than later.



PHQ 9 Scores and Proposed Treatment Actions

PHQ-9 Score	Depression Severity	Proposed Treatment Actions
0 - 4	None-minimal	None
5 - 9	Mild	Watchful waiting; repeat PHQ-9 at follow-up
10 - 14	Moderate	Considering counseling, follow-up and/or pharmacotherapy
15 - 19	Moderately Severe	Active treatment with an SSRI and/or psychotherapy
20 - 27	Severe	Immediate initiation of an SSRI and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management (American Psychiatric Association).

Depression Management Protocol in Primary Care

Pharmacotherapy With an SSRI

According to the 2015 American Psychiatric Association Guidelines for the Psychiatric Evaluation of Adults, an antidepressant medication is recommended as an initial treatment choice for patients with mild to moderate major depressive disorder and definitely should be provided for those with severe major depressive disorder (American Psychiatric Association). Because the effectiveness of antidepressant medications is generally comparable between classes and within classes of medications, the initial selection of an antidepressant medication will largely be based on the anticipated side effects, the safety or tolerability of these side effects for the individual patient, pharmacological properties of the medication (American Psychiatric Association). Most patients tolerate a selective serotonin reuptake inhibitor (SSRI), serotonin norepinephrine reuptake inhibitor (SNRI), mirtazapine, or bupropion (Gelenberg et al., 2010)

SSRI and Psychotherapy

The combination of psychotherapy and an SSRI may be used as an initial treatment for patients with moderate to severe major depressive disorder (American Psychiatric Association). In addition, combining psychotherapy and an SSRI may be a useful initial treatment even in milder cases for patients with psychosocial or interpersonal problems. In general, when choosing an antidepressant or psychotherapeutic approach for combination treatment, the same issues should be considered as when selecting a medication or psychotherapy for use alone.

Suicidal Patient

Identify suicidality in all patients with depressive conditions or treatment (e.g., psychiatric meds) using a standardized scale.

If risk is identified, proceed with active referral for hospital or outpatient care as judged appropriate.

Complete the brief Safety Planning Intervention during the visit where risk is identified.

With consent, discuss the safety plan with the family to gain support for safety activities.

As part of the safety plan, discuss any lethal means considered by and available to patient.

Arrange and confirm removal or reduction of lethal means as feasible.

Make appointment with mental health professional.

Complete one caring contact (phone call or, if preferred by patient, text or e-mail) within 48 hours of visit or the next business day.

u Reference: *(Recommended Standard Care for People with Suicidal Risk: MAKING HEALTH CARE SUICIDE SAFE, 2016).*

Safety Planning and Other Resources

Safety planning is a brief intervention to help a patient develop a plan to recognize suicidal thoughts and manage them safely. Action steps may include calming activities, identifying supportive people to talk to and providing contact information for crisis call or text lines. Safety planning is recommended in the Sentinel Event Alert (*Recommended Standard Care for People with Suicidal Risk: MAKING HEALTH CARE SUICIDE SAFE, 2016*).

Crisis Text Line

The Crisis Text Line provides free, 24/7 support via text messaging for those in crisis. Individuals can text 741741 from anywhere in the United States and connect to a trained volunteer crisis counselor. <https://www.crisistextline.org/>

National Suicide Prevention Lifeline

The National Suicide Prevention Lifeline (1-800-273- TALK [8255]) provides free, 24/7 access by phone to a trained volunteer crisis counselor. <https://suicidepreventionlifeline.org>

Referrals and Follow-up Appointments

- u Depending on the score of the PHQ-9, the provider will refer the patient to psychiatry/psychology and initiate an SSRI if indicated (American Psychiatric Association). The front desk will also schedule the patient for a weekly follow up appointment for the first month, and then as needed after start of seeing a psychologist and psychiatrist.

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Depression Management Protocol in Primary Care

Thank you for your time.

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Depression Management Protocol in Primary Care

