IMPLEMENTATION OF A DEPRESSION PROTOCOL FOR A NONPROFIT CLINIC IN THE MIDWEST

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Abstract

Depression is underdiagnosed and undertreated in the primary care setting. Primary care offices are the gatekeeper for many individuals' healthcare needs. Frequently when patients present to a primary care clinic with physical complaints, the provider conducts selective screening instead of universal screening. As a result, individuals with depression are left undiagnosed and untreated. Primary care providers must be equipped to assess, diagnose, treat, and follow-up with patients identified with depression. Before this project, a nonprofit clinic only screened individuals who complained of depression. Universal screening was implemented using a patient health questionnaire (PHQ-2) assessment tool. If the PHQ-2 was positive, a patient health questionnaire (PHQ-9) was completed. A provider then worked with the patient to select the best treatment. The goal was to implement universal screening for depression, provide evidence-based treatment for patients with depression, and conduct a timely follow-up. During the implementation of this project, 55 patients were screened for depression using a PHQ-2 assessment tool. Of those 55, nine patients took a PHQ-9. Two of those nine patients took a repeat PHQ-9 following treatment intervention. Seven patients were unavailable for a timely follow-up appointment.

Keywords: adult depression, nonprofit organization, depression, treatment, primary care, universal screening

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Chapter I: Introduction

Depression is a mental health illness that affects approximately 5% of adults worldwide (World Health Organization [WHO], 2022). Depression is characterized by persistent sadness, anxiety, hopelessness, helplessness, guilt, worthlessness, demotivation, and difficulty concentrating (National Institute of Mental Health [NIMH], 2022). It is common to see someone suffering from depression have difficulty sleeping, experience appetite issues, have suicidal thoughts, or even have a previous suicide attempt (NIMH, 2022). Depression can impact a person's ability to engage in relationships, maintain employment, and function in society (United States Preventive Services Task Force [USPSTF], 2016). The USPSTF provides evidence that depression screening and patient support systems can improve adult outcomes. Treatment for adults with depression discovered through primary care screenings can improve clinical outcomes (2016).

Statement of Problem

The leading cause of disability among people over the age of 15 is depression (USPSTF, 2016). In 2022, a nonprofit, low-cost, Midwestern primary care clinic administration identified a need for a depression protocol involving screening and treatment.

Purpose/Aim of the Project

This quality improvement project implemented a standard protocol for universal screening, assessment, and treatment of depression at a nonprofit clinic. The purpose was to determine if implementing universal screening with the PHQ-2 tool with confirmation using the PHQ-9 tool would improve the identification of patients with

depression in a Midwest nonprofit clinic. Then, according to USPSTF recommendations, initiation of evidence-based treatment and a timely four-week follow-up was conducted. The aim was to improve the detection and treatment of depression, including appropriate follow-up.

Background/Problem of Interest Supported by the Literature

People face increased mental health risks, including social isolation, stress, anxiety, and economic hardships, which leads to growing concerns regarding mental health (Winkler et al., 2020). These mental health risks affect those with a history of depression and can precipitate the onset of mental disorders in individuals without a history (Winkler et al., 2020). Major depressive disorders have increased from 3.96% in 2017 to 11.77% in 2020 (Winkler et al., 2020, para. 3). If these percentages continue to increase, there is a substantial concern for health and economic consequences for society. Depression is a primary cause of disability worldwide (WHO, 2022). In the United States, 17.3 million adults have experienced a major depressive episode, with approximately 210 billion dollars spent annually on medical care and lost productivity (Siniscalchi et al., 2020). Despite the prevalence, depression often goes undiagnosed and untreated and is extensive in primary care (Kahalnik et al., 2019). Even though the main access point for health care is often primary care, only approximately 3% of patients presenting for an initial appointment are assessed for depression (Jackson & Machen, 2019). The USPSTF (2016) recommends universal screening for depression in the primary care setting. The project's clinic staff reported only screening patients for depression if the patient reported feeling depressed (K. Hunt, personal communication, June 13, 2022).

Significance of the Project

The goal of this project was to conduct universal screening for depression at a nonprofit clinic for the uninsured using the PHQ-2. This quality improvement project aimed to improve the identification and treatment of patients with depression. These patients would not have been identified using the clinic's past practice of only assessing patients who specifically reported depression. The topic of depression was chosen because of the catastrophic consequences that can develop if depression is not identified and treated. Depressed individuals are at an increased risk of suicide and can have a lower quality of life as a result of depression not being identified and treated (Rancans et al., 2018).

Impact of the Project

Primary care is the setting where most depressed patients receive treatment (Jackson & Machen, 2019). The USPSTF (2016) recommends universal depression screening in primary care due to the high prevalence rate and low rate of diagnosis. The use of universal screening is recommended because diagnosing a patient with depression can be challenging (Samples et al., 2019). A depression protocol that includes screening assessment, diagnosis, treatment, and timely follow-up is essential for identifying patients in primary care who may not present with symptoms consistent with depression. To diagnose a patient with depression, there must be two essential indicators with four more symptoms out of nine standards on the PHQ-9 in a two-week timeframe (Samples et al., 2019). Once diagnosed, adequate treatment with the proper dose of medication is essential to improve patient outcomes. There is evidence that only one in five patients prescribed antidepressants receives minimally adequate dosages

(Kahalnik et al., 2019). In the primary care setting, evidence-based guidelines are essential to effectively treat depression.

Chapter II: Literature and Theory Review

The project aimed to implement universal screening to identify patients at risk for depression. Algorithms were developed for evidence-based treatment and follow-up to improve the outcomes of patients with depression.

Literature Review

A systematic literature review was conducted by searching the electronic nursing database Cumulative Index to Nursing and Allied Health Literature. Additional evidence was obtained from scholarly websites such as The United States Preventive Services Task Force (USPSTF), Centers for Disease Control and Prevention (CDC), and the American Academy of Family Physicians (AAFP). The terms depression, treatment and primary care were used to search for full-text articles from 2017 to 2022 and produced 36 possible articles. Another search used the terms depression, universal screening, and primary care, to search for full text articles from 2017 to 2022, yielded 18 articles. A final search for depression, nonprofit, and primary care yielded no results.

A review of the literature revealed four themes related to depression. The themes included the prevalence of depression, the effects of depression, underdiagnosis and undertreatment of depression, and the importance of universal screening. Samples et al. (2019) note that approximately 5% of individuals worldwide have some form of depression. It is estimated that 29% of individuals seen in primary care are screened for depression, with only 3% being screened during an initial visit (Henry et al., 2019; Jackson & Machen, 2019). There are greater than 4 million primary care visits for depression in the United States each year (Scoppetta et al., 2020; CDC, 2022). Globally, approximately 7% of primary care visits are due to depression (Scoppetta et

al., 2020).

For many patients, primary care is their first point of contact in healthcare. Patients diagnosed with depression often seek medical care for reasons other than depression. It is common for a patient suffering from depression to present with physical complaints (Jackson & Machen, 2019). The typical presenting physical complaints include symptoms such as sadness, insomnia, fatigue, changes in appetite, or suicidal thoughts (NIMH, 2022). Life events such as divorce, the death of a loved one, unemployment, or losing a home can contribute to depression (NIMH, 2022). To be diagnosed with depression, one would experience five or more of these symptoms consistently over two weeks. The scoring on the PHQ-9 reflects the depressive symptoms the patient is experiencing. The score on the PHQ-9 assessment tool is used to confirm the diagnosis of depression.

With primary care being the gatekeeper for patients, it is imperative providers be equipped to screen, identify, and treat patients who have depression (Siniscalchi et al., 2020). The result of depression left untreated includes emotional suffering, decreased work productivity leading to lost wages, relationship issues, and can lead to comorbidities for the individual (Siniscalchi et al., 2020). A direct connection exists between mental and physical health, and there is evidence that depression is associated with severe chronic disease; therefore, early identification is essential (Siniscalchi et al., 2020). Depressed patients do not often initiate dialogue with their providers that specifically state depressive symptoms have been present for the last two weeks (Jackson & Machen, 2019). If patients did this, depression would be easier to identify and would rarely be missed (Jackson & Machen, 2019). Therefore, primary care

clinicians should universally screen patients for depression to identify it as early as possible.

Jackson and Machen (2019) estimate that only half of the patients with major depressive disorder were diagnosed as depressed before the recommendation for universal screening. Diagnosing depression can be difficult, which is why universal screening is imperative. Selective screening for depression has been a common practice by providers (Jackson & Machen, 2019). As a result, depression has been under-recognized and undertreated in primary care (Moise et al., 2018).

According to the literature, depression is underdiagnosed and undertreated (Samples et al., 2019; Kahalnik et al., 2019; Moise et al., 2018; Jackson & Machen, 2019). Underdiagnosing and undertreating depression leads to lower quality of life for individuals, increased suicide rates, and increased use of medical services (Rancans et al., 2018). Evidence suggests that patients with depression are more likely to recover from depression when they receive adequate antidepressants early and adhere to their treatment regimens (Sirey et al., 2017). Universal screening of adults in the primary care setting, especially nonprofit clinics, can improve the identification and treatment of depression (Rancans et al., 2018). Nonprofit clinics provide services to a vulnerable population who may or may not always report feelings of depression (K. Hunt, personal communication, June 13, 2022).

The PHQ-9 questionnaire is a standard depression screening tool in primary care (Rancans et al., 2018). The PHQ-9 is based on nine questions assessing how a patient feels (Rancans et al., 2018). This tool has been noted to be universally effective for identifying the severity of depression in a patient across racial and ethnic

populations (Rancans et al., 2018). Scoppetta et al. (2020) support that the PHQ-9 is the best tool for assessing depression in the primary care setting (2020).

Although the PHQ-2 was developed to be used in combination with the PHQ-9, the PHQ-2 has also been shown to be an effective and efficient screening tool for detecting depression (Scoppetta et al., 2020). In crowded primary care settings where consultation time is limited, short questionnaires, such as the PHQ-2, which consists of the first two questions of the PHQ-9, are increasingly used to detect depression (Scoppetta et al., 2020). The PHQ-2 questionnaire, composed of two questions, asks about the frequency of symptoms of depression, scoring them from 0 (never) to 3 (almost every day). Rancans et al. (2018), found evidence that the PHQ-2 tool helps identify depression. Levis et al. (2020) also concluded that the PHQ-2 might provide sustainable accuracy for depression screening alone or in combination with the PHQ-9. A validation study of the PHQ-2 concluded that it was both valid and attractive as a depression screening tool (Levis et al., 2020).

The literature reveals that patients with depression can receive quality treatment in primary care, equivalent to services provided by a psychiatric specialist (Kahalnik et al., 2019). Treating patients with depression can be challenging at times, mainly due to nonadherence to treatment regime (Sirey et al., 2017). Treatment nonadherence is seen more commonly in primary care than in specialty psychiatry sites (Sirey et al., 2017). However, in the first six weeks of treatment, the patient must comply (Sirey et al., 2017). Risks related to suicidal ideation increase during this timeframe, making adherence to treatment crucial (Sirey et al., 2017). If patients adhere to the medication regime and follow the recommended treatment guidelines, the literature reports that

outcomes can improve (Sirey et al., 2017). Evidence-based guidelines recommend medication, psychotherapy, or a combination of both, along with a timely follow-up, to improve outcomes for the depressed patient (Rush & Thase, 2018).

Depression is an ongoing issue that can last several weeks, months, or years (NIMH, 2022). It is common for depression to improve and then worsen or recur at some point in time. Universal screening for depression during an initial visit or a follow-up appointment is the best practice to identify if a patient is experiencing depressive symptoms. Universal screening will identify those patients who may be experiencing a recurrence of depression following a treatment regime or an initial onset of depression, which is why it is imperative to screen everyone.

The USPSTF (2016) recommends universal screening for depression in the general population. Screening must be initiated with appropriate support systems in place to ensure accurate diagnosis, effective treatment, and timely follow-up, (USPSTF, 2016). The benefits of universal depression screening include early identification and implementation of treatment, which may reduce morbidity and mortality (USPSTF, 2016).

For this quality improvement project, every patient over the age of 18 years (excluding pregnant patients) was to be screened with a PHQ-2. If the PHQ-2 was positive (score of 3 or higher), a more thorough screening assessment with a PHQ-9 was to be completed. For those with a positive screen using the PHQ-9, an evidence-based treatment plan was initiated. The screening process allowed for a comprehensive assessment and standardized treatment using evidence-based guidelines for depression. A timely follow-up was also scheduled according to recommendations by the USPSTF

(2016).

Review of Theory

This project was developed using Dorothy Johnson's behavioral system theory. This nursing theory emphasizes the importance of maintaining or restoring behavioral balance and promoting efficient and effective behavioral functioning in patients to prevent an illness (Masters, 2018). Johnson's theory includes four concepts that direct this project and its connection to depression. The four concepts include Person, Environment, Health, and Nursing (Masters, 2018). To understand the first concept, Person, there needs to be an understanding that humans have two systems (biological and behavioral). According to Masters (2018), nursing's focal point is the behavioral aspects, while medicine focuses on science or biology. The second concept, Environment, is how society interacts with its surroundings. The environment and the events in the environment affect depressed patients by disturbing balance (Masters, 2018). In addition to physical and mental health, the third concept, Health, involves the patient's social and psychological well-being. To maintain balance of this concept, one must develop healthy responses to stimuli in the environment (Masters, 2018). Clinical stability is facilitated by utilizing the fourth concept, Nursing. In an illness such as depression, the healthcare provider is concerned with keeping the patient balanced (Masters, 2018). This project coincides with Johnson's theory because it improves the patient outcome regarding the illness of depression. Two patient outcomes were improved with universal screening and support services during this quality improvement project.

Lewin's 3-stage Model of Change Theory is the organizational change model

utilized for this project. Lewin's theory provides a framework for organizational change (Hussain et al., 2018). The theory involves unfreezing, moving, and refreezing (Bishop, 2018). Lewin's theory describes change as forces within the organization that move in opposite directions (Bishop, 2018). The driving force pushes individuals toward change, and the restraining force pulls them back (Bishop, 2018). Unfreezing is accomplished by diminishing old behaviors by unlearning them or ignoring them (Bishop, 2018). Once the old behavior has been discarded, the moving phase is accomplished by allowing the individuals to move toward new behaviors that are admissible for the organization (Bishop, 2018). Refreezing involves a return of the power to a new state of equilibrium using new behaviors (Bishop, 2018). According to Hussein et al., resistance to change is typical within an organization as it involves moving from the known to the unknown (2018).

Alignment of Theory

The Dorothy Johnson behavioral model theory was utilized based on the identification of depression to allow for treatment and a return to balance for the individual. Based on Johnson's theory assessing for depression using the PHQ-2 and PHQ-9 assessment tools, implementation of treatment algorithms, and timely follow-up within four weeks, should place the patient in an improved mental and physical state (Masters, 2018). The best time to apply the theory is when the patient is screened for depression when assessing for illness or disequilibrium (Masters, 2018).

This project aligned with the Johnson theory by identifying the patients with depressive symptoms using the PHQ-2 and PHQ-9 assessment tools. Next, the evidence-based treatment for that person was determined. Following Johnson's

behavioral system model, the course of action promoted equilibrium and emotional and physical stability (Masters, 2018). According to Masters (2018), nurses assist the patient with maintaining equilibrium. As part of the behavior system model of nursing, the patient is first assessed and diagnosed. Upon diagnosis, healthcare professionals design a treatment plan that includes interventions. After completing the treatment plan, the patient should be reevaluated for balance (Masters, 2018).

The healthcare arena is constantly changing, and those in healthcare must be flexible to meet the needs of patients (Harrison et al., 2021). To be flexible, healthcare organizations must emphasize how everyday clinical work can promote learning and improve patient outcomes (Harrison et al., 2021). Quality improvement is now considered routine for healthcare and essential to achieving the highest patient outcomes (Harrison et al., 2021). Quality improvement involves change within an organization and is not always an easy process to accomplish.

To create change related to healthcare conditions such as depression screening, change management techniques are often used as guides (Harrison et al., 2021). This quality improvement project applied Lewin's organizational change theory beginning with unfreezing. Unfreezing for the organization meant staff would need to discontinue old behaviors, such as only screening those patients who complained of feeling depressed for depression. Unfreezing was accomplished by educating the staff on the importance of using the PHQ-2 questionnaire to provide universal screening for all patients 18 years and older who presented to the clinic during the four-week implementation phase. Staff was educated on the consequences of not identifying patients with depression and the importance of timely follow-up to ensure treatment

improvement.

The moving phase included screening every patient with a PHQ-2 and, if positive (score of 3 or higher), confirming with a PHQ-9 questionnaire. The moving phase was accomplished by educating the staff on the importance of universal screening. The project manager visited the clinic weekly to review forms and obtain updates from the staff regarding how many assessments had been obtained to ensure the assessments were being conducted. The project manager reached out to the clinical director via email weekly to receive any feedback regarding the project.

The refreezing stage included the continuation of universal screening by the staff utilizing the PHQ-2 questionnaire for all patients ages 18 years and older who received treatment at the nonprofit clinic. The refreezing also included providing treatment according to evidence-based guidelines. As part of the refreezing phase, a follow-up with each patient receiving depression treatment was to be completed at the four-week mark of treatment. Refreezing included the continuation of universal screening. The project manager has received confirmation from the clinical director that the PHQ-2 and the PHQ -9 assessment tools will be added to the electronic medical record to ensure sustainability in the future. Also, providers at the clinic were requested to continue to utilize the evidence-based treatment algorithms and conduct timely follow-ups at no more than the four-week mark of treatment.

Chapter III: Method

The prevalence of depression has increased worldwide and yet, according to Kahalnik et al., (2019), depression is underdiagnosed and undertreated in the primary care setting (Kahalnik et al., 2019). Primary care staff must be able to identify, treat, and provide adequate support services to patients with depression. Using a quality improvement approach, this project aimed to improve the identification of patients with depression and decrease PHQ-9 scores (Moran et al., 2020). A lower PHQ-9 score indicated there was an improvement in depressive symptoms. The design choice was driven by the issue of implementing a depression protocol for a nonprofit clinic. The clinical question to address for this quality improvement project was, did universal screening for depression using a PHQ-2 assessment tool improve identification and treatment of depression in a nonprofit clinic?

Design of the Project

The project design was a quality improvement study deemed exempt by the Indiana Wesleyan University Institution Review Board (Appendix A). The project manager met face-to-face to educate the staff on the importance of universal screening using the PHQ-2 (Appendix B) and the devastating consequences that can occur if patients are not screened for depression. The project manager provided education (Appendix C) about the PHQ-2 and PHQ-9 (Appendix D) assessment tools and how these tools were to be used to identify patients with depression. Permission is not required to use the PHQ-2 and PHQ-9 assessment tools. The clinic director sent a follow-up electronic mail with content authored by the project manager reiterating the main points of the quality improvement project and the expectation of staff during

implementation. The patients met the inclusion criteria if they were 18 years or older and presented to the clinic for a follow-up or a new patient visit. A PHQ-2 assessment was excluded for patients already diagnosed with depression.

The receptionist for the clinic provided the PHQ-2 questionnaire to patients when they presented for their scheduled appointment. Patients completed the PHQ-2 while waiting in the lobby for their appointment. The provider then reviewed the results of the PHQ-2 with the patient during the office visit. If the score on the PHQ-2 were three or higher, the provider would have the patient complete a PHQ-9 questionnaire. The provider would then review the results of this assessment tool with the patient. If depression was diagnosed by the provider using the PHQ-9 tool, the provider referred to the provided treatment algorithm (Appendix E) to determine the appropriate intervention for mild depression. Appendix F includes the treatment algorithm for moderate depression and Appendix G contains guidelines for severe or recurrent depression treatment. The treatment algorithm included evidence-based guidelines for treating depression according to Epocrates®. Epocrates® is a mobile medical reference application providing clinical information on drugs, diseases, diagnostics, and patient management (Epocrates®, 2022). The project manager utilized Epocrates ® guidelines for all the treatment algorithms included in Appendix E, F, and G. No additional information from any other source was utilized for the treatment algorithms.

A follow-up appointment was scheduled to ensure timely support and to assess the treatment's efficacy. The patient was to follow the provided evidence-based treatment algorithm for four weeks. Next, a follow-up appointment or phone call was to be completed, and a repeat PHQ-9 administered to see if there was an improvement in

the PHQ-9 scores. A lower PHQ-9 score showed there was improvement in depressive symptoms. According to the Epocrates ® treatment algorithm, completing a follow-up appointment or phone call four weeks from the initial screening is the best practice for reassessing the patient with a repeat PHQ-9.

Setting

The setting of this DNP project is a nonprofit, low-cost, Midwestern primary care clinic. This clinic provides a means for those without insurance to obtain healthcare services at a reduced cost. Except for the paid receptionist and clinical director, volunteers primarily run the clinic. The clinic provides approximately 1600 visits annually, including new patient appointments, follow-up appointments, and telehealth appointments. The clinic has seen over 16,000 patients since opening in 2006. The clinic provides medical, dental, and spiritual services to those who cannot obtain health insurance and do not qualify for government programs. The clinic has earned a gold rating from the National Association of Free & Charitable Clinics Quality Standards Program (2022), recognizing the clinic's commitment to providing quality patient care by following a proper action plan.

Population

The eligibility criteria for this DNP project included patients 18 years and older who presented to the clinic for a new patient visit or a follow-up visit for any diagnosis, including depression. Those who were previously diagnosed with depression were not asked to take the PHQ-2 assessment tool, but they did complete the PHQ-9 assessment. There was no emphasis on the characteristics of patients to be included in this project as this project focuses on universal screening for depression using the PHQ-2 assessment

tool.

There were no recruitment strategies utilized for this project. Upon checking in for the appointment, the receptionist presented the PHQ-2 assessment to the patient. The provider then reviewed the results and had the patient complete the PHQ-9 assessment if indicated. The medical assistants and the clinical director were not directly involved in administering the assessment tools.

Data Collection

Healthcare data is used to make clinical judgments, answer questions, and evaluate for improvement in health outcomes (Shah, 2019). Clinic staff collected data for this quality improvement project by having the patient complete the PHQ-2 and as appropriate, the PHQ-9 questionnaires. Every patient 18 years and older, excluding those patients who were already diagnosed with depression, were asked to complete a PHQ-2 assessment as part of the pre-appointment paperwork. The project was implemented over eight weeks, including four weeks of screening with the PHQ-2 and PHQ-9 assessment tools and four weeks of follow-up.

The source of data collection for this quality improvement project utilized during implementation was a paper version of the PHQ-2 and PHQ-9 assessment tools. An identifier was used to maintain the anonymity of the patient. Demographic information such as date of birth, gender, previous diagnosis of depression, and current medications was recorded on the PHQ-2 and PHQ-9 assessment tools and used in the data analysis process.

Chapter IV: Results

Underdiagnosing and undertreating depression leads to lower quality of life for individuals, increased suicide rates, and increased use of medical services (Rancans et al., 2018). The universal screening intervention allowed for identification of patients with depression, treatment using evidence-based guidelines, and timely follow-up which resulted in lower PHQ-9 scores and expectantly improved quality of life for the patient.

Results of Data Collection/Analysis

Prior to implementing this quality improvement project, the nonprofit clinic identified 17 patients who had been diagnosed with depression. During the project's implementation phase, 95 patients were seen at the clinic for either new patient or follow-up visits. There were 55 patients screened using the PHQ-2 assessment tool. The demographic data for the patient population screened revealed an average age of 45 years with 60% of the patients being male gender. Ethnically, over half (56%) of the patients seen during the implementation were Caucasian. Nine of the 55 PHQ-2 assessments were positive, indicated by a score of three or higher. The nine patients who were positive on the PHQ-2 then completed a PHQ-9 during the same visit. Two of the nine patients with a positive PHQ-9 assessment completed a repeat PHQ-9 assessment after four weeks of intervention (medication only). Both patients who completed a repeat PHQ-9 questionnaire following treatment intervention had a lower score indicating improvement in depressive symptoms.

The project evaluated 55 patients. There were 44 patients who completed a PHQ-2 depression assessment tool and were not found to have depression. These 44

individuals did not receive treatment. Nine patients were identified to have depression. Two patients did not receive treatment, as their circumstances were considered situational. These patients were monitored, but no treatment was initiated per a decision made between the provider and the patient. Five patients restarted medication they had previously taken for depression as the treatment was consistent with the project treatment algorithms. The remaining two of the nine patients had their dose of medication increased according to the treatment algorithms. These two patients were taking anti-depressant medication prior to taking the PHQ-2 assessment, but their dose was increased after confirming the severity of depression with the PHQ-9 tool. These two patients were the two patients who repeated the PHQ-9 tool following the treatment algorithm and showed improvement in their depression.

Only two patients repeated the PHQ-9 following treatment, so it was impossible to detect a significant difference between time points unless more repeat PHQ-9 assessments were completed. Based on a *p*-value of 0.79, there was not enough evidence to suggest a significant difference in mean PHQ-9 scores before and after treatment. Descriptively, there was a decrease of 1.6 points in mean PHQ-9 scores, but it was not enough to be statistically significant.

Information was obtained regarding which provider saw the patients for a visit with the nurse practitioner and one physician, having the most frequent visits. There is no significance to this information other than two providers screened most patients.

One patient was scheduled for a follow-up within the indicated four-week timeframe. The second patient who had a repeat PHQ-9 completed the tool over the phone after the clinical director gave permission. The office did schedule follow-up

visits for the remaining patients, but they were not scheduled during the four-week timeframe. Reasons for this included patient preference for scheduling or the office was unable to provide the visit due to no openings (K. Hunt, personal communication, August 25, 2022).

Discussion

Depression often goes undiagnosed and untreated in the primary care setting. According to the USPSTF, there is evidence that interventions related to depression consisting of medication therapy, psychotherapy, or a combination of both, can improve patient outcomes and decrease clinical morbidity (2016). Even though the main access point for health care is often primary care, only approximately 3% of patients presenting for initial appointments are assessed for depression (Jackson & Machen, 2019). Healthcare can and must do better for this vulnerable population. This quality improvement project focused on conducting universal screening for every patient 18 years and older seen at a nonprofit clinic with a PHQ-2 assessment tool. A PHQ-9 questionnaire was used to identify the severity of the depression. Lastly, evidence-based interventions according to provided treatment algorithms were implemented to improve health outcomes for depressed patients.

The outcome of the universal screening intervention produced positive results by screening 55 patients for depression using the PHQ-2 assessment tool. Before implementing this quality improvement project, 17 patients at the clinic had been diagnosed with depression. This quality improvement project identified nine additional patients as having depressive symptoms. Seven of the nine patients received treatment according to the provided Epocrates ® treatment algorithms. Of those seven patients

receiving treatment, two completed a repeat PHQ-9 assessment showing a decrease in depressive symptoms and a lower PHQ-9 score. Although the data could not show statistical significance, the project did provide a means to screen patients for depression and identify those who were depressed. Once identified through universal screening, evidence-based interventions could be implemented, and the patients could receive support and a timely follow-up.

Implications for Practice

Depression is prevalent and disabling for society (USPSTF, 2016). The USPSTF recommends that universal screening be implemented with support systems in place to treat and provide timely follow-up for the patient (2016). Therefore, healthcare professionals must be equipped to adequately assess if a patient is depressed and be able to provide supportive care with proper referrals as needed. Early identification and treatment are crucial due to the devastating consequences that can occur if left untreated, such as suicide (NIMH, 2022). Implementing universal screening led to an increased number of patients being screened for depression. This project led to seven patients either being placed back on medication they were previously on for depression or increasing the dosage of current antidepressant medications. The remaining two patients identified to be depressed, who did not start medication, had follow-up appointments scheduled so the provider could assess for changes in their depressive symptoms. These patients, if left untreated, could have experienced worsening depressive symptoms and a different outcome.

In less than five minutes, an individual could have depression identified and follow a path toward equilibrium instead of illness. Universal screening is one way to

ensure that each patient, whether they complain of depression or not, is screened to identify depression at the earliest point possible so they can receive adequate treatment and follow-up.

The implications of this DNP quality improvement project included a successful universal assessment of 55 patients during a four-week implementation phase. Though parts of the project were not completed, there are positive insights to gain from this project. This project will increase the depression screening rate in a nonprofit primary care clinic for the uninsured.

Theoretical implications regarding Johnson's behavioral model clearly state that environment and biology impact a patient's well-being (Masters, 2018). Screening for depression in primary care only when a patient complains of feeling depressed is not enough. Based on the literature, patients with depression often present with physical symptoms, and providers tend to conduct screening based on their clinical judgment and do not conduct universal screening (Samples et al., 2019). A screening tool such as the PHQ-2 provides an efficient and effective method to screen patients for depression (Siniscalchi et al., 2020). This project showed an increase in the number of patients screened for depression, with nine patients receiving a PHQ-9 assessment. During the implementation of this project, 55 patients were screened using the PHQ-2 tool, and depression was ruled-out in 46 of these patients.

Screening adults for depression using the PHQ-2 and the PHQ-9 is confirmed as a reliable method in the primary care environment (Siniscalchi et al., 2020). Before this quality improvement project, universal screening was not required at the clinic. Patients were only screened if they reported feelings of depression. Universal screening for

depression allows for greater capture of those patients who may not present with typical depressive symptoms. Assessment with a PHQ-9 identified the severity of depression, so appropriate treatment following evidence-based guidelines could be implemented. Although timely follow-up visits were not completed for all nine patients identified as having depression, the clinic is aware of the importance and the need to ensure a timely follow-up is completed in the future.

The findings of this quality improvement project demonstrate the value in providing universal screening. There were 55 patients screened who would not have been screened for depression if this project was not implemented. This quality improvement project aligns with the depression screening guidelines that led the USPSTF to update its recommendations in 2016 to include universal screening for depression in adults (USPSTF, 2016). The universal screening guidelines were developed because the USPSTF determined less than half of all primary care patients were being screened for depression (2016). As noted per the USPSTF guidelines, all screening must include adequate systems, including evidence-based interventions and timely follow-up (2016).

Depression is a lifelong illness with evidence of relapse and recurrence. Depression can impact a person's relationships, ability to work, and function in society, 2022). Despite the prevalence rate, patients with depression are often underdiagnosed and undertreated in primary care (Kahalnik et al., 2019). Improvement of depression assessment and appropriate treatment with timely follow-up includes universal screening with a PHQ-2 assessment tool.

Implementation of universal screening with a PHQ-2 to quickly assess each

patient takes seconds to complete. If the PHQ-2 score is three or higher, a PHQ-9 assessment is indicated. The PHQ-9 assessment takes less than five minutes to complete. The early detection of a patient with undiagnosed depression is the benefit and the main implication for the use of universal screening for depression.

Limitations

Staff reported several limitations to the project. Limitations included being short-staffed, change in staff, focusing on physical conditions instead of mental health, cancelation of appointment by the patient, and lack of compliance of volunteers as the main reasons for the lack of assessments, treatment, and timely follow-up.

Clinic staffing shortages were noted to be a frequent problem. Healthcare has been affected by COVID-19 (Seah et al., 2021). There is a shortage of workers, and the healthcare systems have been drained worldwide (Seah et al., 2021). The clinic reported a decrease in volunteers and attributed this to the reason for a lack of completed assessments during the implementation phase. Burnout and stress are significant contributors to the lack of volunteers in healthcare currently (Office of the Assistant Secretary for Planning and Evaluation, 2022).

In addition, the providers focused on the physical issues the patient presented with instead of assessing for depression. Office visits are typically 15 minutes, which is not enough time to address physical and mental health concerns. Appointment length was a factor in this project.

The limitations noted by the project manager included the lack of access to patient files for patients previously diagnosed with depression, the timeframe of the project, and the inability to be onsite during the project. Other factors that limited the

project included the need for more integration between medical and mental health and the lack of compliance of volunteers. Access to the 17 patients previously diagnosed with depression would have helped this project. This would have allowed a comparison of the timeframe for previous diagnoses with the number of patients currently diagnosed and treated.

The second limitation was related to the four-week timeframe for assessment and follow-up. Implementing PHQ-2 and PHQ-9 assessments over extended periods would have been beneficial. A longer implementation period would have provided a better overview of the trends at the clinic and may have allowed the remaining seven patients to be scheduled for follow-up.

A third limitation was related to the project manager's need to be present on site during the implementation process. The project manager, if onsite, could have provided patient education regarding the project and the importance of participation. The clinic's documentation system does not allow confirmation of a patient receiving psychotherapy using one of the services provided by the clinic, which is a limitation. As the clinical director explained, the clinic has no way of knowing if a patient seeks counseling outside the clinic. It would be helpful to have this information to know if the patient is attending counseling services and if any improvement has been noted.

A fourth limitation was the change in staffing during the project. During the project, the clinic had three directors. The current clinical director did not allow for phone follow-up PHQ-9 assessments. Lastly, the lack of compliance among volunteers was believed to be a factor in the results of this project.

Recommendations

Although the project results were different from the anticipated results, there were still valuable takeaways to gain from the project. In primary care, collaborative team models facilitate access to mental health services, such as assessment, medications, counseling, and care coordination, which are essential for the recovery of common mental health disorders such as depression (Ashcroft et al., 2021). The American Association of Family Physicians (AAFP, 2022) believes achieving the best patient care outcomes requires collaboration between multiple disciplines. Family physicians and other primary care providers should remain knowledgeable about mental health practices, including effective screening techniques (AAFP, 2022).

The second recommendation is for primary care providers and all clinic staff in the primary care setting to continue to educate patients on depression to reduce the stigma associated with mental health (AAFP, 2022). By doing so, they advocate for their patients, which will improve access to treatment (AAFP, 2022).

The third recommendation relates to providing universal screening even when the number of volunteers is decreased. The time involved is miniscule in comparison to the positive gain that can occur when accurately diagnosing a patient with depression. The assessment and diagnosis of depression in primary care can occur in less than five minutes. Universal screening can seem immense, but offices can use technology such as tablets in the waiting room to decrease the time spent during the visit.

Improving volunteer engagement is one method to increase the number of volunteers in the nonprofit setting. The clinic noted they were unable to complete screenings due to being short-staffed. According to Hudson (2021), there are several

ways to improve volunteer engagement and reduce turnover. One way is to conduct volunteer recognition, which has been shown to improve volunteer turnover, communication, and relationships, which impact volunteer turnover. According to Venzin (2018), there are six steps to keep volunteers in an organization. They include training staff, matching volunteers correctly, constantly communicating, avoiding micromanagement, being specific about term lengths, and engaging one-time volunteers (p. 1). Following these steps can help improve volunteer retention (Venzin, 2018).

There needs to be improved collaboration and integration of mental health services in primary care. The nonprofit clinic where this project was implemented needed integration between the medical and mental health providers. The project manager could not see evidence of psychotherapy in the electronic medical record for the patients who were diagnosed with depression after completing the PHQ-9 (K. Lucas, personal communication, August 25, 2022). The clinical director was also unable to provide any information regarding the use of psychotherapy at the clinic (K. Lucas, personal communication, August 25, 2022). With the high prevalence of depression in adults and most of the care received in primary care, there needs to be a collaboration between primary care and mental health providers (AAFP, 2022).

The last recommendation involves providing depression education to decrease stigma and improve treatment adherence. Staff reported that some patients were apprehensive about completing the PHQ-2 and PhQ-9 assessments due to a lack of knowledge about depression (K. Lucas, personal communication, August 25, 2022). Disease stigma is typically perpetuated by insufficient knowledge. (Sanchez et al.,

2016). Patients may be reluctant to take depression medication due to the concern of becoming addicted and possible side effects (Sanchez et al., 2016). Implementation of a depression education intervention has shown success in increasing engagement in depression treatment, decreasing stigma, and improving adherence (Sanchez et al., 2016).

This quality improvement project aimed to conduct universal screening for all patients 18 years and older in a nonprofit clinic. While the clinic did not assess every patient seen during the implementation phase, they conducted 55 PHQ-2 screens during the four-week implementation. Nine patients completed the PHQ-9 assessment, and two took a repeat PHQ-9 assessment. No statistically significant data was possible given the small number of repeat PHQ-9 assessments. However, the fact that 55 patients were screened for depression and depression was ruled-out for 46 is a positive finding. Universal screening is a helpful tool to use in the primary care setting. Evidence-based interventions can be implemented, and timely follow-up completed to ensure improved patient outcomes. Primary care is the gatekeeper of medical services and needs to be fully equipped to identify those who are depressed to reduce risk to the patient. Education, collaboration, and integration are the three action words to focus on from this project. Providing education about the importance of universal screening for depression will reduce the stigma associated with mental health illnesses, especially depression. A collaborative team approach in primary care can improve access to services, including assessments, medication, and counseling required for improved patient outcomes. Integration of mental health services and primary care is needed to decrease the fragmentation that exists between mental health and medical care.

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Appendices

Appendix A: IWU IRB

Notice of Exemption

Indiana Wesleyan University

Institutional Review Board

Notice of Exemption

Implementation of a Depression Protocol for a Nonprofit Clinic in the Midwest

Melissa Carter, Penny Callaway (Investigators)

1749.22 IRB ID Number

The IWU Institutional Review Board (IRB) has reviewed your proposal and has determined that your proposal is exempt from further review by the IRB because the proposed project does not constitute human subjects research. Federal regulations that establish the authority of the IRB provide a specific definition of human subjects research which defines the scope of IRB authority. Your project falls outside the federal definition of human subjects research and is therefore not subject to IRB review.

Please note that this exemption regards only the oversight of human subjects research by the IRB. The IRB has not reviewed any other aspects of the research project and makes no judgement on the merits of the project or its methodologies. All research executed at IWU must conform to all applicable state and federal laws and regulations and to all applicable IWU policies.

Chair, Institutional Review Board

Appendix B: PHQ-2 Assessment Tool

Patient Health Questionnaire-2 (PHQ-2)

ID#:_____ Date:_____

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

For office coding: ___*0*_____+_____+_____+_____
*=Total Score*_____

Adapted from the patient health questionnaire (PHQ) screeners (www.phqscreeners.com). Accessed October 6, 2016. See website for additional information and translations.

PHQ-2 Scores and Proposed Treatment Actions The PHQ-2 consists of the first 2 questions of the PHQ-9. Scores range from 0 to 6. The recommended cut point is a score of 3 or greater. Recommended actions for persons scoring 3 or higher are one of the following:

- Administer the full PHQ-9
- Conduct a clinical interview to assess for Major Depressive Disorder

1. Korenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: Validity of a Two-Item Depression Screener. Med Care. 2003, Nov;41(11):1284-92.

Appendix C: Outline of Staff Education

I. Prevalence of depression

II. Disability

   a. Vulnerable

III. Difficult to diagnose

   a. Selective screening

   b. Leads to underdiagnosing and undertreating depression

IV. Universal screening recommended by USPSTF (2016)

   a. Utilize PHQ-2

   b. Confirm with PHQ-9

V. Treatment algorithm

   a. Evidence-based guidelines according to epocrates®

   b. Follow-up in four weeks

   c. Repeat PHQ-9

Appendix D: PHQ-9 Assessment Tool

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: _____

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 at all	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 E: Treatment Algorithm for Mild Depression

Mild depression:
Patients with mild depression have **low to moderate severity symptoms**, partial impairment, **no psychotic symptoms**, **no suicidal ideation**, and no psychomotor retardation or agitation.
These patients do equally well with either psychotherapy or an antidepressant.
The initial choice of therapy should be guided by patient preference. Options include:

- Antidepressant treatment
- Psychotherapy, including computer-based treatment with CBT, PST, and stress management
- Supportive interventions may include self-help books, yoga, relaxation training, light therapy, exercise, tai chi, music therapy, and acupuncture

Antidepressant treatment:

- The most prescribed antidepressants, **SSRIs and SNRIs**, offer similar response rates and can be used first line as monotherapy in mild to moderate depression.
- There is essentially **no consistent evidence that any of the traditional antidepressants are superior to any other**

Psychotherapy:
Psychotherapy (CBT, IPT, or PST) is also considered a first-line option in mild to moderate depression. Psychotherapy appears to have a positive impact on the quality of life of patients with depression, beyond measurable reductions in depressive symptom severity. Mild depression treated with psychotherapy may be less likely to progress to severe depression.
Supportive interventions:

- **Self-help books** are popular and bibliotherapy has demonstrated better efficacy than no treatment at all.
- **Yoga** may have a beneficial effect on depressive disorders, but there are significant variations in interventions, reporting, and feasibility.
- Other supportive interventions include **relaxation training**, light therapy, **exercise**, **tai chi**, **music therapy**, and acupuncture.
- **St John's wort** is a herb that is considered to be effective for the treatment of mild to moderate depression. It may also be used as an alternative therapy (as monotherapy only) if there is no response to first- and second-line treatments. St John's wort has an encouraging safety profile; however, numerous reports indicate the possibility of clinically significant drug-drug interactions, which must be taken into account before prescribing.

Computer-based treatment:

- For patients who cannot access or afford or schedule individual or group face-to-face CBT, there is evidence to support the use of computer-based CBT.
- There is also evidence to support the efficacy of computer-based PST and stress management. However, high withdrawal rates are common.

Source: Epocrates (2022). https://online.epocrates.com/diseases/5541/Depression-in-adults/Treatment-Approach

Appendix F: Treatment Algorithm Moderate Depression

Moderate depression:
Severe symptoms, significant impairment but no psychotic symptoms, no suicidal ideation, and no severe psychomotor retardation or agitation. These patients are suffering and if not unable to perform their normal life tasks, they are finding it very difficult to do so. Antidepressants are necessary in these patients but are possibly not sufficient to improve patient outcomes. Moderately to severely depressed patients derive the greatest benefit from the combination of antidepressants and psychotherapy.

General principles of antidepressant treatment:

- The main antidepressant options include:
- **Selective serotonin-reuptake inhibitors (SSRIs)** (e.g., citalopram, escitalopram, fluoxetine, paroxetine, sertraline)
- **Serotonin-norepinephrine reuptake inhibitors (SNRIs)** (e.g., desvenlafaxine, duloxetine, levomilnacipran, venlafaxine)
- Bupropion (a dopamine-reuptake inhibitor)
- Mirtazapine (a 5-HT2 receptor antagonist)
- Vilazodone (an SSRI and partial 5-HT1A receptor agonist)
- Vortioxetine (a serotonin-reuptake inhibitor with serotonin receptor modulation properties).
- Selection of an antidepressant depends on factors other than the relative efficacy of different agents; **no consistent differences in safety or efficacy have been demonstrated between antidepressants.**
- **Choice of drug** should be based on patient preference, tolerability, and past evidence of effectiveness in the patient.
- Determine antidepressant **dose based on the known target dose range**.
- **Follow up patients 1 to 2 weeks** after initiating therapy.
- **Titrate** the antidepressant dose to the maximum tolerated in patients who experience a partial response after 2 to 4 weeks.
- **A 50% decrease in symptom score constitutes an adequate response**, and a **25% to 50% change in symptom score may indicate the need to modify treatment**.
- Consider a change in drug class; if a patient was on an SSRI, then try a SNRI. If treatment was not tolerated due to adverse effects, retry with an agent with fewer or different adverse effects. If an agent is switched, resume a weekly follow-up until a response is apparent.
- Caution is required **when switching from one antidepressant to another** due to the risk of drug interactions, serotonin syndrome, withdrawal symptoms, or relapse. The timeframe required for safely switching depends on various factors including the pharmacokinetic properties of the drugs and possible interactions between them, as well as patient characteristics such as age, sensitivity to adverse effects, and the capacity to wait to begin a new course of treatment. Slowly tapering the dose of the first drug before stopping it, and then waiting a period of time before starting the second drug (known as a washout period, which is usually five half-lives of the first drug). Drugs with longer half-lives (e.g., fluoxetine) require longer washout periods (e.g., up to 5-6 weeks).

- If there is an **inadequate response** to 2 (or more) full-dose and duration antidepressants, the patient's depression might be considered treatment resistant or refractory, and

warrants a more complex approach, as outlined in the "Treatment-resistant/refractory depression" section below.

- In general there appears to be a **reduced risk of relapse** when antidepressants are **continued for over 6 months**.
- **If discontinuation of antidepressant treatment is required**, slowly decrease the dose to reduce the risk of unpleasant withdrawal symptoms; this may take several months at a rate that is tolerable to the patient. Closely monitor the patient to ensure that any apparent emerging withdrawal symptoms do not in fact represent a relapse of their depression.

Psychotherapy and other nonpharmacologic treatments:

- **Psychotherapy** in various forms has been shown to be both effective and cost-effective in reducing depressive symptoms.
- **Cognitive behavioral therapy (CBT)** has shown greater efficacy than pharmacologic placebo across levels of severity. Adjunctive CBT has also been found to improve outcomes for depression treatment in the primary care setting.
- Other commonly used psychotherapeutic methods for depression include **interpersonal psychotherapy (IPT)** and **problem-solving therapy (PST).** IPT may improve interpersonal functioning, and also appears effective for relapse prevention.

Source: Epocrates (2022). https://online.epocrates.com/diseases/5541/Depression-in-adults/Treatment-Approach

Appendix G: Treatment Algorithm Severe Depression

Severe Depression: Scores of 20+ on PHQ9
Those who are psychotic, suicidal, catatonic, or have severe psychomotor retardation impeding activities of daily living, or severe agitation. These patients are at increased risk for suicide, impulsive and potentially self-destructive behavior. Specialist referral, hospitalization, constant observation, tranquilization, and/or Electroconvulsive therapy may be necessary to keep the patient safe until definitive antidepressant therapy can take effect.
Specialist referral is indicated, and **hospitalization should be considered if** patients:

- Have **significant suicidal ideation** or intent and **lack adequate safeguards** in their family environment
- Have **intent to hurt others**
- Are **unable to care for themselves** and adhere to their treatment
- Have **psychotic symptoms**
- Have **uncontrolled agitation** accompanied by the risk of impulsive behavior.

Suicide risk management

- **Suicide risk management is critical**, especially as the risk may increase early in treatment. Routinely asking patients about suicidal ideation and reducing access to lethal means (especially firearms) can reduce the risk of suicide. Close telephone follow-up by a trained psychiatrist may help reduce the risk of death by suicide after a previous suicide attempt.

Pharmacotherapy

- **Antidepressant therapy is usually the first-line option in most patients with severe depression**. See Moderate depression treatment options.
- For patients who have agitation as a depressive symptom, antipsychotics can directly tranquilize the distress associated with this form of severe depression. Agitated patients may also benefit from short-term treatment with a benzodiazepine, or possibly both an antipsychotic and a benzodiazepine, until definitive antidepressant therapy takes effect.

Psychotherapy

- Patients with severe depression are unlikely to find other talking treatments effective, and it may worsen their outlook. Limit psychotherapy to the support necessary to manage the patient safely and to encourage the patient to accept definitive treatment.

General principles of antidepressant treatment:

- The main antidepressant options include:
- **Selective serotonin-reuptake inhibitors (SSRIs)** (e.g., citalopram, escitalopram, fluoxetine, paroxetine, sertraline)
- **Serotonin-norepinephrine reuptake inhibitors (SNRIs)** (e.g., desvenlafaxine, duloxetine, levomilnacipran, venlafaxine)
- Bupropion (a dopamine-reuptake inhibitor)
- Mirtazapine (a 5-HT2 receptor antagonist)
- Vilazodone (an SSRI and partial 5-HT1A receptor agonist)
- Vortioxetine (a serotonin-reuptake inhibitor with serotonin receptor modulation properties).

- Selection of an antidepressant depends on factors other than the relative efficacy of different agents; no consistent differences in safety or efficacy have been demonstrated between antidepressants.
- **Choice of drug** should be based on patient preference, tolerability, and past evidence of effectiveness in the patient.
- Determine antidepressant **dose based on the known target dose range**.
- **Follow up patients 1 to 2 weeks** after initiating therapy.
- **Titrate** the antidepressant dose to the maximum tolerated in patients who experience a partial response after 2 to 4 weeks.
- **A 50% decrease in symptom score constitutes an adequate response**, and a **25% to 50% change in symptom score may indicate the need to modify treatment**.

Source: Epocrates (2022). https://online.epocrates.com/diseases/5541/Depression-in-adults/Treatment-Approach