Understanding Depression

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Abstract

Background: Depression is the "common cold" of psychiatry. **Purpose:** The purpose of this review was to discuss a variety of topics involved with this disease process, including pathophysiology, the standard of practice, pharmacological treatments, clinical guidelines, and costs of the disease. **Method:** A thorough survey of the literature on "understanding depression" was implemented for this study. **Findings:** Best practices, including plan implementation and evaluation, are discussed. The cost of depression is more extensive than financial costs, though research concludes that the more severe depressive symptoms present, the cost of care is reflected as higher. Through the hypothetical plan suggested, there would be an increased adherence to the Standard of Practice Guidelines to increase screening for depression at the outpatient mental health clinic at the author's healthcare facility.

Keywords: understanding depression, suicide, veterans, costs of depression, antidepressants

1. Introduction

Depression is amongst the most common mental disorders within the United States of America (National Institute of Mental Health, 2019). An estimated 17.3 million adults have experienced at least one depressive episode, in the year 2017, in the United States (National Institute of Mental Health, 2019). This paper will discuss a variety of topics involved with this disease process, including pathophysiology, the standard of practice, pharmacological treatments, clinical guidelines, costs of the disease, and more. The hypothetical development of best practice improvement plans and evaluations will be reviewed for a specific organization.

2. Pathophysiology

Though there has not been a specific identified underlying pathophysiology of depression, the evidence points toward an interaction between neurotransmitter availability and receptor regulation. Neurotransmitters included in the availability disturbance within the Central Nervous System (CNS) include serotonin, norepinephrine, dopamine, glutamate, and brain-derived neurotrophic factor. Vascular lesions may also interfere with emotion regulation and other portions of the brain including the hippocampus and the amygdala. These lesions in the specified areas of the brain have been indicated in depression (Halverson, Bhalla, Moraille-Bhalla, Andrew & Leonard, 2019).

Neuroimaging has indicated that a patient in a depressive state has decreased metabolic activity in the neocortical structures and increased activity in the limbic structures. Age and disease-related changes along with physiologic weakness and psychosocial hardship, may lead to hypometabolism of cortical structures and hypermetabolism of limbic structures (Halverson et al., 2019).

Genetic features have shown to play a role in the development of depression. First degree relatives of a depressed person are approximately three times more likely to develop depression as compared to the general population (Halverson et al., 2019). Stress and loss can increase the risk of developing depression. Chronic pain, psychosocial stressors, and medical disabilities have a part in the possibility of developing depression, including bereavement, negative life events, and loneliness (Halverson et al., 2019).

Depression is a treatable condition, with many treatments offered outside of the pharmacological approach. The proper treatment regimen, including medication, psychotherapy, or alternative treatment methods, may take an extensive amount of time to determine the patients individualized the best approach. When the disease is properly managed, patients may lead successful lives.

3. Standard of Practice

The standard of practice recommendations for depression, of the Department of Veterans Affairs and DoD (VA/DoD), have published goals including offering best practice advice for the care of adults with depression, recommended assessment protocols, diagnosis guidelines, treatment interventions, and indications for referral to specialty care (Department of Veterans Affairs & Department of Defense, 2016). Recommendations, per the VA/DoD (2016), for identification of the disease process include screening for depression using the Patient Health Questionnaire-2 (PHQ-2). Recommendations for assessment and triage include patients with suspected depression are assessed for risk of harm to themselves or others, psychotic features, the status of functioning, any current medical treatment, and pertinent family history. For patients with a previous diagnosis of depression, a Patient Health Questionnaire-9 (PHQ-9) should be administered to measure the severity of depression and treatment monitoring and planning.

Treatment setting recommendations by the VA/DoD (2016), including using collaborative care for treatment in the primary care setting. The diagnostic tools that the VA/DoD utilizes are the Diagnostic and Statistical Manual of Mental Disorders, the fifth edition (DSM-5) (Department of Veteran Affairs & Department of Defense, 2016). Disease management recommendations include patient education with an individualized treatment plan. All education and treatment planning should include the patient, their support system, and the provider. Psychotherapy including Acceptance and Commitment Therapy (ACT), Behavioral Therapy, Cognitive Behavioral Therapy (CBT), Interpersonal Therapy (IPT), Mindfulness-Based Cognitive Therapy (MBCT), and Problem-Solving Therapy, may be offered in individual or group settings, based on patient preference. Pharmacological management recommendations include Selective Serotonin Reuptake Inhibitors (SSRI's) except for fluvoxamine, Serotonin-Norepinephrine Reuptake Inhibitors (SNRI's), Mirtazapine, and Buproprion (Department of Veteran Affairs & Department of Defense, 2016). The recommendations outline that no specific psychotherapy or pharmacotherapy is more effective than another, per research-based evidence. If there is no response or minimal response demonstrated from monotherapy, the VA/DoD (2016) recommends that after four to six weeks, the provider should change therapies or add additional therapy.

Monitoring of depression recommendations includes after beginning therapy or changing treatments, the patients' symptoms, adherence to treatment, and the occurrence of adverse effects should be monitored monthly until remission is achieved. Once remission is accomplished on an antidepressant medication, that medication is recommended to continue for at least six months to reduce the risk of relapse (Department of Veteran Affairs & Department of Defense, 2016). If the patient is at high risk for relapse, it is recommended per the VA/DoD (2016) to offer CBT, IPT, or MBCT to reduce the risk of relapse. Educating the patient on the benefits of light therapy, exercise, acupuncture, herbal supplements, and other alternative therapies are noted, with weak or minimal evidence to support (Department of Veteran Affairs & Department of Defense, 2016).

4. Pharmacologic Treatments

4.1 Introduction of Drugs

There are several categories of medications utilized to manage depressive symptoms. Antidepressants may decrease depressive symptoms, though they may take two to twelve weeks to have an effect and reach the full potential of symptom management (National Alliance of Mental Illness, 2017). Most patients try multiple different medications before finding a medication that works best to manage their symptoms. Categories of medications prescribed to treat depression in order of most commonly utilized include SSRIs, SNRIs, Norepinephrine-Dopamine Reuptake Inhibitors (NDRIs), Second-Generation Antipsychotics (SGAs), Tricyclic Antidepressants (TCAs), and Monoamine Oxidase Inhibitors (MAOIs).

4.2 First Drug Category

SSRIs are the most commonly prescribed antidepressant (National Alliance of Mental Illness, 2017). Serotonin is one of the neurotransmitters that carry brain signals to the neurons. The SSRI medication blocks the reabsorption of serotonin to the neurons to make serotonin more available to improve the transmission of chemical messages between neurons. The Food and Drug Administration (FDA) has approved Citalopram, Escitalopram, Fluoxetine, Paroxetine, and Sertraline to treat depression in the SSRI drug category (Mayo Clinic Staff, 2019). A unique adverse effect and priority information regarding patient education of SSRIs is serotonin syndrome. Serotonin syndrome is a rare adverse effect, though it requires immediate medical attention if signs and symptoms arise. Symptoms of serotonin syndrome include high fever, confusion, diaphoresis, significant alterations in blood pressure, and tachycardia. Serotonin syndrome can be caused by a patient being prescribed more than one medication that blocks the reabsorption of serotonin, including two antidepressants, St. John's wort herbal supplement, and other pain medications (Mayo Clinic Staff, 2019).

4.3 Second Drug Category

SNRIs are the second most commonly prescribed antidepressant (National Alliance of Mental Illness, 2017). Similar to the mechanism of action of SSRIs, the SNRI prevents the reuptake of the neurotransmitters serotonin and norepinephrine from increasing the amount of available chemical messengers to communicate with the neurons. The FDA has approved Desvenlafaxine, Duloxetine, Levomilnacipran, and Venlafaxine to treat depression in this category (Mayo Clinic Staff, 2019). A specific adverse effect of Venlafaxine, Desvenlafaxine, and Levomilnacipran is hypertension, while for Duloxetine a specified adverse effect is worsened liver complications. Serotonin syndrome is also a concern for SNRIs due to blocking the reabsorption of serotonin. One priority information that all providers should be aware of when prescribing most antidepressants is the increase in suicidal ideations or behaviors, specifically with adults under the age of 25. Increased suicidal ideations and behavior tend to occur with the first weeks of a new or changed dose of a prescribed antidepressant (Mayo Clinic Staff, 2019).

4.4 Third Drug Category

NDRIs are another commonly used antidepressant to manage depressive symptoms (National Alliance of Mental Illness, 2017). The mechanism of action of the NDRI is blocking the transport of norepinephrine and dopamine back to the source of creation within the brain cell (Wagener, 2019). With the reuptake of dopamine and norepinephrine blocked, there is a greater number of available neurotransmitters in the brain, which has been researched and concluded to manage symptoms of depression. Medications within this category include Mirtazapine and Bupropion (National Alliance of Mental Illness, 2017). Priority information to provide patients is that there is a potential to overdose on Bupropion with toxicity symptoms including hallucinations, loss of consciousness, arrhythmias, and seizures. Potential adverse effects of NDRIs include withdrawal symptoms with long term use, symptoms including anxiety, insomnia, flu-like symptoms, irritability, headaches, and more. Withdrawal symptoms can begin three to five days after not taking the medications and can last one to two weeks in duration. NDRIs have a low potential for abuse, though some facilities do not prescribe NDRIs due to the risk of abuse.

4.5 Local Outcomes

The VA/DoD utilizes SSRIs except for fluvoxamine, SNRIs, and NDRIs, as previously outlined (Department of Veterans Affairs & Department of Defense, 2016). The use of the medication categories follows the best practice guidelines for the American Psychiatric Association (APA). In a randomized trial of the medication duloxetine versus four selective SSRIs, involving 750 outpatient individuals with depression, found that Duloxetine had a primary outcome of remission after twelve weeks of 36% as compared to the select SSRIs at 32%, though this was not a statistically significant finding (Martinez et al., 2012). Based on these findings the VA/DoD determined that SNRIs may be more effective at treating depressive symptoms than SSRIs.

Addressing the need for older veterans with barriers to care including mobility, stigma, or geographic location through telemedicine is a non-pharmacological treatment the VA/DoD researched to provide better care for depression management. It was concluded that from a sample selection of 241 veterans aged 58 years of age and older with depression, after one year of telemedicine talk therapy treatment that 39% of veterans were no longer depressed, as compared to veterans that had in-person therapy, 46% reported to no longer be depressed (Egede et al., 2015). Per the National Veteran Suicide Prevention Annual Report, there has been a decrease in Title 38 veteran death by suicide from the year 2014 to the year 2017. In 2014, there were a reported 6,272 Title 38 veterans that died by suicide, while in 2017, there were 6,139, a 0.4 average per day decrease in suicide deaths (Office of Mental Health and Suicide Prevention, 2019).

5. Clinical Guidelines

According to the APA, the most recent clinical guidelines were published in October 2010. The recommendations for treatment of an individual with depression include establishing and maintaining a therapeutic alliance, completing a psychiatric assessment, evaluate the safety of the patient, establish the appropriate treatment setting, and to evaluate the functional impairment and quality of life. Treatment should also include coordination of the patient's care with other clinicians, monitoring the patient's psychiatric status, integrate measurements into psychiatric management, enhance treatment adherence, and provide education to the patient and the family (Gelenberg et al., 2010).

6. Assessment

A complete biopsychosocial assessment is required when assessing an individual for depression. An evaluation of current symptoms, a psychiatric history of treatment both current and past, previous suicide attempts, and the

existence of any co-occurring psychiatric disorders is essential to include in the initial assessment (Gelenberg et al., 2010). Assessing the severity of symptoms using tools including the Inventory of Depressive Symptoms (DS), the Hamilton Rating Scale for Depression (HAM-D), Montgomery Asberg Depression Rating Scale (MADRS), the 9-item Patient Health Questionnaire (PHQ-9), or the Beck Depression Inventory (BDI). The utilization of caffeine, tobacco, alcohol, over-the-counter medications, and other substances should be assessed. Individuals may attempt to alleviate depressive symptoms by using the above-listed substances and could suggest the disease process is occurring. Personal history including sexual history, history of trauma, any major life events, occupational and social histories should be obtained. A medical history, including pain, should be assessed due to co-occurring medical diagnoses being common in the presence of depression and could suggest that depression is occurring (American Psychiatric Association, 2017). A complete mental status exam (MSE) is an indispensable component for identifying depressive symptoms, suicide risk, co-occurring, cognitive deficits, or psychosis. The occurrence, type, and severity of functional impairment may be determined through the MSE and determine if depression is present. Family history can also determine if the individual is experiencing depression due to the genetic component being passed down from parents (Gelenberg et al., 2010).

7. Diagnosis

The APA utilizes the DSM-5 for diagnosing all psychiatric disorders, including depression. Best practice recommendations for reliably diagnosing depression include following the outlines diagnostic criteria in the DSM-5. The individual must have five or more symptoms during the same two-week time span, a change from previous functioning, and at least one of the symptoms including a depressed mood or loss of interest or pleasure (American Psychiatric Association, 2017). The symptoms of depression may include the following, not related to a medical condition: depressed mood for most of the day, nearly every day, by subjective or objective signs, noticeable anhedonia, nearly every day, by subjective or objective signs, significant weight loss when not attempting to lose weight by five percent body weight in one month, or a decrease or increase in appetite nearly every day, insomnia or hypersomnia nearly every day, fatigue or loss of energy nearly every day, psychomotor agitation or retardation nearly every day, by subjective or objective signs, feelings of worthlessness or excessive guilt, nearly every day, decreased ability to concentrate or indecisive, nearly every day, by subjective or objective signs, recurrent thoughts of death or suicidal ideation without a plan, or a suicide attempt or specific suicidal plan. Five of the nine symptoms listed above must be present to diagnose depression (American Psychiatric Association, 2017).

8. Patient Education

Education on the disease process of depression should be made readily available and easily accessible to all individuals and any involved loved ones, with the patient's consent (Gelenberg et al., 2010). Priority information includes that depression is a medical illness, and some treatments have been effective and necessary for individuals. Regarding medications and treatment therapies, patients should be educated on the progression of treatment including side effects, symptoms disseminate, and mood changes. The risk of relapse and common early signs and symptoms should be presented for the individual and their support system to identify possible recurrence. Living a healthy lifestyle should be encouraged including regular aerobic exercise to possibly reduce the recurrence of depressive symptoms (Gelenberg et al., 2010). Everyone should have educational materials that are tailored to them, their learning capacity, and their specific diagnosis and treatment.

9. Standard of Practice Disease Management

After a thorough review, the VA/DoD aligns with the APA standard of practice for the assessment, diagnosis, and treatment of adults with depression. The VA/DoD utilizes screening tools including the PHQ-9 and PHQ-2 to assess individuals with and without a diagnosis of depression. The APA suggests several tools, including the PHQ-9, among others to assess the severity of symptoms of depression (Gelenberg et al., 2010). The APA and VA/DoD both utilize the DSM-5 to diagnose individuals with depression with the previously mentioned criteria. The VA/DoD recommends conjunct therapies to include pharmacological intervention and psychotherapies and educating the patient on alternative treatments such as exercise and light therapy (Department of Veterans Affairs & Department of Defense, 2016). The APA recommends regular aerobic exercise, pharmacologic interventions, and alternative treatment therapies (Gelenberg et al., 2010).

Though the VA/DoD has a standard of practice for the assessment, diagnosis, and treatment of depression, research suggests that these best practice outlines are not being adhered to by providers. From a sample of 45,587 veterans discharged from an inpatient psychiatric hospitalization, with depression, less than 40% went to a follow-up visit seven days after discharge. Less than 60% of veterans had enough antidepressant medication to cover their prescriptions until their next follow up appointment post-discharge, and less than 13% of veterans

had at least eight psychotherapy encounters (National Academies of Sciences & Engineering and Medicine, 2018). Upon further research, only 20% of veterans were assessed with the PHQ-9 initially, and only 13% were reassessed after four to six weeks of treatment (National Academies of Sciences& Engineering and Medicine, 2018).

10. Managed Disease Characteristics and Resources

The first characteristic of well-managed depression is maintaining a healthy weight. Eating healthy and regularly exercising assists adults in achieving a healthy weight. A national survey that was completed, discovered that 43% of adults that were diagnosed with depression, were obese (Gotter, 2017). To assist in maintaining a healthy weight, eating a well-balanced diet of lean protein with a surplus of fruits and vegetables, decreasing foods with high levels of sugar and fats, and decreasing or eliminating processed foods (Gotter, 2017). Regularly exercising releases endorphins that boost mood, increases body temperature to omit a calming effect on the central nervous system, and reduces chemicals in the immune system that have the potential to increase symptoms of depression (Gotter, 2017).

The second characteristic of well-managed depression is to avoid unhealthy relationships with others. The research concluded that undesirable social communications could be linked to increased levels of cytokines, which are associated with depression (Gotter, 2017). To avoid these negative interactions, an individual with well-managed depression will avoid people that take advantage of them and stay away from people that decrease their self-esteem. Having a strong support system can defend against depressive symptoms. Routinely connecting with friends, family, and coworkers, attending events, and spending time participating in a hobby may assist in avoiding unhealthy relationships and build strong relationships with others (Gotter, 2017).

The third characteristic of well-managed depression is to decrease the time spent on social media. Though this characteristic may not pertain to all adults with depression, it is a characteristic to assist in managing the disease process. Research shows that increased social media utilization may contribute to depressive symptoms and reduced levels of self-esteem (Gotter, 2017). An individual with well-managed depression may not have social media apps on their smartphone, have timers set on their smartphone to limit the use of websites including social media, or only logging onto social media for a purpose and only once per day (Gotter, 2017). Social media may be a trigger for an individual with depression, being aware of your triggers and avoiding them, when possible, is a characteristic of well-managed depression that assists in the prompt implementation of healthy coping mechanisms to manage depressive symptoms.

11. Unmanaged Disease Characteristics

The first characteristic of unmanaged depression is sleep difficulties. Depression can be accompanied by decreased energy, anhedonia, and fatigue, which may feel debilitating (Healthline Editorial Team, 2017). Excessive daytime somnolence and insomnia can lead an individual to have unmanaged depression. With a lack of restful sleep, one may develop feelings of anxiety including symptoms of tachycardia, restlessness, difficulty focusing, hyperventilation, and diaphoresis (Healthline Editorial Team, 2017).

The second characteristic of unmanaged depression is anhedonia. Depression can influence an individual's ability to experience pleasure from activities they once found enjoyable. A lack of enjoyment in activities may lead to withdrawal from social events, hobbies, decreased sex drive, and interactions with family and friends (Healthline Editorial Team, 2017). Anhedonia can lead to feelings of hopelessness, helplessness, and guilt. Having negative self-talk and inappropriate guilt are common recurring thoughts of unmanaged depression (Healthline Editorial Team, 2017).

The third characteristic of unmanaged depression is suicidal ideation. In the year 2013, over 42,000 people died from suicide in the United States of America (Healthline Editorial Team, 2017). Behaviors indicative of possible suicidal ideation include the increased consumption of illicit drugs or alcohol, isolation from loved ones, giving away their valuable possessions, or telling people goodbye (American Foundation for Suicide Prevention, 2018). A person with unmanaged depression and suicidal ideation may also speak about killing themselves, reporting being a burden to others or having no reason to live. The mood of a suicidal individual may be irritable, have a sudden improvement in depressive symptoms, or they may be anxious (American Foundation for Suicide Prevention, 2018). Talking about suicide or making a suicidal attempt are lethal characteristics of unmanaged depression.

12. International and National Disparities

The depression rates in China have reported a percentage of two to five for lifetime prevalence, as compared to the United States, where there is a 16% lifetime prevalence (Zhang, 2010). While in Canada, there is an 11.3%

lifetime prevalence rate of depression (Parikh et al., 2016). China utilizes a three-step treatment program for depression management including acute, continuation, and maintenance phases, similar to the United States of America (Zhang, 2010). In Canada, a two-step treatment phase is used, with only acute and maintenance phases of treatment (Parikh et al., 2016). In China, the first-line treatment for depression is one antidepressant medication. A second-line treatment include changing the antidepressant medication and adding an additional medication. If this is still ineffective, electroconvulsive therapy (ECT) is appropriate (Zhang, 2010). In the United States, acute phase initial treatment includes medication management, psychotherapy, a combination of psychotherapy and medication, ECT, transcranial magnetic stimulation, or light therapy (Gelenberg et al., 2010). Canadian goals of treatment in the acute phase include full symptom remission, and for the maintenance phase, the goal is to prevent relapse or recurrence of depressive symptoms. In the maintenance phase medication management, psychological intervention, complementary, and alternative medicines along with neurostimulation to prevent recurrence (Parikh et al., 2016). Diagnostic tools utilized in the United States include the DSM-5 (Gelenberg et al., 2010). Canada utilizes the DSM-5, just as the United States, though there have been movements to move toward a different diagnostic tool that utilizes an alignment of diagnosis and brain system functioning (Parikh et al., 2016). China has a similar diagnostic tool as compared to Canada and the United States, known as the Chinese Classification of Mental Disorders, Third Edition (CCMD-3) (Zhang, 2010). The United States recommends screening adults at primary care level and reports no evidence that screening is harmful in adults. The United States' primary care practices implement a variety of screening tools including the PHQ-2 and PHQ-9 being the most abundantly utilized (Maurer, 2012). Screening and physician knowledge on depression and the treatment entailed in China are minimal. There is a lack of preparation of the physicians in the mental health field, there are gaps in care noted which may lead to patients with depression that are undiagnosed (Zhang, 2010). Canada recommends not routinely screening for depression in adults, specifically adults that do not have any obvious signs of depression. No apparent symptoms are defined as no objective or subjective signs of depressive symptoms or potential (Canadian Task Force on Preventative Health Care, 2013).

In comparing depressive lifetime prevalence, phases of treatment, treatment standards, diagnostic, and screening tools within Canada, China, and the United States in international and national disparities, it is evident that increased screening may lead to increased individuals being diagnosed and treated for depression. The United States has the highest standard of screening for depression and the highest rate of lifetime depression prevalence. Though diagnosis of depression internationally is comparable to the United States in using similar tools, treatment strategies differ greatly in varying phases and treatment regimen standards.

13. Managed Disease Factors

The first factor that would assist a patient with depression to manage the disease process is having a support system. Positive social support can improve physical and emotional health, improve a sense of belonging, and increase problem-solving skills and accountability (Taubman, 2018). A support system can assist a person with the disease process remains active and find pleasure in activities they feel are meaningful. Spending time with a support system can decrease feelings of isolation and be comforting to a person with depression. A support person can be there to assist in reducing stress and give advice to assist in resolving issues. Discussing progress toward a mutual or independent goal can assist an individual in managing depression by being held accountable (Taubman, 2018).

The second factor that would assist a patient with depression to manage the disease process is the ability to access care. Alternative methods to care have been developed to increase adherence to treatment for depression, including telepsychiatry. Telepsychiatry reaches the patient in their home via a mobile device or computer. With the use of telepsychiatry, providers can reach more patients that live in remote areas, patients that have barriers to access such as lack of transportation or the stigma of seeking care (Smith, 2017). Research conducted on 241 veterans, diagnosed with depression, in two subgroups received either telepsychiatry or in-person sessions for one year. After one year, it was concluded that there was no statistical difference between the subgroups in symptom relief or satisfaction of care, comparing face-to-face care and telepsychiatry (Smith, 2017). Advantages of telepsychiatry include convivence of care, increased access to a provider, privacy of treatment, and consistency of care. Increasing access to care results in increased adherence to treatment and patients with depression having a well-managed disease process.

The third factor that would assist a patient with depression to manage the disease process is cultural influence. In Western culture, Europe, Australia, and North America, the view of self is known as independent self-construal (Sun, 2014). The Western culture views self-actualization as a necessity in development and is outlined as a task for adolescence to reach in childhood. Cross-cultural studies have reported that Western nations are among the happiest people in the world (Ludden, 2017). In Western culture, there is a tendency to approach problems with

an analytical viewpoint and dividing things into categories and viewing the self as independent of others, which may lead to increased levels of subjective wellness (Ludden, 2017). Every culture has varying viewpoints on managing the disease of depression, with no culture being superior, though the research indicates the Western culture approach assists in positively managing the disease process.

14. Unmanaged Disease Factors

The first factor leading a patient with depression to not manage the disease process is not having a support system. Depression can lead to isolation, feelings of loneliness, and feelings of rejection and hopelessness. Increased isolation can lead to a greater risk of suicidal thoughts, disconnecting from people of support, increased feelings of hopelessness, and self-thoughts that the world may be better off if they were dead (Krull, 2018). Isolation can lead to a greater decline of hopelessness, helplessness, and suicidal ideations, which are all factors that contribute to the increased severity of depressive symptoms. Toxic or unreliable support persons can take advantage of a person who does not have well-managed depression and hurt them physically, psychologically, emotionally, or financially (Krull, 2018).

The second factor leading a patient with depression not to manage the disease process is the ability to access care. Financial barriers to care play a large role in patients accessing mental health care. According to a study, 47% of respondents with diagnosed mental illness that thought they needed care, did not receive care due to cost or not having health insurance (Rowan, McAlpine & Blewett, 2013). Patients who cannot afford the out-of-pocket costs from the insurance may decide to not seek treatment, leading to unmanaged depression. Though depression can cause severe disability, three out of five adults will not receive care from their primary care provider or a mental health specialist for depression or depressive symptoms (Rowan et al., 2013).

The third factor leading a patient with depression not to manage the disease process is cultural influence. In Eastern cultures, specifically East Asia, there is a cultural view of self, known as interdependent self-construal (Sun, 2014). This view places increased importance on relationships and shared goals. In a study conducted, Japanese American students in college endorsed a lower positive affect, as compared to European American students, while Korean students reported a more negative affect and somatization (Sun, 2014). Another study reported that although Asian American students have better academic performance, as compared to other students, they also had higher levels of depressive symptoms, social issues, and withdrawn behaviors. Asian American students also have reported a negative self-perception, endorsed a dissatisfaction with their social support, and scored higher on the Beck Depression Inventory when compared to European American students (Sun, 2014). The emphasis on interdependence in Eastern culture has a higher prevalence of stigma in seeking care and reporting depressive symptoms to their friends, employers, and family members, as compared to Western culture (Sun, 2014).

15. Patient, Family & Population

15.1 Patient Burden

Patients in the United States are burdened by depression, with a 60% increase in failure to complete college, increased risk of teen pregnancy, increased risk of job loss, decreased work performance, and decreased financial success (Kessler, 2012). Having depression is also a predictor for coronary artery disease, cerebral vascular accident, diabetes, myocardial infarction, and certain forms of cancer (Kessler, 2012). Seeking care with a lack of providers is a patient burden in the state of Michigan. The ratio of people to mental health providers throughout rural Michigan ranges from 200 to 4200 people per provider, with seven of the 15 counties in the upper peninsula of Michigan having zero mental health providers (Campbell, Wilkinson, Roelofs, & Rutledge, 2019).

15.2 Family Burden

Family and support persons share the burden of depression with the patient. Decreased income from missing work as a result of depressive symptoms and disturbance of familial structure are all shared family burdens (Lepine & Briley, 2011). There is a bidirectional influence of depression and relationship, a relationship may cause a depressive episode, or the loss of the relationship could also result in a depressive episode. Having relations with a person diagnosed with depression has a greater likelihood of ending in separation or divorce (Lepine & Briley, 2011). Maternal depression has been found to affect a percentage of 10 to 16 of pregnant women, which can increase the risk of lower birth weight of the fetus, spontaneous abortion, and preterm delivery (Lepine & Briley, 2011).

15.3 Population Burden

In the 1980s and 1990s, as part of de-institutionalization, Michigan closed over 30 psychiatric hospitals, though failed to increase outpatient services. In 2018, Beaumont hospitals across southwest Michigan saw 18,000 patients with a mental illness, which was increased by 13% in the year 2017 (Greene, 2019). In 2012, a study was conducted and reflected that patients that are seen in the emergency department for a medical illness have wait times 3.2 times longer than psychiatric patients (Scutti, 2019). Due to increased wait times for those with and without mental illness, patients are not being seen in a timely manner, leading patients to not go to the emergency department at all, or leave against medical advice, without proper care. Depression is a leading cause of disability across the globe and is a significant contributor to the world burden of disease (World Health Organization, 2020).

16. Costs

16.1 Patient Costs

The cost to the patient with depression varies, depending upon variable outside factors. According to one study, indirect and direct costs were influenced by the patients' scores on the PHQ-9. Direct costs of depression may include healthcare resource utilization, per patient, per year, and indirect costs including presenteeism and absenteeism from their current employer. Total costs for patients scoring between zero and four on the PHQ-9 spend approximately 8,662 dollars, patients scoring between 5 and 14 spend approximately 12,223 dollars and patients scoring between 15 and 27 spending approximately 16,376 dollars (Chow, Doane, Sheehan, Alphs & Le, 2019). The associated costs of care and depressive symptom severity are being correlated with patients reporting more severe symptoms and having higher impairment in workplace productivity, higher indirect and direct costs of care, and a greater volume of healthcare resources utilized, as compared to patients with reportedly less severe depressive symptoms (Chow et al., 2019).

16.2 Family Costs

Finding a provider that is within driving distance, a provider that is in-network, insurance paying for care, and paying for out-of-pocket treatment costs, are all struggles for family members of a person with depression, noted by Tepper (2016). The author reports that 13% of respondents state that the number one reason that they do not seek care is due to affordability, with the second reason being lack of insurance coverage at 12% of respondents (Tepper, 2016). It was reported that 29% of respondents reported that their mental health care claim was denied based on lack of necessity, per the insurance company. The number of family members spending more than 1,000 dollars per year on prescription medication rose to 3% in 2014, with 39% of that population being diagnosed with mental illness, and in the year 2012, 13% of Americans were taking antidepressants (Tepper, 2016).

16.3 Community Costs

The total economic burden of depression rose by 21.5% between the years 2005 and 2010, reaching a staggering $210.5 billion (Chow et al., 2019). The Medicare and Medicaid programs have placed penalties on providers whose patients are readmitted within 30 days of discharge. At the state level, some programs provide financial assistance to treat mental illness, and some networks are attempting to reduce the occurrence of undiagnosed depression by increasing screening on medical units in the hospitals (Williams, Chung & Muennig, 2017). Both federal and state governments contribute billions of dollars to support outreach programs, treatment and screening programs for depression and all other mental illnesses.

17. Best Practices

Within the outpatient mental health clinic at my organization, most patients have major depressive disorder listed as their chief complaint, in my experience. There has not been a consistent method for screening other patients for the possible presence of depression or depressive symptoms. The American Academy of Family Physicians recommends that adults should be screened for depression and effective diagnosis, treatment, and follow-up care should be implemented from the results of the findings (Maurer, 2012). This recommendation does not align with the practice implemented at my organization. I will address this misalignment by utilizing the recommendations outlined in the Standard of Practice Guidelines. The goal for this hypothetical plan implementation for best practice is to increase screening for depression of all patients seen at the outpatient mental health clinic at my healthcare facility.

17.1 Plan Implementation

The first hypothetical intervention will be to assess a patient using a PHQ-9 based on self-report of symptoms. There will be a template created within the electronic health record to document a completed patient-directed assessment of screening. To develop the template, the director of the mental health clinic will be consulted, along with the patient safety director, and the information technology department. The template will be the PHQ-9 and be documented by the assessing provider, based on the patients' exact answers in the self-report. The PHQ-9 is the most predominately researched screening tool for depression in a primary care setting and is suggested by the National Quality Forum (Zimmerman, 2019).

Upon completion of the screening, the second hypothetical intervention will be to complete a safety plan. Once the screening tool is completed and documented within the electronic health record, a provider with meet with the patient to determine if a depression diagnosis is necessary, utilizing the DSM-V. According to the American Psychiatric Association (2017), a patient must meet five criteria within the depression category to be diagnosed with depression. A crisis safety plan should then be completed by all patients that have been diagnosed with depression and in the presence of the mental health provider. A safety plan should include the individuals that would be willing to help, contact information for the patients' mental health provider, current medications, treatments currently being utilized, a copy of their advanced psychiatric directive if applicable, calming techniques, and preferred treatment facilities (Krolak, 2019).

The third and last hypothetical intervention will be to monitor outcomes during the patients' treatment of depression. Patients will be asked to complete a PHQ-9 at each follow-up appointment scheduled at the outpatient mental health clinic. Research has shown when utilizing the PHQ-9 assessment tool to measure outcomes have a higher rate of response (7.3% increases) and a higher remission rate (3.9% increase) (Zimmerman, 2019).

17.2 Plan Evaluation

The evaluation method that will be utilized for the use of the PHQ-9 is a cumulative assessment of the patient's responses to the 9-item questionnaire and the calculated score. The tool is valid and takes only two to five minutes to complete. The tool has 61% sensitivity and 94% specificity in adults for the utilization of the PHQ-9 (Maurer, 2012). The interpretation is a patient with a score of one to four, there is minimal depression severity, a score of 5 to 9 reflects mild depression severity, while scores ranging from 10 to 14 indicates moderate depression severity.

The evaluation method that will be utilized for the creation of a crisis safety plan, will be the teach-back method. Requesting that the patient teach-back to the provider why the crisis safety plan is important and how to utilize it in times of crisis is one way to evaluate effectiveness. The teach-back method allows the provider to assess the patients' understanding and confirms education was effective (Agency for Healthcare Research and Quality, 2015).

The evaluation method that will be utilized for monitoring outcomes will be a data analysis of all PHQ-9 assessments completed by the patient, and any positive or negative trends observed. Data analysis will occur upon each follow-up visit with the patient at the outpatient mental health clinic to quantitatively assess trends and effectiveness of treatment (Zimmerman, 2019). If there was a positive trend assessed, with lowering PHQ-9 scores, treatment could be found successful.

18. Conclusion

Depression is a treatable condition, with varying treatments that have been clinically proven to decrease depressive symptoms and assist individuals in coping with their disease. The VA/DoD has published goals for their Standard of Practice in the treatment of depression for veterans that obtain inpatient and outpatient care. There are several categories of medications utilized to treat depressive symptoms including SSRIs as the most prescribed, SNRIs and NDRIs, respectively. Specific to the VA/DoD, SSRIs aside from fluvoxamine, SNRIs and NDRIs are all utilized, and this follows the best practice guidelines set by the APA. Based on an evidenced-based study, the VA/DoD concluded that SNRIs, specifically Duloxetine, could be more effective in treating depressive symptoms as compared to SSRIs. The standard of practice, as published by the VA/DoD aligns with the APA Standard of Practice for the assessment, diagnosis, and treatment of adults diagnosed with depression, though the research suggests that these standards are not being adhered to at the VA/DoD. The cost of depression is more extensive than financial costs, though research concludes that the more severe depressive symptoms that are present, the cost of care is reflected as higher. Through the hypothetical plan suggested, there

would be an increased adherence to the Standard of Practice Guidelines, with a goal to increase screening for depression at the outpatient mental health clinic at the author's healthcare facility.

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