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Shrinking Health Care Disparities in Women: The Depression Dilemma

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FACULTY

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Table of Contents

Shrinking Health Care Disparities in Women: The Depression Dilemma

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Introduction: Why Focus on Women and Depression?

Gwendolyn Puryear Keita, PhD

TARGET AUDIENCE

Physicians and pharmacists practicing in the managed care environment.

LEARNING OBJECTIVES

By engaging in this activity, participants will be able to

1. recognize the symptoms of a woman with depression and develop an appropriate treatment plan while considering unique gender barriers and issues;
2. recognize the need for timely diagnosis by primary care providers for appropriate treatment and entrance into the managed care system to increase optimal outcomes for depression;
3. explain why women are at greater risk for depression than men and describe factors that play a role in developing depressive disorders;
4. acknowledge the complexity of comorbid conditions associated with mental illness and evaluate the importance of adequately diagnosing and treating comorbidities to improve outcomes and manage costs; and
5. integrate best practices into the work environment to ultimately improve patient health and productivity outcomes.

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These discussions highlight the importance of focusing on the prevalence, impact, and consequences of depression in women. Unipolar depression is the leading cause of disability for women worldwide. Depression negatively affects other health conditions, such as diabetes and cardiovascular disease, although the direction of causality is not known. High costs are associated with this chronic, recurring, debilitating illness. Depression can steal creativity, energy, and motivation, thereby contributing heavily to reduced work performance and productivity. Yet the cost of women's depression is measured not only by financial figures, but in terms of how it affects family and child relationships and permeates to subsequent generations.

It has been shown that depression affects females more than it affects males. This greater prevalence in women begins as early as the teen years, and the disparity between women and men is approximately doubled by the time people reach their early 20s. However, certain events in a woman's life also pose increased times of risk for developing depression, such as the times of varied hormone levels—pregnancy, the postpartum period, and the perimenopausal transition. Certain life stressors, such as poverty, sexual abuse, and poor social support, also put women more at risk for a depressive episode.

Why focus on women and depression? Because effective pharmacological and behavioral treatments are available, many of which are generic and therefore offer very cost-effective options. Depression is often marked by relapses over time. A consistent finding in depression research is that a previous depressive episode is the single largest predictor of a future depressive episode. Early detection and adequate treatment is paramount to interrupting this miserable cycle.

Many times, patients are seen and treated for depression in the primary care setting. Yet it has been noted that primary care providers more often than specialists face challenges when treating depressed patients. These challenges range from not being allowed to bill for adequate time spent with the patient, managing patient's expectations of side effects and thus their persistence with medication, and gaining intimate knowledge of depression treatment guidelines.

The articles in this supplement review the efforts of 2 organizations that have offered support to primary care providers in treating their depressed patients. The support activity has ranged from providing expert consultation to allowing adequate billing for mental health services to providing the patient a "care coach" by telephone. Initial results are very promising, indicating reductions in depression rating scale scores, hospital admissions, and total patient care costs.

Quest for Timely Detection and Treatment of Women With Depression

Jeanne Leventhal Alexander, MD, FABPN, FRCPC, FAPA, FACPsych

ABSTRACT

BACKGROUND: Women are at risk for a wide range of depressive and anxiety disorders and particularly for mood disorders associated with their menstrual cycle, with seasonality, and during the menopausal transition.

OBJECTIVE: To review the presentation of depression, the importance of timely and effective treatment, and some of the research surrounding increased prevalence of depression in women, and the times and conditions—such as the perimenopausal transition, pregnancy, postpartum period, and comorbidities—of this increased risk in women.

SUMMARY: Dynamic interactions of both biological and environmental factors contribute to the development of major depression. These include, but are not limited to, predisposing genetic influences, gender, environmental stressors, poor social support, childhood sexual abuse, other psychiatric illness, and trauma. Timely and effective treatment of each episode of depression to remission is critically important. Barriers to instituting collaborative care of depressive illness are numerous. The lack of adequate collaborative care along with the consequent failure to adequately diagnose and treat depression reflects some of the deficiencies in the current organization and delivery of health services.

CONCLUSION: The prevalence of depression, its psychosocial and medical consequences, and the worsening course of depression without treatment highlight the public health importance of early detection and improved strategies for the treatment of depression in modern health care settings.

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Depression is a widespread, debilitating psychiatric illness with significant economic and humanistic consequences. It is common and can be quite serious in nature.[1,2] Women carry a greater burden of affective and anxiety disorders than do men, with the lifetime prevalence of depression in women at about 21%, compared with 13% in men.[3] An analysis by the World Health Organization found that depression is the leading cause of health-related disability and that depression is the second leading cause of disease burden for women in the United States.[4] Depression currently affects 20 million Americans and 19 million Europeans (in European Union countries), and the rates of depressive illness are increasing.[5] The barriers to diagnosis, treatment, and achieving treatment to remission are numerous and represent a significant challenge to the health care system.[6-8]

Effective Treatment Exists for Depression

Although no clearly identifiable determinants exist, several theories have been proposed to explain the increased prevalence rate of depression in women. Adverse experiences as well as depression and/or anxiety disorders during childhood, along with gender differences in sociocultural roles, have been implicated.[9-12] In studying the lifetime incidence of major depression in twin pairs, Kendler et al. found that the heritability of major depression was higher in women (42%) than in men (29%). Interestingly, girls and boys have equal prevalence rates until adolescence.[13] However, after puberty, prevalence increases in girls until early adulthood, when women consistently have a higher prevalence of depression compared with men.[14] Premenstrual dysphoric disorder (PMDD), with a 12-month prevalence of 3% to 8% of women,[15] also contributes to the greater prevalence of depression in women.

Depression Risk Factors

Dynamic interactions of both biological and environmental factors contribute to the development of major depression. These include, but are not limited to, predisposing genetic influences, gender, environmental stressors, poor social support, childhood sexual abuse, other psychiatric illness, and trauma.[14,16-19]

Past Depressive Episodes

The greatest risk factor for a future depressive episode is a past depressive history. In 1 study, women who had a history of depression were nearly 5 times more likely to have a future episode of major depressive disorder.[20] Risk of recurrence for depression in either gender has been found to increase with each episode: the first episode increases the risk of a second by 50%; 2 episodes increase the risk of a third by 70%; and 3 episodes increase the risk of a fourth by 90%.[21-23] It has been shown that

with each new depressive episode, the association between stressful life events (SLEs) and the onset of the next depressive episode becomes progressively weaker.[24,25] Corruble et al., in their cross-sectional survey of 13,377 treated patients with unipolar depression, found a linear reduction in the "average life events exposure" as a function of the frequency of depressive episodes of severity in the past,[26] consistent with the results of Kendler et al.[24,25]

Stressful Life Events

Two of the most widely replicated findings for major depression are its greater prevalence in women after adolescence and its causal association with SLEs.[24,27] Bouma et al. found an increased association between adolescent females with a parent who had had a depressive episode (lifetime) and sensitivity to the depressogenic effects of SLEs compared with same-aged males, regardless of temperament, family functioning, and/or perceived parenting.[28] Stress is an important predictor for the development of mood-continuum problems.[18,19] Stressors have different effects on a woman depending on the nature of the stress, its duration, her early life experiences, her customary positive or negative bias toward appraising the stress, and her stage of life.

New research has found an association between some individuals who may be particularly vulnerable to SLEs and/or adverse environments and genetic polymorphisms of the serotonin transporter gene promoter region (5-HTTLPR) locus of the serotonin transporter (5-HTT) gene.[29-31] Furthermore, the combination of polymorphisms of brain-derived neurotrophic factor, 5-HTTLPR, and maltreatment/SLEs have been associated with increased risk of depression with SLEs in both children[32] and in the adult population.[30] Wichers et al. recently reported on the effects of moment-to-moment effect of positive emotions on genetic risk for depression in a sample of 279 twin pairs.[33] The genetic influence of SLEs on lifetime depression and the genetic effects on "negative mood bias" in daily life were found to be "buffered" by positive stress appraisal. Safford et al. concluded from their study appraising SLEs of 76 undergraduates with high negative cognitive styles compared with 81 undergraduates with low negative cognitive styles that the underlying cognitive style affects stress generation, particularly in women.[34] These studies point to the importance of intervention early in life and the potential strategic impact of operationally based therapies, such as cognitive behavioral therapy and interpersonal psychotherapy, in depression risk as well as prevention for recurrence.

Women consistently report SLEs to be associated with housing problems, loss of confidence, proximal relationship problems, and illness of an individual in their distal network.[35] Studies have found an association between a high-demand psychosocial work environment and depression risk/depressive disorders,[36] burnout/emotional exhaustion,[37] and/or malaise/fatigue. Marital stress and/or family stress, as well as demands along with high work stress, have been found to increase the risk of depression along with increased risk of other mental health problems.[38]

Women are often placed in the caregiving role with multiple caregiving responsibilities involving children, spouses, and parents. Maclean et al., in their cross-sectional data analysis of the Canadian National Public Health Survey of women aged 15 to 64, found that distress, stress, and chronic stress levels were high for mothers, regardless of their employment or marital status.[39] The levels were even higher if the mother was unemployed or single. Employment was helpful to the single mothers; however, in those mothers who had partners, employment was found to increase their stress.[39]

These studies on stress in women and the impact of stressors on a woman's risk of developing mood problems suggest multiple contributing factors. Thereby, some of the challenges for the health system are to create effective treatment plans to help these women improve their mood disorders, to decrease the effects of their underlying stressors, and to increase their positive cognitive appraisal skills for those underlying stressors.[18,19,28,33,34]

Impact on Family and Social Network

Depression not only affects the patients, it also adversely affects their family, friends, and caregivers. Females with mood disorders have been found to have higher odds of divorce, teenage pregnancy, and failure to complete high school than do those females without mood disorders.[40] As women are frequently caregivers, the impact of depression has been found to have a carry-over effect on those receiving care. Children of depressed mothers are at increased risk of developing emotional and behavior problems.[28,41] This link has been explained by both genetic (nature) and non-genetic (nurture) influences.[41] A growing body of evidence shows that children of women with depression have higher rates of school problems and lower levels of social competence and self-esteem than do their classmates whose mothers are not depressed.[42]

Timely and Effective Treatment

The barriers to improving care of depressive illness are well known. Patients may resist mental disorder diagnoses or fail to follow up with prescribed treatment for reasons including side effects or unawareness of long-term benefits.[43] Primary care practitioners have low rates of diagnosing depression, of prescribing according to guidelines recommended by the American Psychiatric Association, and of following up with patients after treatment is initiated.[23,44] Health care systems have had difficulty instituting effective systems to deliver care to depressed patients in the primary care setting.[8] The problem appears not to be the lack of effective treatments for depression but structural deficiencies in many health care organizations that result in inadequate delivery of mental health services.[8,43,45]

Instituting timely, effective, and guideline-driven treatment of each episode of depression to remission is critically important. Many patients do not fully respond or fail to respond to

antidepressant treatment.[46-48] The Sequenced Treatment Alternatives to Relieve Depression (STAR*D) trial found that 29% to 46% of depressed patients failed to respond fully to antidepressant treatment of adequate dose and duration. An additional group of 12% to 15% had only a partial response, as measured by symptom severity.[49] A patient with a Hamilton Depression Rating Scale (HDRS) rating ≥8 after treatment had a high probability of relapse despite having improved during the trial.[47,50] Patients with only partial response to antidepressants are more likely to have a relapse, impaired psychosocial functioning, increased risk of cardiac morbidity and mortality, and increased all-cause mortality.[51]

Discontinuation of antidepressant therapy has been found to result in rapid reemergence of symptoms and loss of any psychosocial gain, while maintenance therapy with a selective serotonin reuptake inhibitor (SSRI) for at least 4 months has been shown to protect against recurrence of chronic depression.[52,53] A higher level of efficacy with first-line antidepressant medications can be achieved by optimizing dosage, offering concurrent cognitive behavioral therapy or interpersonal therapy, and recognizing when it is time to switch or augment therapies, according to best practice guidelines[54] as well as applying the results of the STAR*D trial.[48,55]

In the STAR*D trial, patients who did not remit on citalopram, the first-line antidepressant, were then stratified and randomized to evaluate second-step treatments.[48,55] Randomization was to sustained-release bupropion, extended-release venlafaxine, or sertraline. Depending on the antidepressant, the median time-to-remission after initiation of the second antidepressant was from 4 to 6 weeks. Lack of response to 1 antidepressant as a first-line treatment did not imply that another antidepressant in the same class would not have efficacy. Both intraclass and interclass switches were found to be efficacious.[56] Combining cognitive behavioral therapy with antidepressant treatment, either for the first-line or second-line treatment, not only improved remission rates, but also provided some relapse prevention.[57-63] Cognitive behavioral therapy has been shown to decrease an individual's cognitive reactivity to depressogenic stimuli, which additionally has been shown to provide some protection from recurrence of depression.[59,64]

Clinical Presentation

Major depressive disorder consists of a constellation of symptoms that traverse 3 domains: psychological, behavioral, and somatic (physical). The diagnostic criteria for major depression, as defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, are the same for women and men (Table 1).[65] The presentation and course, however, can sometimes differ in women. Women may experience symptoms of atypical depression (e.g., hypersomnia, hyperphagia, carbohydrate craving, and evening mood exacerbation) and frequently have symptoms of anxiety, panic, and eating disorders.[66]

TABLE 1 DSM-IV-TR Criteria for Major Depressive Episode

A diagnosis of major depression disorder is based on the following list of symptoms and requires at least 1 or both symptoms from section A and at least 5 of 9 symptoms overall.

A. At least 1 of the following abnormal moods, which significantly interfere with the person's life:
   1. Abnormal depressed mood most of the day, nearly every day, for at least 2 weeks.
   2. Abnormal loss of all interest and pleasure most of the day, nearly every day, for at least 2 weeks.

B. The following symptoms have been present during the same 2-week depressed period:
   1. Appetite or weight disturbance, either
      a. abnormal weight loss (when not dieting) or decrease in appetite, or
      b. abnormal weight gain or increase in appetite.
   2. Sleep disturbance, either abnormal insomnia or abnormal hypersomnia.
   3. Activity disturbance, either psychomotor agitation or retardation (observable by others).
   4. Abnormal fatigue or loss of energy.
   5. Feelings of worthlessness or inappropriate guilt.
   6. Abnormal poor concentration or indecisiveness.
   7. Recurrent thoughts of death (not just fear of dying) or suicide.

C. The symptoms are not due to a mood-incongruent psychosis.

D. There has never been a manic episode, a mixed episode, or a hypomanic episode.

E. The symptoms are not due to physical illness, alcohol, medication, or street drugs.

F. The symptoms are not due to normal bereavement.

If the patient is 18 years or younger, abnormal mood may manifest as irritability.

Note: Do not include symptoms that are clearly due to a general medical condition or mood-incongruent delusions or hallucinations.

Adapted from American Psychiatric Association (2000).[65]

DSM-IV-TR=Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision.

Psychological or Emotional Symptoms

A major depressive episode is characterized by the psychological symptom of a persistent, diminished ability to experience pleasure. Patients appear sad or depressed and they are often pessimistic, believing that nothing will help them feel better. Anxiety symptoms are present in about 58% of depressed outpatients.[67] Irritability, indecisiveness, lack of interest or motivation, and excessive guilt are also common symptoms.

Behavioral Symptoms

Behavioral symptoms may manifest as cognitive symptoms or psychomotor disturbances. Patients may experience a decreased ability to concentrate, slowed thinking, and a poor memory for recent events—all of which contribute to reduced productivity.[68] Psychomotor agitation, such as pacing or angry outbursts of shouting, may be present. Crying spells, interpersonal friction,

social withdrawal, and avoidance of emotional intimacy may also be symptoms of major depressive disorder.

Physical or Somatic Symptoms

Patients who present with somatic symptoms as their predominant symptom of depression are often unaware that they suffer from depression. Data from the World Health Organization study of psychological problems in general health care found that 69% of participants who met criteria for depression approached their primary care clinician complaining of somatic symptoms alone.[69] Kroenke et al. found a definitive correlation between the number of physical complaints and a diagnosis for depressive disorder.[70] Chronic fatigue, which interferes with the ability to perform normal daily tasks, is a common somatic complaint in major depressive disorder. Pain, especially headache, often accompanies fatigue. Sleep disturbances and appetite disturbances, including decreased appetite or increased appetite and weight gain, may be present. Other somatic symptoms include gastrointestinal or cardiovascular complaints, muscle tension, or loss of sexual interest (Table 2).

The Mood Disorders Continuum

While major depressive disorder is considered 1 of the most common types of depression, depression should be thought of as part of a disease continuum that includes mood disorders and comorbidities such as anxiety disorders, all of which influence quality of life. The importance of early and accurate diagnosis is ideal for providing optimal treatment, clearly identifying patient triggers, diagnosing risk for future episode(s), and preventing further morbidity.

Minor Depression/Depressive Spectrum Disorder

Persistence of depressive mood symptoms for at least 2 weeks, but not otherwise meeting criteria for dysthymic disorder or major depressive disorder, is called minor depression or depressive spectrum disorder.[71] It is common, and affects about 10% to 24% of the population over a lifetime.[3] Depression spectrum disorders appear to cause functional impairment similar to that seen with other mood disorders[72,73] and may have ramifications for long-term risk for development or recurrence of major depression.[74,75]

Dysthymic Disorder

Dysthymic disorder is a chronic low-grade depression or depressed mood for at least 2 years, for most of the day, for more days than not, and includes any 2 of the following symptoms:

- Poor appetite or overeating
- Insomnia or hypersomnia
- Low energy or fatigue
- Low self-esteem
- Poor concentration or difficulty making decisions
- Feelings of hopelessness

Lifetime prevalence rates of dysthymic disorder are about 8% for women and about 5% for men.[76] Although dysthymic disorder is a chronic illness, it has an excellent recovery rate of about 74%.[67] However, the relapse rate of 71% is high, with the majority of relapses generally occurring within 3 years of recovery.[67] In many ways, dysthymic disorder is a more persistent condition than a non-chronic major depressive episode, particularly with respect to duration of symptomatology. Research indicates that 75% of patients with dysthymic disorder have exacerbations that meet criteria for major depressive disorder, and 95% of dysthymic disorder patients suffered a major depressive disorder during their lifetimes.[77,78] Dysthymic disorder represents 36% of patients in mental health settings.[79]

Depressive Disorders and Comorbid Anxiety

Comorbidity between generalized anxiety disorder (GAD) and dysthymic disorder or major depressive disorder is common. The presence of GAD has been found to significantly increase the risk of a subsequent depressive disorder.[80] Patients who have comorbid GAD and a mood disorder often present with somatic symptoms, and these patients do not necessarily perceive their anxiety or mood problems as being connected to those symptoms.[81] Similar to depression prevalence, anxiety disorders are also about 2 to 3 times more common in women than in men.[82] When women experience depression, they are twice as likely to experience depression with anxious and somatic symptoms. Three fourths of patients with GAD will develop an episode of major depression in their lifetime.[83]

Pregnancy, Breast-feeding, Menstrual Cycle, Seasonal Change, and the Menopausal Transition

Depression During Pregnancy

The prevalence rate for depression in pregnant women is about 14%.[84] Factors such as history of depression or PMDD, younger age, limited social support, living alone, greater number of children, marital conflict, and ambivalence about pregnancy increase the risk of depression during pregnancy and the postpartum period.[66] For women who develop depression during pregnancy the decision to treat depression requires thoughtful consideration of the risks and benefits as well as the treatment options. The use of medication during pregnancy remains a controversial and complicated issue, yet maternal anxiety and stress during the pregnancy appear to predict adverse pregnancy outcomes.[85] Despite the frequency of depression in pregnant women, information to guide patients and physicians through the process of considering treatment during pregnancy is limited.[84]

Depression During the Postpartum Period

Postpartum depression is a major health issue for many women from diverse cultures. It is fairly common with a prevalence rate of about 13%.[86] Symptoms are somewhat different in women who have depression outside of the postpartum time period. Whereas

non-postpartum depression is associated with sad mood and suicidal ideation, postpartum depression can be associated in some women with the psychomotor symptoms of restlessness and agitation, as well as impaired concentration and impaired decision making.[87] If they are mild, mood changes postpartum are referred to as "postpartum blues." Postpartum blues are characterized by labile mood, tearfulness, and irritability. If the blues last longer than 2 weeks, the patient should be evaluated for postpartum depression.

The risk of postpartum depression is increased in women with pregravid depression, a history of PMDD during pregnancy, negative life events during pregnancy, and an inadequate social support system.[66] Treatment of postpartum depression should take into consideration that many antidepressants readily cross into breast milk, and so the risks and benefits of taking antidepressants while breast-feeding should be evaluated in each patient to determine what is best for that patient and her child. If postpartum depression is not treated, risks increase for impaired maternal-child bonding, poor self-care, and newborn neglect.[86]

Premenstrual Dysphoric Disorder

PMDD is identified by somatic and emotional symptoms, which begin or worsen with luteal onset and resolve in the early follicular phase. About 3% to 8% of women are affected by PMDD.[15] Functional impairment is present and severe, and mood symptoms predominate. A history of PMDD is a risk factor for major depressive disorder. Up to 60% of those women with premenstrual dysphoria will have suffered or will suffer an episode of major depression.[88-92] The probability of a woman with lifelong PMDD suffering a major depressive episode is high, as is the probability of her having had such an episode before middle age.[93]

Seasonal Affective Disorder

Seasonal affective disorder (SAD) meets criteria for major depression but occurs only in the winter months.[94] The disorder is present in 0.4% to 2.7% of the population.[94-96] A high comorbidity exists between SAD and PMDD. SAD and PMDD have common symptoms, and in 1 study, 46% of the women diagnosed with SAD also had a diagnosis of PMDD during the summer.[97] The most common symptoms of SAD include a depressed mood, profound lack of energy, hypersomnia, hyperphagia, carbohydrate craving, and weight gain. Treatments include light therapy, medications, and psychotherapy.

Depression Associated With the Menopausal Transition

The perimenopausal transition is a time of increasing vulnerability for depressive episodes, with or without a history of a mood disorder.[98-101] Freeman et al. found an increased likelihood of depressive symptoms during the transition to menopause and a decreased likelihood after menopause.[20] A later study of women with no history of depression found that depressive symptoms increased during the transition to menopause compared with premenopause.[101] Premenstrual symptoms in early perimenopausal women (aged 36-44 years) and an early natural menopause (before age 40) have been found to increase a woman's risk of mood problems. Longitudinal studies have found an association between increased risk of mood disorders in the menopausal transition and a history of depressed mood or depression, including postpartum depression and premenstrual syndrome,[102] SLEs or life events viewed as undesirable,[102-107] and identifiable stressors.[108,109] Psychosocial difficulties were found in these studies to increase a midlife-aged woman's risk for mood problems during perimenopause. These psychosocial difficulties include a poor lifestyle (e.g., smoking),[101] little exercise,[110] difficulty paying for the basic necessities,[111,112] lower educational level,[111] health problems (e.g., comorbidities),[106,113,114] lack of a partner, and single parenting.[115]

TABLE 2 Common Physical Complaints in Depression[66,69,70]

- Fatigue/loss of energy
- Insomnia
- Weight loss or gain: loss of or increase in appetite
- Dizziness/palpitations
- Gastrointestinal symptoms: abdominal cramping, bloating, heartburn, diarrhea, and/or constipation
- Numbness
- Bodily aches and pain/fibromyalgia: backache, chest pain, chronic joint pain, limb pain, headache, etc.
- Loss of sexual desire

There is a strong relationship between the occurrence of hot flashes (e.g., vasomotor symptoms) and mood disorders. Women experiencing hot flashes have higher rates of depression regardless of prior incidence of depression.[22] In longitudinal studies, vasomotor and somatic symptoms have consistently been found to increase risk of mood problems.[104,116-118] Among women aged 35 to 52 years, greater anxiety and more depressed mood were both significantly associated with hot flashes.[119] Hot flashes and the associated sleep disturbances can contribute to fatigue, irritability, personal embarrassment in public settings, and feelings of anxiety or lack of control.

Hot flashes vary in intensity, frequency, and duration. When women experience hot flashes, most (35%) will experience them for 1 to 2 years, while 29% will experience hot flashes for 3 to 5 years. However, up to 10% of women will experience hot flashes for 11 or more years.[120,121] About 30% of all perimenopausal women experience hot flashes too infrequently to count, 30% experience several per day, and 30% experience hot flashes between few and several per day.[120,122] The prevalence of hot flashes and night sweats in women aged 45 to 55 years has been estimated to occur in about 10% of premenopausal women, 32% of perimenopausal women, and 40% of naturally menopausal women.[123] Yet 60% of women with depression

were found in 1 study to experience hot flashes and night sweats.[124] Additionally, women have been found to underreport their experience of hot flashes and night sweats.[125]

Estrogen augmentation to antidepressant treatment has been used in menopausal women to treat depressive episodes that have been refractory to complete remission without this augmentation.[126-130] These studies found varying degrees of additive improvement with the concurrent treatment with estrogen. It should be noted, however, that these studies were either a pilot,[126] small,[127,130,131] and/or preliminary.[129] One larger study[132] and another preliminary study[133] did not find an improvement with estrogen augmentation. In a recent study comparing 2 groups of surgically menopausal women suffering hot flashes and depressive symptoms, those women on low-dose estrogen therapy plus the SSRI fluvoxamine 50 mg per day were significantly more likely to experience a decrease in the frequency of hot flashes and a lessening of depressive symptoms than were women on low-dose estrogen therapy only.[134] Estrogen treatment is not yet considered a first-line treatment for major depression experience in perimenopause, either as monotherapy or as augmentation treatment.

Summary

Women are at risk for a wide range of depressive and anxiety disorders and have a particular risk of mood disorders associated with their menstrual cycle, seasonality, and menopause. While the majority of women do not experience mood and anxiety disorders during their lifetime, a significant minority do. The cumulative effect of childhood SLEs and premenopausal mood and anxiety disorders place women who experience them at an increased risk for a symptomatic menopause and a recurrence of mood and anxiety disorders throughout their later life.

Menopausal somatic symptoms such as hot flashes increase the risk of depression during the menopausal transition, and depression increases the risk of hot flashes. The importance of collaborative depression care within the managed care setting, with the timely diagnosis and treatment of depression throughout a woman's lifetime, should not be underestimated. Early and consistent interventions in the clinical setting using operationalized non-somatic therapies, such as cognitive behavioral therapy, interpersonal group therapy, and mindfulness-based therapies, are all crucial to increasing these women's abilities to prevent further depressive episodes. These therapies will also help them maintain their well-being and provide some prevention of future depressive episodes by decreasing heightened sensitivity to negative appraisal/depressogenic reactions to SLEs. The prevalence of depression, its psychosocial and medical consequences, and the worsening course of depression without treatment highlight the critical importance of early detection and effective treatment strategies in the managed care setting.

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Psychosocial and Cultural Contributions to Depression in Women: Considerations for Women Midlife and Beyond

Gwendolyn Puryear Keita, PhD

ABSTRACT

BACKGROUND: Women share a greater burden of mood disorders than men and have twice the prevalence rate of depression.

OBJECTIVE: To highlight some of the psychosocial and cultural contributions to depression in women.

SUMMARY: Multiple factors contribute directly or interact to precipitate the onset of depression. Genetics, stress life events, previous history of depression, and cognitive factors have been shown to be significant risk factors for future depression episodes. Life stressors contribute to the onset of depression in both men and women, but particular stressors affect the genders differently, with women identifying more closely with relationship issues, lack of adequate housing, and poverty. Women are also more frequently affected by physical and sexual abuse, which will significantly influence future episodes of depression. Depression does not discriminate on the basis of race. Women of all ethnic groups suffer from depression. However, research indicates that there may be differences in prevalence and treatment-seeking behavior in black Americans, Mexican Americans, and white Americans.

CONCLUSION: Many factors contribute to the occurrence of depression. Some of these occurrences may be explained by the changing hormonal milieu, susceptibility after physical or sexual abuse, poverty, housing problems, or loss of a close friend. One of the explanations for the higher rate of depression in women is that women have a greater incidence of first depressive episodes, which often begin during adolescence or young adulthood.

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Identification and treatment of depression in women represent challenges and unmet needs in medicine. Beginning during adolescence and into early adulthood, women are twice as likely as men to have a depressive episode.[1] The reasons for this discrepancy are many and complex, but it has been explained by both biological and psychosocial factors.[1] Women also face life changes not experienced by men, such as pregnancy and postnatal and perimenopausal periods. These appear to be times of increased risk of depression for some women. A first depressive episode sets in motion a chronic course that causes substantial human capital loss for women, prevention and treatment of first episodes of depression should be a primary goal.

Gender Differences in Rates of Depression

Depression is approximately twice as common in women than it is in men, and the rate differences begin to appear during early adolescence.[2] In childhood, there are similar levels of depressive disorders and depressive symptoms. By the age of 12, girls' rates of depressive disorders and depressive symptoms increase, while boys' rates increase only slightly or not at all. By the age of 18, a consistent female : male ratio of 2 : 1 is seen in the United States. One of the possible reasons for differences in depression prevalence rates between the genders is that the single highest risk factor for subsequent depression episodes is a history of depressive episodes, and that girls have a greater number of first-onset episodes than boys do. Additionally, evidence demonstrates a genetic role in vulnerability to depression, and still more evidence suggests that this genetic vulnerability is more pronounced in women than in men.[3-5]

Hypotheses to Explain Gender Differences in Depression

Stressful Life Events

Data are mixed on whether women experience more adverse life events. One study, investigating the differences in stressful life events (SLEs) contributing to depressive symptoms in both sexes, found no evidence for an overall gender difference in sensitivity to the depressogenic effects of SLEs.[6] However, life events considered stressful differed between the sexes. Men consistently reported significantly higher rates of occurrence of 4 SLEs: job loss, legal problems, robbery, and work problems. Women consistently reported housing problems, loss of a confidant, proximal relationship problems, and illness of an individual in their distal network as SLEs. Discrimination, particularly race discrimination, is another chronic stressor associated with depression in women's lives.[7,8] While data are mixed on differences in exposure to SLEs, women are more likely to experience major depression in the wake of an SLE.[9]

Physical and Sexual Abuse

Compared with men, women more frequently experience certain kinds of negative life events, such as physical and sexual abuse, poverty, and gender discrimination. In women, physical and sexual abuses are potent risk factors for depression (Table). The lifetime prevalence of depression is almost double for victims of completed rape in childhood (52%) than it is for nonvictimized women (27%).[10] The mean prevalence rate of depression among battered women is 48%.[11] Childhood physical abuse is a strong predictor of adult depression in all ethnic groups after controlling for background characteristics that are risk factors for both abuse and depression.[12] Additionally, suicidality (recurrent thoughts of death or suicidal ideation and plans, and attempts or gestures of self-harm with death as a possible result) is strongly linked to a history of abuse.[13,14]

Poverty

Poverty is a chronic stressor highly correlated with depression. Association between socioeconomic status and depression exists at all levels of the socioeconomic status hierarchy. Poverty increases risk of acute stressors, which include exposure to crime, violence, physical or sexual assault, and illness and death of children.[15]

Integrated Cognitive Model of Depression

Many models have attempted to explain depression pathophysiology. The integrated cognitive model of depression postulates that the interaction between negative life events (e.g., physical and/or sexual abuse, unrelenting poverty, and discrimination) and negative cognitive style (e.g., excessive dependency on others, being a ruminator), genetic vulnerability, hormonal changes, and hypothalamic-pituitary-adrenal axis dysregulation could independently contribute to women's higher rates of depression.[16,17] However, the factors likely interact in complex ways to produce depression, particularly in women. This model helps to explain why depression has a cyclical pattern in some women, particularly in situations of rumination or appalling past life experiences. Though depression has various triggers, once it is activated, the symptoms are similar regardless of the cause. According to this model, when the symptoms are allowed to cycle automatically, the state can maintain itself for a period of time.

TABLE Socioeconomic and Biological Reasons to Explain Depression in Women[5,11,18,33]

- Sexual or physical assault or ongoing abuse
- Unrelenting poverty
- Discrimination
- Negative cognitive style
- Excessive dependency on others
- Rumination
- Genetic vulnerabilities
- Hormonal changes
- Hypothalamic-pituitary-adrenal axis dysregulation

Women's Life Stages and Depression

It is hypothesized that changes in hormone levels in women are a contributing factor for the differences in depression prevalence across a woman's lifetime.[18,19] A dramatic shift in depression prevalence is apparent during adolescence in girls sometime between the ages of 10 and 15 years. During early adulthood, depression becomes most prevalent, with a typical onset between the second and third decades. Women of childbearing age are at heightened risk of experiencing a depressive episode. Approximately 9% of pregnant women and 13% of postpartum women experience major depressive disorder.[20-22] Yet the risk of depressive recurrence increases to 25% for women with previous episodes of postpartum depression.[23]

The transition from regular menstrual cycling to complete cessation of menses—the perimenopausal transition—is a risk factor for depressive episodes.[19] As women age past the perimenopausal period, data fail to demonstrate an increase in rates of major depression disorder following menopause. The primary predictor of depression following menopause is prior depressive history. Women may also be in a caregiving role during this time, which often places extra stressors on life events. Women are at greater risk for psychiatric morbidity than are men at all stages of caregiving.[23] Adult caregivers report higher levels of depressive symptoms, clinical depression, and anxiety.[24-26]

Over the age of 55, gender differences in depression become less apparent.[27] Symptom profiles that characterize depression in late life differ from those earlier in the life span, with older adults less likely to endorse dysphoria. A constellation of symptoms more frequent in older adults and older women specifically is depletion syndrome. Its symptoms include loss of interest, loss of energy, hopelessness, helplessness, and psychomotor retardation.[28] Depletion syndrome or motivation symptom cluster seems more prevalent in elderly women.[28] Bereavement may more often play a role in this age group as well. A subset of older adults with late-onset depression may represent a type of vascular depression associated with structural brain changes, vascular risk factors, and cognitive impairment.[29-31] In such cases, the depressive, or "subcortical," disease is presumed to be organic in nature and seems to be chronic and treatment resistant.[32]

Early-onset depression, defined as a depression onset before age 22 years, can be expected to negatively influence educational attainment and the future earning power of young women.[33] Illness that substantially reduces physical, social, or cognitive functioning is particularly burdensome to young adults in the years immediately after high school. One study showed that a 21-year-old woman with early-onset major depressive disorder could expect future annual earnings that are 12% to 18% lower

than those of a randomly selected 21-year-old woman, whose onset of major depressive disorder occurred after age 21 or not at all.[33] However, early-onset major depressive disorder did not adversely affect the educational attainment of men.

Ethnic Racial Differences in Prevalence of Depression

The National Health and Nutrition Examination Survey III findings indicate that prevalence of depression differs significantly by race/ethnicity, but they also indicate that comparative rates depend on the *type* of depression.[34] Black Americans and Mexican Americans have higher lifetime prevalence rates of dysthymic disorder ($P<0.05$), whereas white Americans have higher lifetime prevalence rates of major depressive disorder ($P<0.01$ and $P=0.05$, respectively). Mexican Americans and white Americans have a significantly earlier onset of major depressive disorder than black Americans do ($P=0.001$). Persons living in poverty had nearly 1.5 times the prevalence of major depressive disorder; however, poverty was significantly associated with prevalence of major depressive disorder only for white respondents ($P=0.023$). Lack of education was a significant risk factor for dysthymic disorder even after controlling for poverty.[34]

Although black Americans are less likely than white Americans to have a major depressive disorder, when they do, it tends to be more chronic and severe. They are also much less likely to undergo treatment. A survey published by Neighbors et al. included self-reports from 3,570 African Americans, 1,621 black Americans of Caribbean descent, and 891 non-Hispanic white Americans aged 18 and older who were interviewed in 2001 through 2003.[35] The researchers reported that 10.4% of African Americans, 12.9% of Caribbean black Americans, and 17.9% of non-Hispanic white Americans had major depressive disorder at some point in life. Education and income were not linked to higher or lower risk of major depressive disorder in any of the groups. Previous studies had shown that slightly more than half (57%) of adults with major depressive disorder underwent treatment. The Neighbors et al. study showed that the treatment rate was less than half (45%) for African Americans and less than a quarter (24.3%) for Caribbean black Americans.[35]

Data suggest that some aspects of culture may protect against depression. More specifically, rates of depression are low among Mexican Americans born in Mexico, and immigrant Mexican American women have an 8% lifetime rate of depression, which is similar to rates of nonimmigrant Mexicans. However, after 13 years in the United States, rates of depression for Mexican women who immigrated to the United States rise precipitously. Women of Mexican heritage born in the United States experience lifetime rates of depression nearly twice the rate of immigrants and similar to those of white persons in the United States. One possible explanation for these findings is that the difference in cultural social support and cultural values versus those in the United States may be protective in Mexico.

Summary

Women face a higher risk than men do of developing depression. During adolescence, the prevalence rates of depression in girls increase until they are twice the rate of boys by young adulthood. Throughout a woman's life, depression becomes a more significant risk at different times, such as during the postpartum or the perimenopausal period. Some of these occurrences may be explained by the changing hormonal milieu taking place at those times. Women are also more susceptible to depression after facing physical or sexual abuse, poverty, housing problems, or loss of a close friend. One of the most replicated findings is that a past depressive episode is the best predictor of a future depressive episode. One of the explanations for the higher rate of depression in women is that women have a greater incidence of first depressive episode, which often begins during adolescence or young adulthood. Depression does not discriminate: women of all races are susceptible to depressive episodes.

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Identifying and Managing Depression in Women

Sam D. Toney, MD

ABSTRACT

BACKGROUND: Depression is a complex disease often occurring with comorbid mental health or medical illnesses. It is highly prevalent and treated most frequently by a primary care physician (PCP). Depression affects the total health status of the patients who have it, and depression patients with comorbidities generally experience worse outcomes. It is also one of the most costly chronic illnesses, as measured by absenteeism and reduced productivity at work, direct medical costs, and suicide-related costs. Despite its high prevalence and being a frequent illness encountered during clinic visits, depression presents many challenges for the PCP in diagnosing and managing the illness and in bringing a patient to full remission. But depression is a highly treatable disorder. With appropriate diagnosis and intervention, depression can be reversed and most patients return to normal functioning.

OBJECTIVE: To provide an overview of a case study of a 24-month, managed care, depression care management program that incorporated a bilayered approach to optimize patient outcomes.

SUMMARY: Patients being treated for depression by a PCP were assigned a care coach who provided educational and goal-setting training by telephone. Psychiatric medical directors were involved in overseeing the treatment plan and consulted with PCPs to optimize treatment plans.

CONCLUSION: Initial outcomes of this program indicate that it was successful in improving patient care and also in reducing overall costs associated with a depressed population. Results included a reduction in the average Hamilton Depression Rating Scale from 10.4 to 5.6, a 56% reduction in hospital admissions for depression, and an 18% total reduction in health care costs per member per month.

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Depression is a highly prevalent mood disorder, which consistently has been shown to be at least twice as prevalent in women than in men.[1] Although the exact reason for this difference is not known, the higher prevalence of depression in women is most likely due to a combination of gender-related differences in cognitive styles, certain biological factors, and a higher incidence of psychosocial and economic stressors.[2] The development of depression in women is associated with several risk factors, including genetic links, previous stressful events, housing problems, relationship problems, loss of confidants, and fluctuations in female hormone levels.[3,4] Yet the single largest risk factor for a subsequent depressive episode, for either men or women, is a previous history of depression.[3]

Depression consists of a constellation of signs and symptoms with disturbances in emotional, cognitive, behavioral, and somatic regulation (Table 1). A sad or depressed mood is only one of many symptoms of clinical depression. Interest or capacity for pleasure or enjoyment may be markedly reduced, apathy and irritability may be increased, physical or somatic complaints are more likely, and anxiety is more often comorbid.[2,5] Depression in women has a significant negative impact on medical comorbidities, family dynamics, productivity at work, and self-care and adherence to medical regimens.[2,6]

However, depression is a highly treatable disorder. With appropriate diagnosis and intervention, depression can be reversed and most patients returned to normal functioning. Primary care providers, who treat up to 70% of patients with depression, face many challenges in bringing patients to remission.[7] Nevertheless, the endeavor can prove a valuable return; providing effective depression care programs, which engage and educate patients and offer individualized patient care through expert support and consultations, can improve patient outcomes and reduce overall health care costs.

Depression—Economic Impact

Major depressive disorders are considered among the most costly illnesses in the world. Greenburg et al. reported that the cost of depression in the United States exceeded $83.1 billion in 2000, with workplace costs accounting for the majority of the economic burden (62%), followed by direct costs (31.4%) and suicide-related costs (6.6%).[8] A study completed in 2002 dollars corroborates the findings of lost workplace productivity.[9] The economic burden of depression has been associated with a 30%-75% increase in health care costs after controlling for differences in medical comorbidities.[10]

A 2004 economic study found that patients who failed to achieve remission with initial therapy or consequent therapy experienced worse overall outcomes and used more overall health care resources than did patients with depression who

achieved remission.[11] Patients wih treatment-resistant depression were found to have used twice as many services as patients with treatment-responsive depression. There were more claims for comorbidities in nearly every body system. Treatment-resistant depression patients cost almost 4 times as much as employees from a random sample.[11]

Early-onset depression (i.e., depression occurring before the age of 22 years) in women leads to significant lost human capital, as measured by annual earnings. Women who developed depression before the age of 22 more often failed to graduate from college and were more likely to earn 12%-18% less than women whose onset of major depressive disorder occurred after age 21 or not at all.[12] It was also shown that early-onset depression was more closely associated with a history of drug and alcohol abuse. However, the timing and direction associated with this relationship remain unclear.[12]

Depression—Medical Impact

Depression is often comorbid with other psychiatric disorders, with anxiety disorders occurring in up to 70% of depression cases and substance abuse in 30%-60% of depression cases.[5,13] Depressive illness is also strongly associated with medical illness; however, the direction of causality in this association is still not entirely known. One study, involving up to a decade of observation, found that active major depression imposed a significantly increased risk of clinically apparent coronary heart disease in women with type 1 and type 2 diabetes.[14] Other studies and observations have shown a substantiated link between diabetes and depression.[15-17] Persons diagnosed with depression, with and without diabetes, have been found to have a higher incidence of metabolic disorders; obesity, along with its characteristic higher levels of fat deposits in the body and increased rates of insulin resistance, is linked to metabolic disorders.[18,19]

In women, recurrent major depression may be a risk factor for cardiovascular outcomes. In middle-aged women, the presence of depression is associated with subclinical atherosclerosis and doubles the risk for plaque in the coronary and carotid arteries after controlling for standard cardiovascular risk factors.[20,21] A study by Agatisa et al. determined that a single episode of major depression was not associated with plaque deposits, but recurrent major depression was associated with coronary and aortic calcification.[21] Wassertheil-Smoller et al. found that, in older women, depression is significantly related to cardiovascular disease risk and comorbidity (e.g., hypertension, stroke, or angina) after controlling for age, race, income, diabetes, smoking, cholesterol levels, medication use, body mass index, and exercise levels.[22] These investigators also found that in this population of older women, among those with no history of cardiovascular disease, depression is an independent predictor of cardiovascular disease and all-cause mortality.

It should be kept in mind that depression can also be a fatal illness. Of those with a mood disorder, 12%-20% commit suicide.

TABLE 1 DSM-IV-TR Criteria for Major Depressive Episode in Adults[49]

Requires a total of at least 5 symptoms.	
At least 1	Sad affect or loss of interests that significantly interfere with the person's life
Plus any 4	• Appetite or weight disturbance • Sleep disturbance • Activity disturbance • Abnormal fatigue or loss of energy • Abnormal self-reproach or inappropriate guilt • Abnormal poor concentration or indecisiveness • Abnormal morbid thoughts of death (not just fear of dying) or suicide
Duration	For at least 2 weeks

The symptoms are not due to physical illness, alcohol, medication, or street drugs.
The symptoms are not due to normal bereavement.
The symptoms are not due to another mental health diagnosis such as bipolar disorder.

DSM-IV-TR=Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision.

The highest risk of the first attempt is within 3 months after onset of a major depressive episode; the highest risk of second attempt is within 3 months of the first attempt. Women, especially those younger than 30 years of age, attempt suicide more often than men, but men are more often successful.[23-28]

Primary Care Physician Challenges

The social stigma surrounding depression is substantial and often prevents patients from seeking treatment. The costs of the illness are pain, suffering, disability, and potentially, death; yet depression can be ameliorated with effective treatment. Once identified, depression can almost always be successfully treated either by psychotherapy or medication, or both.[29] With appropriate diagnosis and intervention, depression can be reversed, and most patients will return to normal functioning. Severe depression often requires referral to a psychiatrist.

Patients tend to seek treatment at the primary care physician (PCP) level for convenience and stigma reasons and because they are "looking for the quick fix." PCPs write 60%-70% of all antidepressant medications in the United States.[30] However, at least 4 older reports suggest that PCPs and other non-psychiatric practitioners underdiagnosed and/or undertreated depressive conditions.[31-33] Paradoxically, these providers are the most likely to see these patients initially. Only one third to one half of those patients with major depressive disorder are properly recognized by their practitioners, and of these, only about 42% receive "minimally

adequate treatment."[34] Note that "minimally adequate treatment" here is defined as care considered adequate for depression in the mental health setting. Minimally adequate treatment is defined as treatment that is consistent with evidence-based practice guidelines (e.g., the American Psychiatric Association [APA] guidelines) for the diagnosis and treatment of depression. Typically this includes adequate dosage, administration, and duration of antidepressant medication and psychotherapy when indicated.

Despite the high prevalence of depression and the fact that it is frequently encountered during clinic visits, its proper diagnosis and management through full remission pose many challenges for the PCP (Table 2). Depression is a complex disease set, and identifying major depression or a depressive disorder is not as obvious as diagnosing other conditions such as high blood pressure. The depressed patient may present to the clinic for a different medical problem and with a group of more ambiguous symptoms, such as trouble sleeping, feelings of anxiety, or substance abuse. A patient's past history of depressive episodes and a risk factor for subsequent episodes may not be readily solicited. In addition, different subtypes of depression (Table 2) further challenge a PCP to make a definitive diagnosis and implement an adequate treatment plan during the typical short-duration primary care visit.

Goals of Therapy

The primary goals of depression treatment continue to be the full remission of symptoms, prevention of relapse and recurrence, and psychosocial and vocational restoration.[6,35] A careful and differential diagnosis is essential to meet these goals, particularly as the presence of residual symptoms may be due to conditions other than depression. After a clear diagnosis has been made, interventions that predictably decrease symptoms and morbidity are attempted first. Pharmacotherapy often starts with an antidepressant, given the strong evidence that drugs are effective. Concomitant non-pharmacologic therapy, such as psychotherapy, care coaching, problem solving, or other behavioral techniques, may also be added.[36]

Pharmacologic Therapy and Practice Guidelines

Once identified, depression can almost always be treated successfully, either with medication, psychotherapy, or both. Not all patients respond to the same therapy, but a patient who fails to respond to the first treatment attempted is highly likely to respond to a different treatment.[37] Antidepressant therapy remains the most common treatment modality, partially because PCPs are more comfortable treating the illness medically than engaging in psychotherapy.[38]

Antidepressants are some of the most commonly dispensed therapeutic drugs worldwide.[39] Selective serotonin reuptake inhibitors (SSRIs) account for the majority of all antidepressants sold.[39] Kornstein et al. showed that women respond better to an SSRI (sertraline) than to a tricyclic antidepressant (imipramine), to which men responded more favorably.[40] However, another study investigating the effectiveness of clomipramine, citalopram, paroxetine, and moclobemide, representing 3 antidepressant classes, did not find gender-based differences in response to class of antidepressant.[41]

Optimizing Antidepressant Therapy

For people who are diagnosed with major depression and receive acute treatment, response rates can be expected to approach 60%-70%.[35] A response to therapy is generally defined as >50% improvement from baseline in depressive symptoms. However, the ultimate goal of therapy is total remission or to be symptom free. APA prescribing guidelines recommend approaches to achieve a higher level of efficacy with first-line antidepressant medication for suboptimal responders by increasing dosage and augmenting treatment with psychotherapy, or, for non-responders, by switching to a new monotherapy and augmenting treatment with psychotherapy (Figure).[36]

If a partial response is seen, APA guidelines recommend optimizing therapy with the first drug by lengthening the time it is used or increasing the dosage for an additional 4 to 8 weeks and then reevaluating. Partial response at 4 weeks of treatment may fully remit with continued therapy. Patients who exhibit no response after 4 weeks of adequate doses are unlikely to respond to that agent with continued treatment.[42] The guidelines recommend switching to a different antidepressant for patients who have had no response to initial therapy and as a choice for those who continue to experience suboptimal results.[36] These recommendations are the same for both women and men.

Less Than Optimal Treatment Outcomes

Several factors may contribute to less than optimal treatment outcomes (Table 3). Nearly half of medical outpatients who receive an antidepressant prescription discontinue treatment during the first month.[43] Therefore, follow-up is extremely important during the first month of treatment. Discontinuation rates within 3 months can reach 68%, depending on the population studied and the agent used.[44] Adverse effects of antidepressants are major contributors to medication non-adherence, as is the patient's lack of understanding concerning treatment and perceived lack of efficacy.[45,46]

Compliance and patient outcomes are improved if the patient is educated about side effects and the clinician is available to take telephone calls.[47,48] Side effects may be ameliorated if the dose is gradually increased.[42]

A Case Study—Depression Care Management

Recognizing the components contributing to some of the poor outcomes in patients with depression and that most patients treated for depression are seen by physicians who do not specialize in mental health, a commercial health maintenance organization (HMO) implemented a disease management program for depression. This program focused efforts on supporting the

PCP in implementing best practices in depression care and also provided patients with basic education and goal setting by assigning each with a behavioral care coach. The initial program design and results of this case study are presented here.

Patient-members targeted for the depression program were identified from a national, commercial HMO claims database. Members were identified using both *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) codes and National Drug Code (NDC) numbers over a period of 12 months (August 1, 2003, to July 31, 2004) prior to outreach and enrollment. The ICD-9-CM codes required at least 1 treatment episode tied to a definitive diagnosis of a depressive disorder and NDC numbers tied to at least 1 prescription of an antidepressant with a definitive diagnosis of a depressive disorder. Patients were contacted by telephone and were invited to enroll in the program. The HMO was conducting several case studies for different disease states, and patients participating in the depression cohort study were limited to enrolling in only this depression disease management program. Therefore, if patients had already enrolled in a diabetes program, they were excluded from the cohort study in the depression program. Additionally, patients who had more than $50,000 in claims were excluded from the study. Members who were not enrolled in the HMO for the full 24 months of the study were also excluded.

Enrolled in the study were 1,292 members; of these, 31 were outliers with claims higher than $50,000, and 152 were not eligible for the full 24 months of the study. Thus, 1,109 members remained in the study. Members in this study were enrolled in the program for 12 consecutive months with active telephonic coaching. Members received at least 1 care coaching call per month over the 12-month period. The timeline included periods for preenrollment eligibility, patient identification and contact, information gathering, initial and posttreatment patient assessment, and posttreatment observation.

TABLE 2 The Primary Care Physician Challenge[49-51]

Categories of Depressive Mood Disorders	Challenges for the PCP of Trying to Bring a Patient With Depression to Remission

• Adjustment disorder (mild and transient)
• Dysthymia (chronic)
• Bipolar depression
• Postpartum depression
• Seasonal affective disorder
• Postpartum depression
• Premenopausal dysphoria
• Depression secondary to other factors
• Major depressive episode
  ◦ With melancholic features
  ◦ With psychotic features
  ◦ With catatonic features
  ◦ With atypical features
	• Short time allowed for a time-intensive patient
	• Possibility for several comorbidities
	• Inadequate training to discern differences of depressive type
	• Patient has clinic visit for a different medical problem
	• Patients may be poorly adherent with the prescribed drug
	• Psychotherapy typically not available in the PCP office
	• Antidepressants used suboptimally
	  ◦ Dosage
	  ◦ Administration
	  ◦ Duration

PCP=primary care physician.

TABLE 3 Factors Related to Less Than Optimal Treatment Outcomes[50-51]

- Inaccurate diagnosis
- Antidepressant inadequate dosing
- Antidepressant side effects
- Treatment nonadherence
- Early medication discontinuation
- Social stigma
- Prescriber nonadherence to published treatment guidelines
- Comorbid disorders (e.g., substance abuse, bipolar or atypical depression)
- Certain drug therapies (e.g., methyldopa, beta blockers) that can exacerbate depression

Patient Characteristics

The average depression rating score measured by the Hamilton Depression Rating Scale (HDRS) rating for patients entering the program was 9.4, indicating mild levels of depression. The population included approximately 75% women. Most patients had medical comorbidities. Between 65% and 70% of patients were being treated for their depression by PCPs.

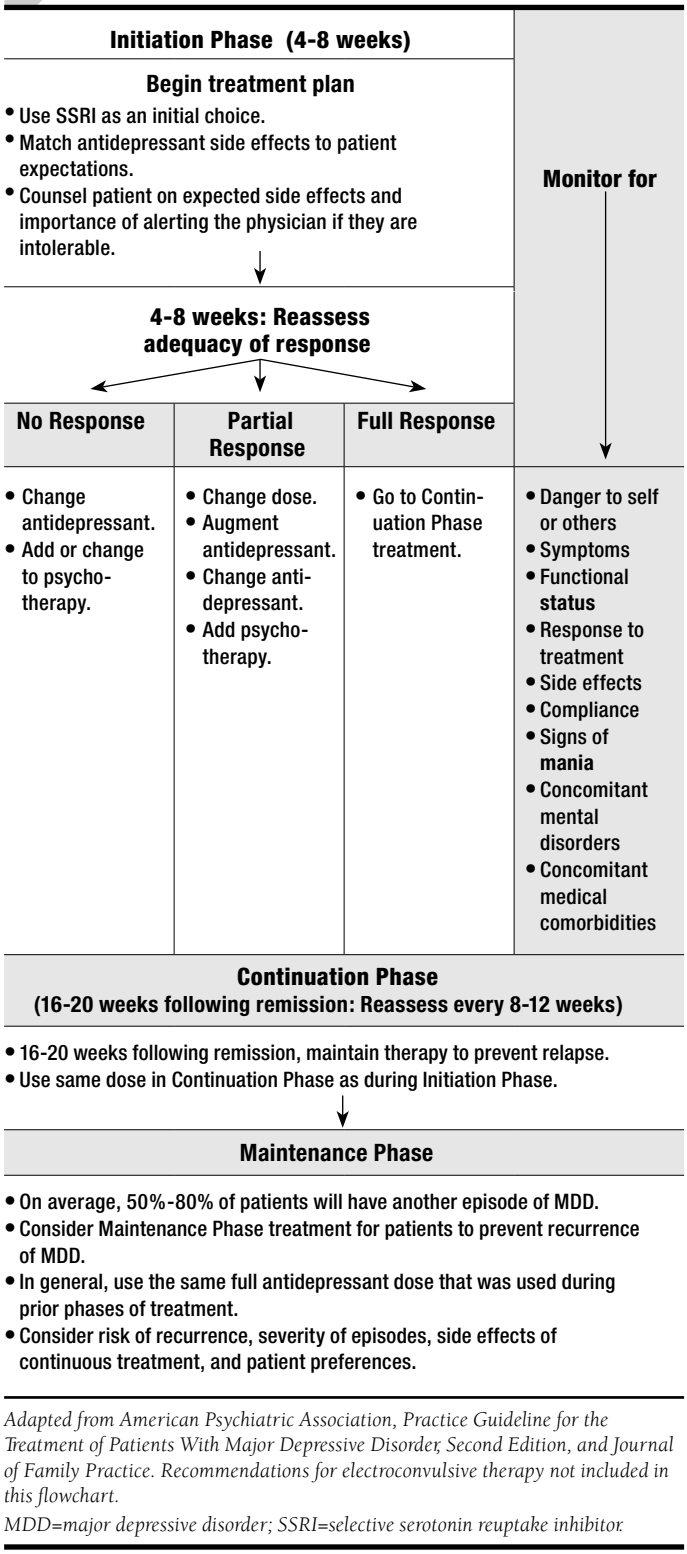
Intervention

Enrollees were assigned a primary behavioral health clinician who provided psychoeducational support and coaching but not formal cognitive behavior therapy or formal psychotherapy. The patient component encompassed patient-centric motivation to improve education and understanding, as well as identification of barriers and poor psychosocial support. Poor adherence patterns to treatment and medication were identified. Psychosocial barriers and barriers to medication adherence were identified using a proprietary assessment developed for this program. There were a number of categories for each parameter, such as no family member available to the member within a day's drive or poor adherence to medication due to the side effect profile. Patients then were offered education and motivational techniques intended to help them follow treatment and medication regimens. Goal setting was also instituted.

Provider Consultation

The PCP was provided with peer-to-peer telephonic consultation by a psychiatric medical director who offered oversight of and recommendations for individual patient treatment plans. Treatment plans were monitored against evidence-based medicine guidelines, including a review of the antidepressant being used, its dose, and duration of use. This method allowed identification of suboptimal treatment plans and enhancement when necessary.

FIGURE Modified American Psychiatric Association Treatment of Major Depressive Disorder



Adapted from American Psychiatric Association, Practice Guideline for the Treatment of Patients With Major Depressive Disorder, Second Edition, and Journal of Family Practice. Recommendations for electroconvulsive therapy not included in this flowchart.

MDD=major depressive disorder; SSRI=selective serotonin reuptake inhibitor.

Primary care response to the overall program was typically quite receptive. The level of PCP satisfaction was substantiated with consultative calls through a provider satisfaction survey process. This revealed >90% satisfaction with this element of the survey.

Initial Outcomes

Initial results indicate that the program was successful in improving patient care and reducing overall costs associated with a depressed population. The average HRDS score was reduced to 5.7. Hospital admissions were reduced by 17%; these admissions were exclusive of any mental health diagnosis code. Hospital admissions associated with depression were reduced by 56%, and overall health plan per member per month (PMPM) costs were reduced by 18.3% from baseline. These proved to be encouraging results, indicating that PCPs can be successful in managing a depressed patient to improved outcomes. This program, which offers the PCP some guidance on treatments and provides care coaching to patients, makes effective use of currently available treatments for depression and provides patients with the best outcomes and improved health care services. A 6-month study of this same population was done using a control group from the same health plan. The results were favorable, demonstrating >1.5:1 return on investment when applying the control group's utilization/cost factors. The control group data were not available for the full 12-month study.

Summary

Depression is a complex mental illness and is often comorbid with medical conditions. Prevalence of depression is higher in women by about 2:1. The PCP tends to treat more cases of depression than does any other provider. However, the PCP faces several challenges, including time needed for accurate diagnosis and treatments and especially management of the optimal use of antidepressants. Treatment for comorbid medical illness and depression presents a tremendous therapeutic challenge. Yet challenges with the accurate diagnosis and the development and implementation of adequate treatment plans can be overcome.

The case study presented in this article highlights disease management efforts to support the PCP in best care practices for depression and provide patients with basic education and goal setting through the services of a behavioral care coach. Initial outcomes of this case study indicated that the program successfully improved patient care and also reduced overall costs associated with a depressed population. Measured results showed a reduction in the average HRDS score, a 56% reduction in hospital admissions for depressed patients, and a 18% reduction in total PMPM.

This program demonstrates that PCPs can effectively treat depressive illness with support from specialist consultation. The results are overall better patient outcomes and reduced health plan costs.

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Managed Care Best Practices
The Road From Diagnosis to Recovery: Access to Appropriate Care

Michael Golinkoff, PhD, EMBA

ABSTRACT

BACKGROUND: Depression is a painful, functionally impairing, and frequently recurring condition. A costly illness for employers, depression contributes to reduced functioning, decreased work productivity, and absenteeism. In addition, costs associated with comorbidities in people who have depression are higher when they are compared with the costs in people who do not have depression. In patients with either coronary or cerebral vascular disease, depression significantly increases the risk of cardiovascular morbidity and mortality.

OBJECTIVE: To highlight some of the challenges faced by primary care providers when they deliver mental health services and to provide an overview of an integrated behavioral health and medical benefit plan implemented as one solution to improve overall depression outcomes and reduce associated depression costs.

SUMMARY: Because of the high prevalence and significant impact of depression, the U.S. Preventive Services Task Force recommends screening adults for depression in clinical practices that have systems in place to ensure accurate diagnosis, effective treatment, and follow-up. However, depression appears to be only partially recognized and inadequately treated in primary care due somewhat to several challenges that primary care practitioners face when they manage a mental health diagnosis along with comorbid medical illnesses.

CONCLUSION: Integrating the medical and behavioral health benefits in a health plan allows for depression screening and the opportunity to direct patients to seek treatment when needed. Preliminary results of this effort in one managed care plan show reduced use of hospital services, days gained at work, and improved adherence to antidepressant therapy. A different component of this plan design includes patient care coaching as well as support of primary care's efforts by providing expert telephone consultation about treatment plans and allowing billing for adequate time spent with depressed patients.

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Depression has a lifetime prevalence rate of 6.3% in men and about 12.6% in women.[1] It is a tremendously costly illness for employers as it results in impaired functioning, decreased work productivity, and increased absenteeism.[2] Among patients who suffer from concomitant depression, the costs for managing diabetes, hypertension, and ischemic heart disease approximately double.[3] Depression is also associated with worse outcomes for cardiovascular disease.[4] Partially in response to recognition of the significant prevalence and morbidity of depression, the U.S. Preventive Services Task Force recommends screening adults for depression in clinical practices that have systems in place to ensure accurate diagnosis, effective treatment, and follow-up.[5] Although only about 25% of patients who seek help for depression in the primary care setting receive adequate treatment, there is increasing evidence that practice-based quality improvement efforts for depressed patients can improve quality of care and depression-related outcomes.[4,6-8]

Employer Costs

Depression adversely affects functioning in all domains, but only recently has the magnitude of the impact on work productivity become clear. Productivity at work is an important business-related metric, and depression-specific costs to corporate America are beginning to be convincingly quantified.[6] Depression substantially reduces an employee's capacity to work, which is partially explained by a depressed employee's lack of energy, insight, and creativity or motivation.[2,6,9,10] Stewart and colleagues[2] calculated the cost of lost labor associated with depression in a survey of U.S. workers and estimated that depressed workers cost employers $44 billion per year. Most (81%) lost productive work time costs are invisible and are explained by reduced performance at work. Specifically, 5.6 hours per week were calculated as lost productive time experienced by all workers with depression of any severity, 8.4 hours per week by workers with major depression, and 1.5 hours per week for workers without depression.

Absenteeism is also an important business-related metric because employers spend an average of 1.9% of payroll expenditures on sick leave benefits.[6] Major depression is a substantial but addressable contributor to absenteeism. In Stewart's analysis, $8.27 billion of lost dollars was attributable to the cost of lost productive time because of absenteeism in workers with depression.[2] In a separate study, improved depression management reduced absenteeism by 22.8% in all depressed workers and by 28.4% in consistently employed depressed workers, indicating gaps in care and opportunities for improvement.[6]

Unemployment

A study to determine the effect of depression on employment status showed that the presence of depression is linked with

subsequent unemployment even after adjusting for confounding variables, including marital status, education, history of unemployment, current part-time employment, and cigarette smoking.[9] Depressive symptoms were associated with a 60% increased adjusted odds of subsequent unemployment; 33% of participants with depressive symptoms and 21% of participants without depressive symptoms reported new unemployment during the 5 years after study initiation.[9] Depression was also associated with subsequent reduction in family income. In one study that compared 1990 with 1991 annual incomes to onset of depressive symptoms, 17% of the participants who had depressive symptoms reported that their family incomes had decreased below $25,000 within 5 years of developing depression compared with only 7% of participants without substantial depressive symptoms.

Depression and Concomitant Medical Illness

Chronic medical illnesses and depression are often seen concomitantly. The presence of a chronic medical illness increases the likelihood of a concomitant depressive episode, and depression has been shown to adversely affect the course of coexisting medical illness, particularly for diabetes and cardiovascular conditions.[11-13] Depression is associated with decreased glycemic control and increased micro- and macrovascular complications in patients with diabetes, and it also increases the risk of developing diabetes by about 23%.[11,14] The mechanism of this effect is not understood but is hypothesized to include depression-induced abnormalities in neuroendocrine and neurotransmitter function or decreased self-care behaviors.[11,14]

Considerable data from prospective studies with recognized indices of depression and objective outcome measures support depression as an independent cardiac risk factor.[15] Many large-scale, well-controlled studies—in which initially healthy subjects were followed up prospectively—identified depression as a significant independent risk factor for both first myocardial infarction (MI) and cardiovascular mortality.[15] Similarly, among individuals with established ischemic heart disease, depression has been found to be associated with an approximately 3- to 4-fold increase in the risk of subsequent cardiovascular morbidity and mortality.[12] After an acute MI, depression is a risk factor for mortality independent of cardiac disease severity.[13]

Depression Treatment and Medical Outcomes

The treatment of depression and subsequent effect on existing medical illness is an area of opportunity for continued research. It has been shown that improving depression care in patients with arthritis not only improves depressive symptoms, but also improves pain symptoms, functional status, and quality of life.[16] In patients with relatively well-controlled diabetes, depression interventions improved self-care and depression outcomes, but diabetes outcomes were not affected.[11] The use of selective serotonin reuptake inhibitors (SSRIs) has been shown to be safe to use in patients with ischemic heart disease or coronary heart disease.[16] But no large, randomized controlled trials to date have shown that treating depression in patients with cardiovascular disease improves outcomes in terms of costs, morbidity, and/or mortality. The National Heart, Lung, and Blood Institute Working Group commented that there is a need for a multicenter, randomized, controlled trial to determine whether effective treatment for depression can reduce risk of cardiovascular disease events and mortality associated with depression in coronary heart disease patients.[17] Unlike the general psychiatric literature that shows psychotherapy is as effective a treatment for depression as is pharmacotherapy, large randomized, controlled trials have not shown a positive impact of psychotherapy for treating depression in cardiovascular patients.

The next section highlights recent research investigating the safety and efficacy of antidepressants in heart disease. Although much research exists on the associations between depression and physical diseases, this discussion is limited to a presentation of 3 large trials of depression and heart disease.

Sertraline Antidepressant Heart Attack Randomized Trial (SADHART)

In line with increasing awareness of the links between depression and cardiovascular morbidity and mortality, a study was undertaken to evaluate the safety and efficacy of an SSRI, sertraline, in patients hospitalized post-MI or with unstable angina who had also been diagnosed with a major depressive disorder.[12] It was shown that sertraline is safe to use in a population with ischemic heart disease and does not impose cardiovascular risk. In patients who had severe depression or recurrent depression, sertraline provided greater improvement in depression symptoms than did placebo. But for mild depression or when the initial depressive episode occurred post-MI, sertraline showed no superior antidepressive effect compared with placebo.

Cardiac Randomized Evaluation of Antidepressant and Psychotherapy Efficacy (CREATE)

The CREATE study,[18] a 12-week trial involving 284 patients with coronary artery disease (CAD), compared efficacy, safety, and tolerability of weekly interpersonal psychotherapy; 20-40 mg of citalopram daily; or weekly standardized clinical management, alone or in combination, to treat major depression in CAD patients. Clinical management involved weekly group sessions with information about depression and medication use, reassurance, and encouragement for medication adherence. Interpersonal psychotherapy involved sessions addressing problems common in patients with CAD, including interpersonal conflicts, life transitions, grief, and loss.

The trial, a 2-by-2 factorial design, studied 4 groups: (1) interpersonal psychotherapy plus placebo, (2) interpersonal psychotherapy plus citalopram, (3) clinical management plus placebo, and (4) clinical management plus citalopram—permitting the

evaluation of both interpersonal psychotherapy and citalopram. The researchers found that the depression responded to the SSRI and that there was a greater difference in depression response rate if there was a prior history of depression. They also found no advantage to adding psychotherapy to medical treatment of depression, although some editorials cautioned against dismissing the value of psychotherapy for depression in this population.[19] Whether SSRIs reduce future cardiac events has not been firmly established.

Enhancing Recovery In Coronary Heart Disease (ENRICHD)

Recognizing the strong association between morbidity and mortality in patients post-MI who have low perceived social support and depression, Berkman et al. undertook a study to determine whether mortality and recurrent infarction are reduced by antidepressant treatment in this population.[13] Patients (N=2,481) were randomized to receive either usual care or intervention therapy to address their depression. Intervention therapy began with cognitive behavior therapy in all patients. After 5 weeks, if patients continued to be severely depressed (defined by a Hamilton Depression Rating Scale [HDRS] rating >24) or had no response to therapy (defined as <50% reduction from the initial Beck Depression Inventory score), cognitive behavior therapy was supplemented with an SSRI antidepressant, or, if not tolerated, an alternate antidepressant. All therapies were continued for 6 months after study initiation. The primary outcome measures were death or recurrent MI, while secondary outcomes included change in depression or perceived low social support scores at 6 months.

At 6 months, intervention decreased depression scores and improved social support more often than usual care. After an average follow-up of 29 months, across all patients there was no significant difference in event-free survival between usual care and psychosocial intervention. However, results from a post hoc analysis indicate that while cognitive therapy did not reduce mortality or recurrent MI, patients receiving SSRIs did have a 42% reduction in death or recurrent MI compared with depressed patients not on medication.[20] Among the rationale for this encouraging outcome: antiplatelet effects of SSRIs. These post hoc findings, although intriguing, should be interpreted cautiously, and the potential benefits of SSRIs on cardiac endpoints should be ascertained in a future study with random assignment to pharmacotherapy.

Likelihood of Adequately Treated Depression

Depression, one of the most costly and debilitating disorders, is inadequately identified and treated in many patients. Kessler and colleagues[7] presented sobering data on the likelihood of medically treated and adequately treated depression. In the National Comorbidity Survey Replication of people who reported having major depressive disorder, 51.6% received health care treatment within the previous 12 months. Within this population, only 42% of the treatment they received was deemed to be minimally adequate (64.3% if they were treated by a mental health specialist and 41.3% if they were treated in a general medical setting). These findings demonstrate striking gaps between the use of existing effective depression treatments and most current practices, where depression identification and management fall short of the guidelines.

An analysis of 358 patients newly started on antidepressants in primary care clinics (within a staff model organization) showed that 195 (54.5%) received doses recommended by the Agency for Health Care Policy and Research for 90 days or more.[21] Although no significant differences in improvement of health-related quality of life outcomes during 6 months were observed, mean total medical costs over 6 months for patients taking the recommended levels of antidepressant treatment were $1,872 ± $140 compared with $2,622 ± $413 for patients taking less than recommended treatment ($P=0.032$). The differences in total medical costs were attributable to significantly lower nonmental health-related inpatient costs in the recommended antidepressant treatment group ($104 vs. $785, $P=0.004$).[21]

Another study showed that depression care and outcomes can be enhanced by supporting primary care practitioners (PCPs) in the treatment and management of their depressed patients. This care model includes education on best practices, nurse clinicians who provide regularly scheduled patient-directed care management, and engagement of patients to be active in their own treatment.[22] For patients beginning new treatment for depression, 2 years of enhanced care significantly increased the number of days free of depression impairment when compared with usual care, and the incremental cost-effectiveness ratio for enhanced care ranged from $9,592 to $14,306 per quality-adjusted life-year. The number of incremental days free of depression impairment increased from 23 days in the first year to 36.4 days in the second year ($P<0.001$), while incremental health plan costs decreased significantly from $568 in the first year to -$12 in the second year ($P<0.001$).[22]

Aetna Behavioral Health Programs

The next section provides an overview of the efforts of one large national payer, Aetna, to focus on plan design strategies aimed at improving depression and comorbid outcomes. By integrating medical and behavioral health services and program offerings, Aetna coordinates members' care to include treatment coverage of the mental health aspects as well as any chronic medical illness. For example, various programs outside of behavioral health exist within Aetna, and all of them screen for depression every time there is verbal contact with a member and the member consents to the screening. About 6,000-8,000 members are screened for depression every month. When patients screen positive, they are alerted with recommendations about using their mental health benefit and asked if a care coach can contact them by telephone. In this way, they are referred to the

behavioral health program for further assessment and intervention. If warranted, a care management plan that involves care coordination within Aetna and the patient's physician is developed for the member.

A similar process is used for targeted member interventions. Members who appear to have depression are identified by pharmacy and medical claims and stratified on the basis of mild, moderate, or severe medical issues based on predictive models developed by Aetna to determine the level of intervention. Program interventions include an outreach, assessment, and enrollment; payer coordination of care between the medical and behavioral health care providers; patient telephonic coaching by behavioral health specialists and active case management for more severe depression; or educational information mailings for relatively mild depression. Because of a very high comorbidity between alcohol use and depression, screening for alcohol use is also a component. A separate program uses similar processes to identify and provide care for patients hospitalized with behavioral health issues, such as bipolar disorder or major depression. There are also less intense behavioral health offerings, such as employee assistance programs for relatively mild depressive symptoms for which counseling about workplace, work/life, legal, or financial issues is provided.

Initial outcomes from this fairly new program show minimal improvement in physical health, but improvements in mental health measures seem to be supported by observed reductions in HDRS scores, improvement in energy level, reduction in work limitations, and reduction in social limitations (statistical analysis not completed). One of the programs for more severely affected members showed that members gained 7.7 work days per month. A very preliminary assessment of the cost profile indicates reduced emergency room use, inpatient length of stay, outpatient visits, and behavioral health inpatient stays with associated reductions in costs in these areas. Antidepressant adherence improved by 10%.

Depression in the Primary Care Setting

As U.S. medical care has evolved, PCPs have been expected to recognize and treat mental health problems.[23] Primary care clinicians are expected to identify signs of possible mental health problems, incorporate those observations into differential diagnoses, and decide which problems to treat or monitor and which to send for consultation or referral.[23] In addition, a patient may or may not have a primary diagnosis and mood disorders frequently associated with comorbidities, such as anxiety or substance abuse. Thus, PCPs face challenges in meeting a patient's mental health needs effectively, and the decisions that they make have important financial and health consequences, especially regarding care for mood disorders.

The Aetna "Depression in the Primary Care Program" was implemented partly because it is recognized that most people who have depression choose to be treated in the primary care setting, and it is understood that PCPs have unique challenges in not only identifying and treating the depressed patient but also in billing for the services provided. In general, a behavioral health benefit does not typically cover the treatment of psychiatric disorders offered by a nonmental health professional. Therefore, reimbursement for PCPs treating depression is problematic in many payer situations. In addition, many medical visit codes are billable for no more than 15 minutes, and depressed patients often require more time.

In the "Depression in the Primary Care Program," PCPs receive training in person or via the Internet on identification, stratification, and treatment of depression. Unique to this program is that the PCP is allowed to bill the medical benefit for behavior health services; additionally, the PCP can bill for the actual amount of time needed to treat the patient with depression rather than the typical one 15-minute billing unit.

Patient members enroll in the program via the Internet and complete a Web-based patient screening and assessment tool, which screens for most of the major psychiatric conditions and comorbid anxiety or substance abuse disorders. Patients link their PCPs to their assessments, which allows their PCPs to access the results via a secure Web site. When the assessments are complete, their providers receive an e-mail alert. In addition, an Aetna care clinician will review the data to verify a diagnosis of depression and to determine whether a psychiatric comorbidity is possible. If needed, the care clinician is able to consult with the PCPs by telephone to discuss optimizing patient treatments. Members can access the site again for reassessments after treatment, and the program provides depression-progress tracking tools. Similar to the alert received after the first assessment, another e-mail alerting PCPs to the updated information is sent.

Preliminary results of 41 enrolled members indicate improvement in depression severity scores and show that those with minimal symptoms have minimal improvement and those with more severe depression show more improvement in disease severity. This outreach program may also be particularly effective for the depressed elderly population. Care management programs for the elderly population may be even more effective than they are for the younger population. In the elderly population, the program provides some social contact for a group of people in isolation and provides education where there is a general lack of understanding. This program also helps mitigate a more complex issue in this group by coordinating and integrating medical care, among often greater numbers of treating practitioners.

Initial results are showing the program to be going in the right direction and as more patients enroll in the program, results continue to be collected. A few enhancements have been made, most notably, communicating this program to the clinic office staff, who, in turn, inform patients about the program and encourage them to enroll.

Summary

In a managed care setting, benefit design may improve depression-related outcomes and reduce overall costs related to depression. Integrating the medical and behavioral health benefits in a health plan allows for screening of depression and directing of patients to seek treatment when they need it. Preliminary results of this effort in one managed care plan show reduced use of hospital services, days gained at work, and improved adherence to antidepressant therapy. In a different component of this plan design, patient care coaching, along with support of primary care's efforts by providing expert telephonic consultation on treatment plans and allowing billing for adequate time spent with depressed patients, produced initial results indicating improvement in depression severity ratings. In conclusion, further study of this approach is needed to fully realize whether there are benefits of improved work productivity or any cost reductions related to better depression care.

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Shrinking Health Care Disparities in Women: The Depression Dilemma

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of Creative Educational Concepts, Inc. (CEC) and AMCP Horizons, LLC. CEC is accredited by ACCME to provide continuing medical education for physicians.

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Continuing Education for this program is processed solely through the AMCP.org Online Learning Center site at www.amcp.org (Learning Center/Online CE). No mailed forms will be accepted.

The posttest worksheet (below) is provided to assist you in marking your answers prior to entering the online CE center for submission; these pages cannot be submitted for CE credits.

In order to receive CE credit for this program, you must complete the following forms online:

1. Posttest form for this program, "Shrinking Health Care Disparities in Women: The Depression Dilemma" on the AMCP.org Online Learning Center site. To receive CE credit, you must receive a score of at least 70%. You will have 2 opportunities to pass the posttest.

2. Program Evaluation form.

Upon successful completion of this program, you will automatically receive your CE statement. Your CE credits will be automatically archived and tracked for you on the AMCP.org Online Learning Center site. All information is kept confidential.

Note: There is a $10 processing fee for nonmembers. (See payment instructions on site.)

Posttest Worksheet: Shrinking Health Care Disparities in Women: The Depression Dilemma

1. Women experiencing hot flashes have higher rates of depression regardless of prior incidence of depression.
   a. True
   b. False

2. In the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) trial, in patients who failed to remit on a selective seratonin reuptake inhibitor (SSRI),
   a. the median time to remission after being given the second antidepressant was from 4 to 6 weeks.
   b. lack of response to 1 antidepressant as a first-line treatment did not imply that another antidepressant in the same class would not have efficacy.
   c. both intraclass and interclass switches were found to be efficacious.
   d. all of the above.
   e. a and b only.

3. Similar to depression prevalence, anxiety disorders are also about
   a. 2 to 3 times more common in women than in men.
   b. half as likely in women as in men.
   c. equal in prevalence between men and women.
   d. 4 times more common in women than in men.
   e. 2 times more common in men than in women.

4. Although DSM-IV diagnostic criteria do not differentiate female from male depression,
   a. DSM-IV criteria does identify the treatments that are expected to bring women to remission more successfully.
   b. DSM-IV criteria identify the following risk factors for development of depression: marital stress, family stress, family demands, and work stress.
   c. women may experience symptoms of atypical depression (e.g., hypersomnia, hyperphagia, carbohydrate craving, evening mood exacerbation).
   d. men more frequently exhibit symptoms of anxiety and panic.

5. Major depressive disorder consists of a constellation of symptoms that traverse the following 3 domains:
   a. Anxiety, depression, and seasonal and affective disorder
   b. Psychological, behavioral, and somatic (physical) symptoms
   c. Genetic influences, gender, and environmental stressors
   d. Economic, humanistic, and medical consequences
   e. None of the above

6. Some of the barriers to improving care of depression illness include the following:
   a. Patients may resist mental disorder diagnoses or fail to follow up with prescribed treatment.
   b. Primary care practitioners have a low rate of diagnosing depression, prescribing according to guidelines recommended by the American Psychiatric Association (APA), or following up with patients once treatment is initiated.
   c. Health care systems have had difficulty instituting effective care systems for depression management.
   d. All of the above.
   e. None of the above.

7. Most studies show that in childhood (ages 5 to 12 years), rates of depression
   a. are equal in girls and boys.
   b. are twice as high in girls.
   c. are twice as high in boys.
   d. are virtually nonexistent in girls and boys.

8. In late adolescence, rates of depression
   a. are equal in girls and boys.
   b. are twice as high in girls.
   c. are twice as high in boys.
   d. are virtually nonexistent in girls and boys.

9. Three large epidemiological studies show which of the following to be responsible for gender differences in depression?
   a. Duration of depressive episodes
   b. Rate of recurrence
   c. Difference in number of first-onset depressive episodes
   d. Family history of depression

10. In people older than 55 years of age, gender differences in depression
    a. become more apparent.
    b. become less apparent.
    c. remain the same.

11. Controlling for other risk factors, the strongest predictor of adult depression in all ethnic groups is
    a. sexual harassment.
    b. childhood physical abuse.
    c. childhood sexual abuse.
    d. reduced earning power.

12. Following menopause, a woman's risk for depression
    a. increases.
    b. decreases.
    c. remains the same as before menopause.
    d. virtually disappears.

13. The female:male ratio for the prevalence rate of depression is
    a. 3:1.
    b. 1:1.
    c. 2:1.
    d. 1.5:1.
    e. none of the above.

14. All of the following are categories and types of depression except
    a. depression with melancholic features.
    b. depression with antisocial hypochondriasis.
    c. depression with catatonic features.
    d. depression with psychotic features.
    e. bipolar depression.

15. The highest risk for suicide is within what time frame following the onset of a major depressive episode?
    a. 2 weeks
    b. 1 month
    c. 3 months
    d. 4 months
    e. 6 months

16. Primary care physicians typically write for what percentage of all antidepressants in a given population?
    a. 5% to 10%
    b. 11% to 15%
    c. 20%
    d. 30%
    e. 60% to 70%

17. Following APA guidelines, patients with a partial response to therapy at 4 weeks may fully remit with
    a. continued therapy.
    b. increased dosage.
    c. These patients never fully remit.
    d. both a and b.
    e. none of the above.

18. Recurrent major depression is associated with
    a. subclinical atherosclerosis.
    b. cardiovascular disease.
    c. cardiovascular death.
    d. insulin resistance.
    e. all of the above.

19. The ways in which depression can affect employees' productivity may be explained by a depressed employee's
    a. lack of energy and insight.
    b. lack of creativity and motivation.
    c. absenteeism.
    d. all of the above.
    e. none of the above.

20. Studies of cardiovascular patients have definitively shown that treating depression with SSRIs significantly reduces subsequent cardiovascular morbidity and mortality.
    a. True
    b. False

21. People who have depression are most often seen by primary care physicians. According to the National Comorbidity Replication Survey, what percentage of these patients receives minimally adequate treatment?
    a. 28%
    b. 42%
    c. 58%
    d. 72%
    e. 100%

22. Data from the World Health Organization study of psychological problems in general health care found that 69% of participants who met criteria for depression approached their primary care clinicians complaining of somatic symptoms alone. Which of the following physical complaints have been found to correlate with a diagnosis of depressive disorder?
    a. Insomnia
    b. Abdominal cramping, bloating, heartburn, diarrhea, and/or constipation
    c. Chronic joint pain/ limb pain/ bodily aches and pain
    d. Change in sexual desire
    e. All of the above

23. Primary care models of depression management that include which of the following components best represent initiatives shown to provide better outcomes for depressed patients?
    a. Encouraging depressed patients to exercise, remain on antidepressant therapy, and call their doctors about antidepressant side effects
    b. Educating primary care practitioners about best practices
    c. Encouraging patient adherence to antidepressant therapies
    d. Providing primary care referrals of all depressed patients to mental health specialists
    e. All of the above

24. Providing primary care practitioners support in the forms of education, expert consultation, and ability to bill for depression-provided services has been definitely shown to improve patient work productivity, reduce both medical and mental health hospitalizations of patients, and reduce patient depression rating scores.
    a. True
    b. False

25. Because of the significant prevalence and morbidity of depression, which adults does the U.S. Preventive Services Task Force recommend screening for depression?
    a. Every patient at every visit, similarly to measuring blood pressure
    b. Every patient with a chronic concomitant medical diagnosis
    c. Patients visiting clinical practices that have systems in place to ensure accurate diagnosis, effective treatment, and follow-up
    d. All women, regardless of primary diagnosis

To complete this activity, go to www.amcp.org (Learning Center/Online CE), where you will access the posttest and evaluation form.

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