EVIDENCE-STATEMENT:
DEPRESSION (Screening)

Why This Chapter is Important for Employers: An Overview

- In a given year, 18.8 million American adults (9.5% of the adult population) will suffer from a depressive illness.[1]
- Routine, systematic screening can successfully identify patients who are depressed, allowing them to access care earlier in the course of their illnesses.[2]
- Depression is a major cause of disability, absenteeism, and productivity loss among working-age adults.[1] Depression is estimated to cause 200 million lost workdays each year at a cost to employers of $17 to $44 billion.[3]
- Research suggests that 80% of patients with depression will improve with treatment.[4]

Clinical Preventive Service Recommendations

U.S. Preventive Services Task Force Recommendation

The U.S. Preventive Services Task Force (USPSTF) recommends screening all adults for depression in clinical practices that have systems in place to assure accurate diagnosis, effective treatment, and adequate follow-up.[5] Although not explicitly stated in the USPSTF recommendation statement, screening adults for depression should be part of an overall system to improve depression recognition and outcomes. Important system aspects include feedback, treatment advice, education, case management, access to mental health care, telephone follow-up, and an institutional commitment to quality improvement.[5]

Evidence Rating: **B (Recommended/ At Least Fair Evidence)**

The USPSTF found good evidence that screening 1) improves the accurate identification of depressed patients in primary care settings and 2) that treating depressed adults identified in primary care settings reduces clinical morbidity. The USPSTF concluded the benefits of screening are likely to outweigh any potential harms.[5]

Other Recommended Guidance

The American Academy of Family Physicians (AAFP) concurs with the U.S. Preventive Services Task Force recommendation.[6]

Information Sources

The recommendations and supporting information contained in this document came from several sources, including the:

- American Academy of Family Physicians (AAFP)
- National Institutes of Mental Health (NIMH)
- U.S. Preventive Services Task Force (USPSTF)
- Peer-reviewed research

The background and supporting information contained in this document is a compilation of research findings. All information presented in this document should be attributed to its referenced source and should not be considered a reflection of other organizations cited in the text.

Condition/Disease Specific Information

Epidemiology of Condition/Disease

Depression is a serious condition that affects 5% to 9% of adult patients presenting at primary care in the United States.[2] In a given year, 18.8 million American adults (9.5% of the adult population) will suffer from a depressive

illness. Approximately 5% to 12% of men and 10% to 25% of women will experience a major depressive episode at some point during their lives.[1]

Depression is a major cause of morbidity in the United States, and it is projected to become the leading cause of disability worldwide by 2020.[3]

Condition/Disease Risk Factors

Risk factors for depression include a family history of depression, female sex, unemployment, and chronic disease.[2]

Value of Prevention

Economic Burden of Condition/Disease

In 2000, over $83.1 billion dollars were spent on depression in the United States; $26.1 billion dollars (31%) for direct medical costs, $5.4 billion dollars (7%) for suicide-related mortality costs, and $51.5 billion dollars (62%) for workplace costs.[7]

Workplace Burden of Condition/Disease

Depression is a major cause of disability, absenteeism, and productivity loss among working-age adults. In a 3-month period, patients with depression miss an average of 4.8 workdays and suffer 11.5 days of reduced productivity.[1] In total, depression is estimated to cause 200 million lost workdays each year at a cost to employers of $17 to $44 billion.[3]

In addition to its direct medical and workplace costs, depression also increases healthcare costs and lost productivity indirectly by contributing to the severity of other costly conditions such as heart disease, diabetes, and stroke.

Economic Benefit of Preventive Intervention

The economic benefits of screening mainly result from averting the lost productivity costs associated with the disease.[8] Some studies suggest that treatment of depression may lead to decreased general medical costs, however, conclusive evidence is not available.

Estimated Cost of Preventive Intervention

The cost of screening for depression depends on the location, provider type, and the screening instrument used. In 2004, the private-sector cost of depression screening averaged $23; approximately 95% of paid claims fell within the range of $0 to $81.[9]

Estimated Cost of Treatment

Treatment of depression in the primary care setting (based on one initial physician visit and one follow-up visit within 3 months) costs an average of $99.68 (in year 2001 dollars). The cost of medication to treat depression varies substantially based on the type of medication chosen. Average wholesale price (AWP) figures are noted below for a 1-month supply of a few varieties of the FDA-approved selective-serotonin-reuptake-inhibitors (SSRIs) commonly used to treat depression.[10]

Drug Name	2006 Average Wholesale Price (AWP)	
	Generic	Brand
fluoxetine/Prozac®	$74.35 (20 mg)	$138.91 to $277.82
paroxetine/Paxil®	$92.50 to $105.02	$72.90 to $81.00
sertraline/Zoloft®	$7.17 (50 mg)	$86.89 (25mg–100mg)

The total cost of treatment should consider treatment-related cost-offsets due to the reduction of lost productivity, absenteeism, and other factors. For example, the indirect cost associated with an employee who is treated for depression (extrapolated from lost work days/time for medical appointments, etc) over a 3 month period averages $400, whereas the indirect cost associated with a depressed employee who does not receive treatment (extrapolated from sick days, etc) averages $840 over a 3 month period.[1] If benefits of treatment on work impairment are taken into account, the estimated cost-savings would exceed the average treatment cost of depression.[8]

Cost-Effectiveness and/or Cost-Benefit Analysis of Preventive Intervention

The cost-effectiveness of screening is sensitive to screening costs and achievable depression remission rates. Based on an economic modeling approach, one study found that one-time depression screening had a relatively low cost per quality-adjusted life year gained compared to no screening. However, neither annual nor periodic screening for depression were found to be cost-effective in comparison to preventive service benchmarks.[1]

Preventive Intervention Information

Preventive Intervention: Purpose of Screening

Screening for depression identifies patients suffering from depression, allowing them to access care earlier in the course of their illness. Research suggests that 80% of patients with depression will improve with treatment.[4] The USPSTF found evidence that patient outcomes improve significantly when depression recognition and management are integrated.[2] Yet despite the value of screening, it is infrequently conducted, and hence, primary care physicians fail to identify 30% to 50% of patients suffering from depression.[5]

Benefits and Risks of Intervention

Risks of screening include false-positive results, which can lead to additional testing, incurring further costs and inconvenience. Patients may also suffer some negative effects after being labeled as depressed. However, the USPSTF felt that these potential risks were likely outweighed by the benefits of screening.[11]

Initiation, Cessation, and Interval of Screening

There is insufficient evidence to determine the optimal ages at which to begin and cease depression screening. Thus, experts agree that depression screening should be initiated and stopped when deemed appropriate by the clinician.

Evidence is also insufficient to determine the optimal interval of screening. Thus, clinicians are encouraged to use their judgment in deciding how frequently to screen patients for depression. The USPSTF notes that recurrent screening is most likely to benefit patients with a history of depression, unexplained somatic symptoms, chronic pain or other comorbid psychological conditions such as anxiety, panic attack, or substance abuse.[11]

The USPSTF found insufficient evidence to recommend for or against depression screening among children or adolescents in primary care settings. However, the USPSTF encourages physicians to remain alert for signs of depression in these populations and to treat or refer to specialty care as appropriate.[2]

While the USPSTF did not recommend screening adolescents for depression, new evidence shows that the benefits of screening in the adolescent population may outweigh the risks involved. A recent randomized controlled trial of high-school students showed that screening adolescents for depression with a standardized screening instrument did not increase suicidal ideation (thoughts or fantasies about committing suicide) or increase feelings of discomfort. Surprisingly, depressed students reported less distress at being asked questions about suicidal ideation than did non-depressed students. Identifying adolescents with suicidal ideation is an important part of youth suicide prevention.[12] Providers need to be aware that the signs and symptoms of depression in adolescents are different from those in adult populations.

Intervention Process

Several depression screening tools, called instruments, are currently available for use in the primary care setting. These instruments are composed of standardized questions that assess the number and severity of a patient's depression symptoms. Clinicians can then interpret the results to make a diagnosis of depression and to develop a treatment plan. Evidence is mixed as to what instrument or method is most effective in accurately identifying patients with depression, but most instruments seem to have an adequate level of sensitivity and specificity. Commonly used instruments, such as the Patient Health Questionnaire-9, are simple to administer and take less than 5 to 10 minutes for a patient or provider to complete.[5]

The USPTF recommends that physicians choose their preferred method of screening based on their patient population and practice setting.[2] Clinicians who do not use a standardized instrument to screen for depression may want to ask their patients the two questions below to assess their mental health status. These may be as effective as using longer screening tools.[2]

1. Over the past two weeks, have you ever felt down, depressed, or hopeless?
2. Over the past two weeks, have you felt little interest or pleasure in doing things?

Positive responses to these questions or positive responses to questions on a short standardized screening test should trigger a full diagnostic interview by the clinician so that they may identify the specific depressive symptoms experienced by the patient and make an accurate diagnosis.[2] The USPSTF recommends that clinicians use standard diagnostic criteria, such as those featured in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).[11]

The process used in screening patients for depression is important. Screening adults for depression in clinical practices that have well functioning systems in place to assure accurate diagnosis, effective treatment, and careful follow-up, are more likely to produce benefits.[2] The USPSTF found several other clinically relevant factors pertinent to successful depression screening processes. For information on these factors please refer the USPSTF website (www.ahrq.gov/clinic/uspstf/uspsdepr.htm).

Implementing a systematic depression screening program in a clinical practice will increase the number of patients diagnosed with depression and the number

of patients treated for depression. It is important to remember that not all of the patients who screen positive for depression will be diagnosed with depression.

Considering the prevalence of depression in the primary care setting, it can be expected that 25% to 40% of patients who screen positive for depression will actually have depression.[2]

- Many screened patients will have screened false-positive, meaning that although they screened positive for depression, they are not actually depressed. These patients do not require treatment.
- Some patients who screen positive for depression may suffer from depressive illnesses other than major depression, such as adjustment reactions with depression or grief reactions, and these patients may benefit from monitoring.
- Some of the patients who screen positive for depression may have, in addition to or in place of depression, another psychological disorder such as anxiety disorder, panic attack, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), a substance abuse disorder, or another type of mental health condition. Physicians should refer these patients to a mental health specialist.

Because of the complexities involved in screening for depression, the USPSTF recommends that clinicians follow-up all positive screens with further diagnostic work, including a full diagnostic interview such as that featured in the DSM-IV.[11]

Treatment Information

Health benefits should include provisions for diagnostic and treatment services. Most patients with depression present and are treated in the primary care setting. While depression is one of the most common disorders seen by primary care providers, research shows that the standard of care delivered is poor. In the primary care setting, 35% to 70% of patients with depression do not receive an appropriate diagnosis or adequate treatment.[1]

Patients who screen positive for depression and are diagnosed with depression as confirmed by the DSM-IV diagnostic interview should 1) begin treatment in the primary care or specialty mental healthcare setting or 2) be referred for treatment to a mental health professional. A primary care treatment plan can include pharmacological therapy (tricyclic anti depressants and selective-serotonin-reuptake-inhibitors [SSRIs], are proven to be effective in the treatment of major depression) psychotherapy, or a combination of the two.[11]

Current research points to a number of successful identification and disease-management techniques for addressing depression in primary care. Experts note that routine, systematic screening can successfully identify patients who are depressed. Patients who are identified in primary care settings as suffering from depression or other mental health conditions, can often benefit from referral to a mental health specialist. Depressed patients may also benefit from collaborative care; an approach to care that pairs a mental health specialist with a primary care provider to provide evidence-based treatment services.[12]

Strength of Evidence for the Clinical Preventive Service
The level of evidence supporting the recommendations contained in this chapter is described below.

Evidence-Based Research:

U.S. Preventive Services Task Force (USPSTF)
Strength of Evidence: B (Recommended/At Least Fair Evidence)

- The USPSTF found good evidence to support screening all adults for depression in clinical practices that have systems in place (such as a referral system, on-site mental health provider, or other mental health resources) to assure accurate diagnosis, effective treatment, and adequate follow-up.[5]

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Campbell KP, Lollar D. Depression evidence-statement: screening. In: Campbell KP, Lanza A, Dixon R, Chattopadhyay S, Molinari N, Finch RA, editors. *A Purchaser's Guide to Clinical Preventive Services: Moving Science into Coverage*. Washington, DC: National Business Group on Health; 2006.

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