Screening for Depression: Recommendations and Rationale

U.S. Preventive Services Task Force*

This statement summarizes the current U.S. Preventive Services Task Force (USPSTF) recommendations for screening for depression and the supporting scientific evidence and updates the 1996 USPSTF recommendations on this topic. At that time, the USPSTF concluded that there was insufficient evidence to recommend for or against routine use of standardized questionnaires to screen for depression in primary care patients. The complete information on which the current statement is based, including evidence tables and references, is available in the accompanying article in this issue and in the systematic evidence review on this topic, which can be obtained through the USPSTF Web site (www.ahrq.gov/clinic/uspstfix.htm) and in print through the Agency for Healthcare Research and Quality Publications Clearinghouse (800-358-9295).

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See related article on pp 765-776.

*For a list of the members of the U.S. Preventive Services Task Force, see the Appendix.

Summary of the Recommendations

The U.S. Preventive Services Task Force (USPSTF) recommends screening adults for depression in clinical practices that have systems in place to assure accurate diagnosis, effective treatment, and follow-up. This is a **grade B recommendation.** (See **Appendix Table 1** for a description of the USPSTF classification of recommendations.)

The USPSTF found good evidence that screening improves the accurate identification of depressed patients in primary care settings and that treatment of depressed adults identified in primary care settings decreases clinical morbidity. (See **Appendix Table 2** for a description of the USPSTF classification of levels of evidence.) *Trials that have directly evaluated the effect of screening on clinical outcomes have shown mixed results. Small benefits have been observed in studies that simply feed back screening results to clinicians. Larger benefits have been observed in studies in which the communication of screening results is coordinated with effective follow-up and treatment. The USPSTF concluded the benefits of screening are likely to outweigh any potential harms.*

The USPSTF concludes the evidence is insufficient to recommend for or against routine screening of children or adolescents for depression. This is a **grade I recommendation.**

The USPSTF found limited evidence on the accuracy and reliability of screening tests in children and adolescents and limited evidence on the effectiveness of therapy in children and adolescents identified in primary care settings.

Clinical Considerations

Many formal screening tools are available (for example, the Zung Self-Depression Scale, Beck Depression Inventory, General Health Questionnaire, and Center for Epidemiologic Study Depression Scale) (1, 2). Asking two simple questions about mood and anhedonia ("Over the past 2 weeks, have you felt down, depressed, or hopeless?" and "Over the past 2 weeks, have you felt little interest or pleasure in doing things?") may be as effective as using longer instruments (3). There is little evidence to recommend one screening method over another, so clinicians can choose the method that best fits their personal preference, the patient population served, and the practice setting.

All positive screening tests should trigger full diagnostic interviews that use standard diagnostic criteria (for example, those from the fourth edition of *Diagnostic and Statistical Manual of Mental Disorders*) to determine the presence or absence of specific depressive disorders, such as major depression or dysthymia (4). The severity of depression and comorbid psychological problems (for example, anxiety, panic attacks, or substance abuse) should be addressed.

Many risk factors for depression (such as female sex, family history of depression, unemployment, and chronic disease) are common, but the presence of risk factors alone cannot distinguish depressed from nondepressed patients.

The optimal interval for screening is unknown. Recurrent screening may be most productive in patients

with a history of depression, unexplained somatic symptoms, comorbid psychological conditions (such as panic disorder or generalized anxiety), substance abuse, or chronic pain.

Clinical practices that screen for depression should have systems in place to ensure that positive screening results are followed by accurate diagnosis, effective treatment, and careful follow-up. Benefits from screening are unlikely to be realized unless such systems are functioning well.

Treatment may include antidepressants or specific psychotherapeutic approaches (for example, cognitive–behavioral therapy or brief psychosocial counseling), alone or in combination.

The benefits of routinely screening children and adolescents for depression are not known. The existing literature suggests that screening tests perform reasonably well in adolescents and that treatments are effective, but the clinical impact of routine depression screening has not been studied in pediatric populations in primary care settings. Clinicians should remain alert for possible signs of depression in younger patients. The predictive value of positive screening tests is lower in children and adolescents than in adults, and research on the effectiveness of primary care–based interventions for depression in this age group is limited.

Scientific Evidence

Epidemiology and Clinical Consequences

Depressive disorders are common, chronic, and costly. The World Health Organization identified major depression as the fourth leading cause of worldwide disease in 1990, causing more disability than either ischemic heart disease or cerebrovascular disease (5). In primary care settings, the point prevalence of major depression ranges from 5% to 9% among adults, and up to 50% of depressed patients are not recognized (6, 7). Other disabling depressive illnesses include dysthymia (a chronic low-grade depression) and minor depression (an episodic, less severe illness). These two illnesses are as common as major depression in primary care settings. Depressive disorders are also relatively common in younger persons, with estimated prevalences of 0.8% to 2.0% in children and 4.5% in adolescents.

Accuracy and Reliability of Screening Tests

Several depression screening instruments are available; most instruments have relatively good sensitivity (80% to 90%) but only fair specificity (70% to 85%) (2). Most instruments are easy to use and can be administered in less than 5 minutes. Shorter screening tests, including simply asking questions about depressed mood and anhedonia, appear to detect a majority of depressed patients and, in some cases, perform better than the original instrument from which they were derived (3).

Assuming optimal test performance and a prevalence of major depression of 5% to 10% in primary care settings, about 24% to 40% of patients who screen positive will have major depression. Some patients with "false-positive" results on screening may have dysthymia or subsyndromal depressive disorders that might benefit from treatment or closer monitoring; others may have comorbid disorders such as anxiety disorder, substance abuse, panic disorder, post-traumatic stress disorder, or grief reactions; still others may have no disorder at all. The finding of a positive screen therefore requires further diagnostic questioning by the clinician to establish an appropriate diagnosis and initiate a plan for treatment and follow-up.

Screening instruments have been tested in children and adolescents, with sensitivity ranging from 40% to 100% and specificity from 49% to 100%. Because the underlying prevalence is much lower than in adults, the positive predictive value is low.

Effectiveness of Early Treatment

Effective treatments are available for patients with depressive illnesses detected in primary care settings (1, 8). Antidepressant medications for major depression, including tricyclic antidepressants and selective serotonin reuptake inhibitors, are clearly more effective than placebo. Most of the data supporting effectiveness come from structured trials with selected populations, although more recent studies using "usual care" comparison groups and real-world settings have produced similar effects. Newer agents perform similarly to older agents.

Psychosocial and psychotherapeutic interventions are probably as effective as antidepressant medications for major depression, but they are clearly more time-intensive (7). The benefits of psychotherapy for other depressive illnesses are less well studied. Few studies have examined the effect of combining medications and psychotherapy.

No studies have examined treatment outcomes for children or adolescents identified by primary care clinicians through screening. Evidence for treating adolescents comes from school and community settings where selective serotonin reuptake inhibitors and cognitive–behavioral therapy, but not tricyclic antidepressants, appear to be effective. Whether these results can be generalized to primary care settings or to children is unclear.

Effectiveness of Screening

The review for the USPSTF identified 14 randomized, controlled trials that have examined the effectiveness of screening for depression in primary care settings (9). In 8 studies, the only intervention was feedback of screening results to clinicians; remaining studies combined feedback with other interventions for patients or clinicians. The trials reported various outcomes, including recognition of depression, rates of treatment, and clinical improvement among patients with depression. In 7 trials, routine depression screening with feedback of screening results to providers generally increased recognition of depression, especially major depression, by a factor of two to three compared with usual care. Trials that examined the effect of feedback of screening results on the proportion of depressed patients who received treatment showed mixed results: In 4 fair- to good-quality trials that used feedback alone, there was no significant effect on treatment rates, but 4 of the 5 trials that combined feedback with treatment advice or other system supports reported increased treatment rates in the intervention group compared with "usual care." Ten trials measured the effect of screening and feedback on depression outcomes from 1 month to 2 years after the intervention. Five of these 10 studies reported significant improvements in the clinical outcomes of depressed patients, and 3 others reported improvements that did not reach statistical significance.

All three trials that compared the effects of integrated recognition and management programs with "usual care" in community primary care practices showed significantly improved patient outcomes. Integrated programs included feedback, provider or patient education, access to case management or mental health care, telephone follow-up, and institutional commitment to quality improvement. One trial, which included both newly detected cases of depression and patients already under treatment, showed improvement in patient symptoms at 6 months only among patients beginning a new treatment episode. No improvement was noted among patients who had recently been treated (that is, those who would have been identified without specific screening). Two trials showed improved symptoms at 12 months; one of these also showed more employment retention in intervention compared with usual care patients. All three trials required allocation of clinic resources to detection and management programs.

On the basis of estimates from the above-mentioned trials, approximately 11 patients identified as depressed as a result of screening would need to be treated to produce 1 additional remission (9). If depression (including major depression, dysthymia, and minor depression) is present in 10% of primary care patients, then 110 patients would need to be screened to produce 1 additional remission after 6 to 12 months of treatment. The number needed to treat for benefit would be smaller for patients with major depression only, but a larger group would need to be screened to identify them.

Potential Harms of Screening and Treatment

The potential harms of screening include false-positive screening results, the inconvenience of further diagnostic work-up, the adverse effects and costs of treatment for patients who are incorrectly identified as being depressed, and potential adverse effects of labeling. None of the research reviewed provided useful empirical data regarding these potential adverse effects.

RECOMMENDATIONS OF OTHERS

The Canadian Task Force on Preventive Health Care found fair evidence to exclude routine screening of asymptomatic individuals for depression in 1994 but suggested that clinicians maintain a high degree of clinical suspicion for depression among their patients (10). The Canadian Task Force is currently revisiting this rec-

ommendation. The American College of Obstetricians and Gynecologists recommends that clinicians should be alert to symptoms of depression and question patients about psychosocial stressors and family history of depression when taking their history (11). The American Academy of Pediatrics recommends that pediatricians ask questions about depression in routine history taking throughout adolescence (12). The American Medical Association recommends screening for depression among adolescents who may be at risk owing to family problems, drug or alcohol use, or other indicators of risk (13).

Appendix

Members of the U.S. Preventive Services Task Force are Alfred O. Berg, MD, MPH, *Chair* (University of Washington, Seattle, Washington); Janet D. Allan, PhD, RN, CS, *Vice-Chair* (University of Texas Health Science Center, San Antonio, Texas); Paul S. Frame, MD (Tri-County Family Medicine, Cohocton, and University of Rochester, Rochester, New York); Charles J. Homer, MD, MPH (National Initiative for Children's Healthcare Quality, Boston, Massachusetts); Mark S. Johnson, MD, MPH (University of Medicine and Dentistry of New Jersey–New Jersey Medical School, Newark, New Jersey)*; Jonathan D. Klein, MD, MPH (University of Rochester School of Medicine, Rochester, New York)*; Tracy A. Lieu, MD, MPH (Harvard Pilgrim Health Care and Harvard Medical School, Boston, Massachusetts); Cynthia D. Mulrow, MD, MSc (University of Texas Health Science Center, Audie L. Murphy Memorial Veterans Hospital, San Antonio, Texas); C. Tracy Orleans, PhD (The Robert Wood Johnson Foundation, Princeton, New Jersey); Jeffrey F. Peipert, MD, MPH (Women and Infants' Hospital, Providence, Rhode Island); Nola J. Pender, PhD, RN (University of Michigan, Ann Arbor, Michigan); Albert L. Siu, MD, MSPH (Mount Sinai School of Medicine and The Mount Sinai Medical Center, New York, New York)*; Steven M. Teutsch, MD, MPH (Merck & Co., Inc., West Point, Pennsylvania); Carolyn Westhoff, MD, MSc (Columbia University College of Physicians and Surgeons, New York, New York); and Steven H. Woolf, MD, MPH (Virginia Commonwealth University, Fairfax, Virginia).

*These current members were not on the Task Force at the time these recommendations were voted on.

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The USPSTF recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality, the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

Appendix Table 1. **U.S. Preventive Services Task Force Grades and Recommendations***

Grade	Recommendation
A	The USPSTF strongly recommends that clinicians routinely provide [the service] to eligible patients. *The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.*
B	The USPSTF recommends that clinicians routinely provide [the service] to eligible patients. *The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.*
C	The USPSTF makes no recommendation for or against routine provision of [the service]. *The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.*
D	The USPSTF recommends against routinely providing [the service] to asymptomatic patients. *The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.*
I	The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. *Evidence that the [service] is effective is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.*

* The U.S. Preventive Services Task Force (USPSTF) grades its recommendations according to one of five classifications (A, B, C, D, I) reflecting the strength of evidence and magnitude of net benefit (benefits minus harms).

Appendix Table 2. **U.S. Preventive Services Task Force Grades for Strength of Overall Evidence***

Grade	Definition
Good	Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes
Fair	Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies; generalizability to routine practice; or indirect nature of the evidence on health outcomes
Poor	Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes

* The U.S. Preventive Services Task Force (USPSTF) grades the quality of the overall evidence for a service on a three-point scale (good, fair, poor).

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