

Screening for Depression in Adults: U.S. Preventive Services Task Force Recommendation Statement

U.S. Preventive Services Task Force*

Description: Update of the 2002 U.S. Preventive Services Task Force (USPSTF) recommendation statement on screening for depression in adults.

Methods: The USPSTF examined evidence on the benefits and harms of screening primary care patients for depression, including direct evidence that depression screening programs improve health outcomes. The USPSTF did not reexamine evidence for those key questions that had strong, consistent evidence in the 2002 review, including questions about the accuracy of screening instruments in identifying depressed adult patients in primary care settings, and the efficacy of treatment of depressed adults with antidepressants or psychotherapy. New areas of evidence considered for this review (and not reviewed in 2002) include efficacy of treatment of depression in older adult patients, harms of screening for depression in

primary care settings, and adverse events from treatment of depression in adults.

Recommendations: The USPSTF recommends screening adults for depression when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up. (Grade B recommendation)

The USPSTF recommends against routinely screening adults for depression when staff-assisted depression care supports are not in place. There may be considerations that support screening for depression in an individual patient. (Grade C recommendation)

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* For a list of the members of the USPSTF, see the **Appendix** (available at www.annals.org).

The U.S. Preventive Services Task Force (USPSTF) makes recommendations about preventive care services for patients without recognized signs or symptoms of the target condition.

It bases its recommendations on a systematic review of the evidence of the benefits and harms and an assessment of the net benefit of the service.

The USPSTF recognizes that clinical or policy decisions involve more considerations than this body of evidence alone. Clinicians and policymakers should understand the evidence but individualize decision making to the specific patient or situation.

SUMMARY OF RECOMMENDATIONS AND EVIDENCE

The USPSTF recommends screening adults for depression when staff-assisted depression care supports are in

place to assure accurate diagnosis, effective treatment, and follow-up. This is a B recommendation.

The USPSTF recommends against routinely screening adults for depression when staff-assisted depression care supports are not in place. There may be considerations that support screening for depression in an individual patient. This is a C recommendation.

See the Clinical Considerations section for the definition of staff-assisted depression care supports and additional information.

The **Figure** summarizes the recommendation and suggestions for clinical practice.

Table 1 describes the USPSTF grades, and **Table 2** describes the USPSTF classification of levels of certainty about net benefit.

See also:

Print

Related article. 793
 Summary for Patients. I-56

Web-Only

Appendix
 CME quiz
 Conversion of graphics into slides
 Downloadable recommendation summary

RATIONALE

Importance

Depression is among the leading causes of disability in persons 15 years or older. It affects individuals, families, businesses, and society. It is common in primary care patients.

Detection

The USPSTF found good evidence that screening improves the accurate identification of depressed patients in primary care settings.

Benefits of Detection and Early Intervention

The USPSTF found good evidence that treating depressed adults and older adults identified through screening in primary care settings with antidepressants, psychotherapy, or both decreases clinical morbidity.

The USPSTF found good evidence that programs combining depression screening and feedback with staff-assisted depression care supports improve clinical outcomes in adults and older adults.

The USPSTF found fair evidence that screening and feedback alone without staff-assisted care supports do not improve clinical outcomes in adults and older adults.

Harms of Detection and Early Intervention

The USPSTF found no evidence of harms of screening for depression in adults or older adults.

The USPSTF found at least fair-quality evidence that second-generation antidepressants (mostly selective serotonin reuptake inhibitors [SSRIs]) increase suicidal behaviors in adults aged 18 to 29 years, especially those with major depressive disorder (MDD) and those who receive paroxetine. The USPSTF found at least fair-quality evidence that SSRI use is associated with an increased risk for upper gastrointestinal (UGI) bleeding in adults older than 70 years, with risk increasing with age.

USPSTF Assessment

The USPSTF concludes that for adults who receive care in clinical practices that have staff-assisted depression care supports in place, there is at least moderate certainty that the net benefit of screening for depression is at least moderate.

The USPSTF concludes that for adults who receive care in clinical practices without staff-assisted depression care supports in place, there is at least moderate certainty that the net benefit of screening adults for depression is small.

CLINICAL CONSIDERATIONS

Patient Population Under Consideration

This recommendation applies to nonpregnant adults, including older adults. It does not apply to children and adolescents, who are considered a separate population.

Assessment of Risk

Individuals at increased risk for depression are considered at risk throughout their lifetime. Groups at increased risk include persons with other psychiatric disorders, including substance misuse; persons with a family history of depression; persons with chronic medical diseases; and persons who are unemployed or of lower socioeconomic status. Also, women are at increased risk compared with men. Significant depressive symptoms are associated with common life events in older adults, including medical illness, cognitive decline, bereavement, and institutional placement in residential or inpatient settings. However, the presence of risk factors alone cannot distinguish depressed patients from nondepressed patients.

Screening Tests

The USPSTF reviewed evidence about the accuracy of screening instruments in identifying depressed adults in 2002 (1). Many formal screening tools are available, including instruments designed specifically for older adults. Asking 2 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 more formal instruments (2). There is little evidence to recommend 1 screening method over another; therefore, clinicians may choose the method most consistent with their personal preference, the patient population being served, and the practice setting.

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

Treatment

The reviews of evidence on which this recommendation is based cover treatment of adults with antidepressants or psychotherapy (1) and updated evidence on the efficacy of depression treatment in older adults (3). Treatment may include antidepressants or specific psychotherapeutic approaches (for example, cognitive behavioral therapy or brief psychosocial counseling) alone or in combination. Both are effective in treating adults and older adults.

In treating patients aged 18 to 29 years, clinicians may want to select a psychotherapeutic approach or medications other than SSRIs because of the increased risk for suicidal behavior associated with the use of SSRIs. Similarly, for adults 65 years or older, clinicians may want to select a psychotherapeutic approach or medications other than SSRIs because of the increased risk for UGI bleeding associated with the use of SSRIs. In addition, the concurrent use of SSRIs with a nonsteroidal anti-inflammatory drug (NSAID) or low-dose aspirin increases the risk for UGI bleeding in adults (aged 40 to 79 years), although the increase in risk is less with aspirin. The risk for UGI bleeding is greater for medications that feature a moderate to high degree of serotonin reuptake inhibition.

Staff-Assisted Depression Care Supports

“Staff-assisted depression care supports” refers to clinical staff that assist the primary care clinician by providing some direct depression care, such as care support or coordination, case management, or mental health treatment.

In the available evidence, the lowest effective level of staff-assisted depression care supports consisted of a screening nurse who advised resident physicians of positive screening results and provided a protocol that facilitated referral to behavioral treatment (4). At the highest level,

staff-assisted depression care supports included screening; institutional monetary commitment; staff and clinician training (1- or 2-day workshops); clinician manuals; monthly training lectures; academic detailing; many materials for clinicians, staff, and patients; an initial visit with a nurse specialist for assessment, education, and discussion of patient preferences and goals; a visit with a trained nurse specialist for follow-up assessment and ongoing support for adherence to medication for those prescribed antidepressant medications; a visit with a trained therapist for cognitive behavioral therapy; and a reduced copay for patients referred for psychotherapy (5, 6). In a successful study designed for practices without ready access to mental health specialty care, office staff recruited, screened, and enrolled participants who screened positive for depression before a clinic visit (7). If the physician confirmed the depression diagnosis, the participant was scheduled for a return visit with the physician and to meet with the nurse specialist in 1 week. The nurse specialist reassessed the patient's level of depression, discussed treatment options and preferences, and asked the participant to complete a homework assignment. Participants completed up to 8 additional sessions that followed the same pattern, either by phone or in person.

Multidisciplinary team-based primary care that includes self-management support and care coordination has been shown to be effective in management of depression. These components of primary care are detailed in recent recommendations from the Task Force on Community Preventive Services (8). It recommends collaborative care for treatment of adults 18 years or older with major depression on the basis of strong evidence of effectiveness in improving short-term treatment outcomes. As defined, collaborative care and disease management of depressive disorders includes a systematic, multicomponent, team-based approach that "strengthens and supports self-care, while assuring that effective medical, preventive and health maintenance interventions take place" to improve the quality and outcome of patient care for treatment of major depressive disorders (8).

Screening Intervals

The optimum interval for screening for depression is unknown. Recurrent screening may be most productive in patients with a history of depression, unexplained somatic symptoms, comorbid psychological conditions (for example, panic disorder or generalized anxiety), substance abuse, or chronic pain.

Other Approaches to Prevention

The Task Force on Community Preventive Services also has made several recommendations about depression care in older adults. It recommends clinic-based depression care management to reduce depression in older adults on the basis of sufficient evidence and home-based depression care management on the basis of strong evidence. The Task Force on Community Preventive Services found insufficient evidence to determine the effectiveness of

community-based exercise interventions for reducing depression in older adults.

The Task Force on Community Preventive Services makes recommendations on population-based interventions appropriate for use by communities and health care systems to promote health and to prevent disease, injury, disability, and premature death. More information about the Task Force on Community Preventive Services and its recommendations on depression interventions is available on their Web site (www.thecommunityguide.org).

Useful Resources

The USPSTF recently updated its recommendation on screening for depression in children and adolescents. The USPSTF recommends screening adolescents (aged 12 to 18 years) for MDD when systems are in place to assure accurate diagnosis, psychotherapy (cognitive behavioral or interpersonal), and follow-up (Grade B recommendation). In addition, the USPSTF concluded that the current evidence is insufficient to assess the balance of benefits and harms of screening of children (aged 7 to 11 years) for MDD (I statement).

In 2004, the USPSTF concluded that the evidence is insufficient to recommend for or against routine screening by primary care clinicians to detect suicide risk in the general population (I statement). At that time, the USPSTF found no evidence that screening for suicide risk reduces suicide attempts or mortality. The USPSTF also found limited evidence on the accuracy of screening tools to identify suicide risk in the primary care setting, including tools to identify those at high risk, and found no evidence that directly addressed the harms of screening and treatment of suicide risk. In addition, the USPSTF found insufficient evidence that treatment of those at high risk reduces suicide attempts or mortality.

For the full recommendation statements and evidence reviews, please go to the Agency for Healthcare Research and Quality Web site (www.preventiveservices.ahrq.gov).

OTHER CONSIDERATIONS

Implementation

The proper diagnosis, treatment, and follow-up of adults with depression require substantial institutional investment and coordination.

Costs

The economic burden of depression is substantial for individuals as well as society. Costs to an individual may include suffering, possible side effects from treatment, fees for mental health and medical visits and medications, time away from work and lost wages, transportation, and reduced quality of personal relationships. Costs to society may include loss of life, reduced productivity (because of both diminished capacity while at work and absenteeism from work), and increased costs of mental health and med-

ical care. In 2000, the United States spent an estimated \$83.1 billion in direct and indirect costs of depression (3).

Research Needs and Gaps

Gaps in the evidence on depression screening in adults in primary care include a lack of information from large-scale randomized, controlled trials (or other well-controlled trials) on the specific role of depression screening in improving depression care management. Useful information that could be derived from studies of depression screening that ascertain health outcomes includes response and remission rates and health risks.

Other research needs and gaps include updated information about the frequency with which depression cases are missed in primary care and the level of severity of these cases. This information would help determine the need for active case finding. Also, information on the possible adverse effects and harms of depression care management programs is needed to determine the net benefits of these approaches. In addition, more information is needed about approaches to preventing risk for bleeding in patients who receive SSRIs, including monitoring, dosage or medication adjustments, and cotherapies. Finally, additional information is needed about the efficacy, tolerability, and safety of antidepressants, including pharmacogenetic studies, studies of the effects of genetic variability, and studies of medication interactions. This information could be used to target depression treatments more effectively to increase benefits and reduce adverse effects.

DISCUSSION

Burden of Disease

Depressive disorders include MDD, dysthymia, and minor depression. Other conditions that include depressive features (for example, bipolar disorder) are not considered depressive disorders. Depression is often associated with loss of productivity at work and impairment in relationships and social functioning. It is a major risk factor for suicide.

In primary care settings, the prevalence of MDD ranges from 5% to 13% in adults and from 6% to 9% in older adults. The prevalence of dysthymia in adults in primary care settings is estimated to range from 2% to 4%. One third to one half of adults and nearly two thirds of older adults who receive treatment for depression receive it in a primary care setting (3). Large-scale studies of patients initiating treatment of depression show that approximately two thirds achieve remission within 1 year. Older patients have similar or slightly lower recovery rates than other adults, possibly because of a higher rate of comorbid medical conditions. Despite fairly high rates of recovery from particular episodes, depression is highly recurrent. A large-scale community care based study of depression treatment found that about half of patients who achieved remission had relapse during the subsequent year (3).

Scope of Review

This recommendation statement updates the 2002 USPSTF recommendation statement on screening for depression in adults. Evidence gathered for this recommendation focused on areas identified as gaps in the evidence in the 2002 review; issues that the USPSTF judged in the previous review to have strong evidence were not addressed. The current evidence review examined direct evidence that primary care depression screening programs improve health outcomes. It also examined the available evidence on the efficacy of depression treatment in older adults and the harms of screening and adverse events from antidepressant treatment in all adults.

Accuracy of Screening Tests

Several depression screening instruments are available, including the Zung Self-Depression Scale, Beck Depression Inventory, General Health Questionnaire, Center for Epidemiologic Study Depression Scale, SelfCARE (D), and the Geriatric Depression Scale; the latter 2 were developed specifically for older adults. Most of these instruments have relatively good sensitivity (80% to 90%) but only fair specificity (70% to 85%). Most 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, seem to detect most depressed patients and, in some cases, do better than the original instrument from which they were derived (3).

Effectiveness of Early Detection or Treatment

No new relevant evidence was found that supports screening for depression in primary care settings without feedback or follow-up (9). A fair-quality randomized, controlled trial (10) studied the health benefits of screening for depression by comparing a group that received screening with a group that received usual care. Williams and colleagues (10) randomly assigned 969 patients at 2 primary care practices to either receive standard care or complete a depression screening before a scheduled visit. Results, both positive and negative, were recorded in the patient's chart. Patients who were depressed on initial screening were more likely to have normal depression scores 3 months after their initial visit than patients who had not had screening (48% vs. 27%; $P < 0.05$). However, the apparent benefit was no longer seen when the comparison included patients who were screened and not depressed at the initial visit.

Two good-quality and 6 fair-quality randomized, controlled trials were identified that examined the effectiveness of depression screening programs with varying levels of care support on health outcomes. Four included general adult populations, and 4 focused on older adults. Four of these studies had been included in the previous review. All of the studies randomly assigned or enrolled adults who screened positive for depression; most administered the screening instrument in the clinic waiting room. Screening test results were given only to clinicians whose patients screened positive (9).

Screening in Adults

Because of the nature of the evidence, the effects of screening cannot be separated from the effects of staff-assisted depression care. Of the 4 trials that were conducted in the general adult population, 3 reported effectiveness in improving depression outcomes, particularly among adults with newly detected depression. The 1 study that did not demonstrate effectiveness in improving depression outcomes offered only simple feedback of screening results, with no other support.

All 3 of the studies that found effectiveness in improving depressive symptoms included some level of staff-assisted depression care support in addition to screening. One fair-quality study that featured staff support for scheduling follow-up visits and facilitating referrals demonstrated an improvement in depressive symptoms, but only among adults with newly identified depression who were not seeking treatment (4). The other 2 studies were large-scale trials that featured higher-intensity interventions involving depression care by staff other than the primary care provider. The higher-intensity interventions included such elements as intensive clinician and office support staff training, support staff or specialty mental health provider participation in ongoing depression care, and several follow-up contacts (5, 7).

The trial that provided the highest-intensity depression care found significantly fewer patients in either of the 2 intervention groups who screened positive for depression after the intervention (based on a 2-item instrument) compared with patients who received usual care (6-month follow-up, 40% vs. 50% [$P = 0.001$]; 12-month follow-up, 42% vs. 51% [$P = 0.005$]) (5). After 5 years, 36% of patients in 1 intervention group screened positive for depression on a 2-item instrument compared with 44% of patients who received usual care ($P = 0.05$) (6).

Given the number of components to this program, the degree to which the screening components contributed to the improvement in depression cannot be measured. Furthermore, although this study demonstrated the feasibility of delivering a multicomponent program in a primary care setting, the program required substantial institutional investments.

Screening in Older Adults

Of the 4 studies conducted in older adults, only 1 found improved depression outcomes in an intervention group beyond usual care; it was also the only study that expanded the role of other clinical or office staff to assist with depression care (11). This trial involved the assistance of a case manager, who interviewed and referred patients to primary or specialty care or to a multidisciplinary geriatric assessment team. The case manager also provided patient education and follow-up. The generalizability of this trial to general primary care screening of older adults may be limited because the study population consisted of patients

who were at high risk for several conditions. It is not clear whether older adults who screened positive only for depression were eligible for the study.

Treatment of Adults

Effective treatments are available for patients with depressive illnesses detected in primary care settings. Psychotherapy and antidepressant medications for MDD, delivered singly or in combination, are effective in treating adults. A systematic review of intention-to-treat trials comparing 3 groups of patients who received antidepressants, psychotherapy, or a control condition reported a 46% remission rate with antidepressants and a 48% remission rate with psychotherapy after 10 to 16 weeks (12). Both treatments are widely available from primary care providers or by referral.

Treatment of Older Adults

Three good-quality systematic reviews included meta-analyses on the effectiveness of treatments for older adults. Two reviews concluded that antidepressants were effective in treating depressed older adults. In the most recent review, older adults who received antidepressants were twice as likely to have remission from major or minor depression as older adults who received placebo (odds ratio [OR], 2.03 [95% CI, 1.67 to 2.46]) (13). A Cochrane review indicated that among community-dwelling older adults, 36% of those who received antidepressants were in remission at the end of the study compared with 21% of those who received placebo (OR, 2.13 [CI, 1.61 to 2.86]) (14).

Psychotherapy is also an effective treatment of depression in older adults. Two good-quality systematic reviews on the efficacy of psychotherapy in older adults found that depressed older adults treated with psychotherapy were more than twice as likely to have remission as those who received no treatment (OR, 2.47 [CI, 1.76 to 3.47] vs. 2.63 [CI, 1.96 to 3.53]) (13, 15).

Potential Harms of Screening and Treatment

The potential harms of screening include false-positive results, the inconvenience of additional diagnostic workup, the costs and adverse effects of treatment of patients who are incorrectly identified as being depressed, and potential adverse effects of labeling. The evidence review found no evidence on any of these potential harms of screening (9).

Harms of treatment include serious adverse effects of antidepressants, such as suicide-related events and psychiatric events, as well as minor side effects, including nausea, dizziness, diarrhea, headache, sexual dysfunction, and insomnia. For older adults, harms of treatment also include serious medical events, such as UGI bleeding.

Harms of Treatment in Adults

The evidence review found 7 studies that compared suicide-related events among adults who received SSRIs

and other second-generation antidepressants with adults who received placebo. No studies reported a significant increase in completed suicide rates in adults who received antidepressants compared with those who received placebo, although completed suicides were rare and, as a result, the power to detect a significant difference was limited (3).

Results from 5 meta-analyses indicated that the odds of suicidal behavior, generally defined as suicide attempts, preparatory acts, or serious self harm, nearly doubled for 2 groups: adults aged 18 to 24 years with MDD or other psychiatric indications who received second-generation antidepressants (OR, 2.31 [CI, 1.02 to 5.64]) (16) and adults who received treatment with SSRIs for any indication (OR, 2.70 [CI, 1.22 to 6.97]) (17). The highest odds of nonfatal suicidal behavior were found in adults with MDD who received paroxetine (OR, 6.70 [CI, 1.1 to 149.4]) (18), with such behaviors mostly exhibited by those aged 18 to 29 years (risk difference for suicidal behavior, 2.7 per 1000 patients treated with paroxetine; number needed to treat, 370 [CI, 208 to 1667]). For all ages, the risk for suicidal behaviors was highest in the first month of treatment (19).

Harms of Treatment in Older Adults

For adults older than 65 years, antidepressant use seemed to be protective against suicidal behavior (OR, 0.06 [CI, 0.01 to 0.58]) (20).

The evidence review identified 1 fair-quality study on bleeding risk in older adults who received SSRIs. Although patients 16 years or older were at increased risk for UGI bleeding during periods of SSRI use, the risk increased significantly with age, from 4.1 hospitalizations per 1000 adults aged 65 to 70 years to 12.3 hospitalizations per 1000 octogenarians. The odds of UGI bleeding in adults aged 40 to 79 years who currently receive SSRIs (adjusted OR, 3.0 [CI, 2.1 to 4.4]) was much higher when they also received an NSAID (adjusted OR, 15.6 [CI, 6.6 to 36.6]) (21).

Estimate of Magnitude of Net Benefit

For adults who receive care in clinical practices that have staff-assisted depression care supports in place, there is at least moderate certainty that the net benefit of screening for depression is at least moderate.

For adults who receive care in clinical practices that do not have staff-assisted depression care supports in place, there is at least moderate certainty that the net benefit of screening adults for depression is small.

Update of Previous USPSTF Recommendation

In 2002, the USPSTF recommended screening adults for depression in clinical practices that have systems in place to assure accurate diagnosis, effective treatment, and follow-up (B recommendation). The current recommendation adds some specificity by stipulating that staff-assisted depression care supports need to be in place. If such sup-

ports are not in place, the USPSTF does not recommend routine screening of adults (C recommendation).

The 2002 recommendation concluded that the evidence was insufficient to recommend for or against routine screening of children or adolescents for depression. Given the availability of new evidence about screening for depression in children and adolescents, the USPSTF has made separate recommendations for these populations (the current USPSTF recommendation on screening for depression in children and adolescents is available at www.preventiveservices.ahrq.gov).

RECOMMENDATIONS OF OTHERS

The Canadian Task Force on Preventive Health Care recommends that adults in the general population be screened for depression in primary care settings with integrated feedback to patients and access to follow-up and treatment. The Canadian Task Force found insufficient evidence to recommend for or against screening adults in the general population for depression in settings without effective follow-up and treatment (22). The American College of Obstetricians and Gynecologists recommends that clinicians be alert to symptoms of depression and provide follow-up care or a referral if depression is recognized (23).

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Disclaimer: Recommendations made by the USPSTF are independent of the U.S. government. They should not be construed as an official position of the Agency for Healthcare Research and Quality or the U.S. Department of Health and Human Services.

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Requests for Single Reprints: Reprints are available from the USPSTF Web site (www.preventiveservices.ahrq.gov).

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Figure. Screening for depression in adults: clinical summary of USPSTF recommendation.



Annals of Internal Medicine
SCREENING FOR DEPRESSION IN ADULTS
CLINICAL SUMMARY OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATION

Population	Nonpregnant adults 18 years or older	
Recommendation	Screen when staff-assisted depression care supports* are in place to assure accurate diagnosis, effective treatment, and follow-up.	Do not routinely screen when staff-assisted depression care supports* are not in place.
	Grade: B	Grade: C
Risk Assessment	Persons at increased risk for depression are considered at risk throughout their lifetime. Groups at increased risk include persons with other psychiatric disorders, including substance misuse; persons with a family history of depression; persons with chronic medical diseases; and persons who are unemployed or of lower socioeconomic status. Also, women are at increased risk compared with men. However, the presence of risk factors alone cannot distinguish depressed patients from nondepressed patients.	
Screening Tests	Simple screening questions may perform as well as more complex instruments. Any positive screening test result should trigger a full diagnostic interview using standard diagnostic criteria.	
Timing of Screening	The optimal interval for screening is unknown. In older adults, significant depressive symptoms are associated with common life events, including medical illness, cognitive decline, bereavement, and institutional placement in residential or inpatient settings.	
Balance of Harms and Benefits		Limited evidence suggests that screening for depression in the absence of staff-assisted depression care does not improve depression outcomes.
Suggestions for Practice	"Staff-assisted depression care supports" refers to clinical staff that assists the primary care clinician by providing some direct depression care and/or coordination, case management, or mental health treatment.	
Relevant USPSTF Recommendations	Related USPSTF recommendations on screening for suicidality and screening children and adolescents for depression are available at www.preventiveservices.ahrq.gov .	

For a summary of the evidence systematically reviewed in making these recommendations, the full recommendation statement, and supporting documents, please go to www.preventiveservices.ahrq.gov.

*See the Suggestions for Practice section of this figure for further explanation.

Table 1. What the USPSTF Grades Mean and Suggestions for Practice

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

Table 2. USPSTF Levels of Certainty Regarding Net Benefit

Level of Certainty*	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by such factors as: the number, size, or quality of individual studies inconsistency of findings across individual studies limited generalizability of findings to routine primary care practice lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: the limited number or size of studies important flaws in study design or methods inconsistency of findings across individual studies gaps in the chain of evidence findings that are not generalizable to routine primary care practice a lack of information on important health outcomes. More information may allow an estimation of effects on health outcomes.

* The USPSTF defines *certainty* as “likelihood that the USPSTF assessment of the net benefit of a preventive service is correct.” The net benefit is defined as benefit minus harm of the preventive service as implemented in a general primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

APPENDIX: U.S. PREVENTIVE SERVICES TASK FORCE

Members of the U.S. Preventive Services Task Force at the time this recommendation was finalized[†] are Ned Calonge, MD, MPH, *Chair* (Colorado Department of Public Health and Environment, Denver, Colorado); Diana B. Petitti, MD, MPH, *Vice-Chair* (Arizona State University, Phoenix, Arizona); Thomas G. DeWitt, MD (Children's Hospital Medical Center, Cincinnati, Ohio); Allen J. Dietrich, MD[‡] (Dartmouth Medical School, Hanover, New Hampshire); Leon Gordis, MD, DrPH (Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland); Kimberly D. Gregory, MD, MPH (Cedars-Sinai Medical Center, Los Angeles, California); Russell Harris, MD, MPH (University of North Carolina School of Medicine, Chapel Hill, North Carolina); George Isham, MD, MS (HealthPartners, Minneapolis, Minnesota); Michael L. LeFevre, MD, MSPH (Univer-

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[†] For a list of current Task Force members, go to www.ahrq.gov/clinic/uspstfab.htm.

[‡] Recused from voting.