

Screening for Depression and Suicide Risk in Adults

US Preventive Services Task Force Recommendation Statement

US Preventive Services Task Force

IMPORTANCE Major depressive disorder (MDD), a common mental disorder in the US, may have substantial impact on the lives of affected individuals. If left untreated, MDD can interfere with daily functioning and can also be associated with an increased risk of cardiovascular events, exacerbation of comorbid conditions, or increased mortality.

OBJECTIVE The US Preventive Services Task Force (USPSTF) commissioned a systematic review to evaluate benefits and harms of screening, accuracy of screening, and benefits and harms of treatment of MDD and suicide risk in asymptomatic adults that would be applicable to primary care settings.

POPULATION Asymptomatic adults 19 years or older, including pregnant and postpartum persons. Older adults are defined as those 65 years or older.

EVIDENCE ASSESSMENT The USPSTF concludes with moderate certainty that screening for MDD in adults, including pregnant and postpartum persons and older adults, has a moderate net benefit. The USPSTF concludes that the evidence is insufficient on the benefit and harms of screening for suicide risk in adults, including pregnant and postpartum persons and older adults.

RECOMMENDATION The USPSTF recommends screening for depression in the adult population, including pregnant and postpartum persons and older adults. (B recommendation) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for suicide risk in the adult population, including pregnant and postpartum persons and older adults. (I statement)

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Summary of Recommendations

Population	Recommendation	Grade
Adults, including pregnant and postpartum persons, and older adults (65 years or older)	The USPSTF recommends screening for depression in the adult population, including pregnant and postpartum persons, as well as older adults.	B
Adults, including pregnant and postpartum persons, and older adults (65 years or older)	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for suicide risk in the adult population, including pregnant and postpartum persons, as well as older adults.	I

USPSTF indicates US Preventive Services Task Force.

See the Summary of Recommendations figure.

Preamble

The US Preventive Services Task Force (USPSTF) makes recommendations about the effectiveness of specific preventive care services for patients without obvious related signs or symptoms to improve the health of people nationwide.

It bases its recommendations on the evidence of both the benefits and harms of the service and an assessment of the balance. The USPSTF does not consider the costs of providing a service in this assessment.

The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision-making to the specific patient or

situation. Similarly, the USPSTF notes that policy and coverage decisions involve considerations in addition to the evidence of clinical benefits and harms.

The USPSTF is committed to mitigating the health inequities that prevent many people from fully benefiting from preventive services. Systemic or structural racism results in policies and practices, including health care delivery, that can lead to inequities in health. The USPSTF recognizes that race, ethnicity, and gender are all social rather than biological constructs. However, they are also often important predictors of health risk. The USPSTF is committed to helping reverse the negative impacts of systemic and structural racism, gender-based discrimination, bias, and other sources of health inequities, and their effects on health, throughout its work.

Importance

Major depressive disorder (MDD), a common mental disorder in the US, can have a substantial impact on the lives of affected individuals.^{1,2} If left untreated, MDD can interfere with daily functioning and can be associated with an increased risk of cardiovascular events, exacerbation of comorbid conditions, or increased mortality.^{1,3-5} In 2019, 7.8% (19.4 million) of adults in the US experienced at least 1 major depressive episode; 5.3% (13.1 million) experienced a major depressive episode with severe impairment.^{1,6} Depression can be a chronic condition characterized by periods of remission and recurrence, often beginning in adolescence or early adulthood. However, full recovery may occur.¹ There is overwhelming evidence of racial and ethnic disparities in depression treatment and outcomes.⁷

Depression is common in postpartum and pregnant persons and affects both the parent and infant. Depression during pregnancy increases the risk of preterm birth and low birth weight or small-for-gestational age.^{8,9} Postpartum depression may interfere with parent-infant bonding.¹⁰ Data from the Pregnancy Risk Assessment Monitoring System has shown a recent increase in self-reported depression during pregnancy, from 11.6% in 2016 to 14.8% in 2019.¹¹

Suicide is the 10th leading cause of death in US adults (45 390 deaths [2019 data]).¹² From 2001 to 2017, there was a 31% increase in suicide deaths.¹³ Over the last decade, there has been an increase; however, in recent years, suicide rates have declined.¹⁴ In 2020, provisional suicide deaths numbered 45 855, which was 3% less than in 2019 (47 511 deaths).^{15,16} However, rates did not decline among Black and Hispanic/Latino persons.¹⁷ Rates of suicide attempts and deaths vary by sex, age, and race and ethnicity.¹ Psychiatric disorders and previous suicide attempts increase the risk of suicide.¹

USPSTF Assessment of Magnitude of Net Benefit

The USPSTF concludes with moderate certainty that screening for MDD in adults, including pregnant and postpartum persons, as well as older adults, has a **moderate net benefit**.

The USPSTF concludes that the **evidence is insufficient** on the benefit and harms of screening for suicide risk in adults, including pregnant and postpartum persons, as well as older adults. As a result, the balance of benefits and harms cannot be determined.

Pathway to Benefit

To achieve the benefit of depression screening and reduce disparities in depression-associated morbidity, it is important that persons who screen positive are evaluated further for diagnosis and, if appropriate, are provided or referred for evidence-based care.

See Table 1 and Table 2 for more information on the USPSTF recommendation rationale and assessment and the eFigure in Supplement for information on the recommendation grade. See the Figure for a summary of the recommendations for clinicians. For more details on the methods the USPSTF uses to determine the net benefit, see the USPSTF Procedure Manual.¹⁸

Practice Considerations

Patient Population Under Consideration

This recommendation applies to adults 19 years or older who do not have a diagnosed mental health disorder or recognizable signs or symptoms of depression or suicide risk. Older adults are defined as those 65 years or older. This recommendation focuses on screening for MDD and does not address screening for other depressive disorders, such as minor depression or dysthymia.

Condition Definitions

The *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) defines MDD as having at least 2 weeks of mild to severe persistent feelings of sadness or a lack of interest in everyday activities. Depression can also present with irritability, poor concentration, and somatic complaints (eg, difficulty sleeping, decreased energy, and changes in appetite).¹⁹

Perinatal depression is defined as depressive episodes that occur during pregnancy and the postpartum period (the first 12 months following delivery).²⁰ In addition to common symptoms of depressive disorders (eg, feeling sad or loss of interest in activities), other symptoms during the perinatal period may include difficulty bonding with the infant, persistent doubt in parenting abilities, and parental thoughts of death, suicide, self-harm, or harm to the infant.²¹

Suicidal behavior includes suicidal ideation, suicide attempts, and suicide completion. Suicidal ideation refers to thinking about, considering, or planning suicide. Suicide attempts refer to nonfatal, self-directed, and potentially injurious behavior that is intended to result in death. Suicide completion is defined as a death caused by self-inflicted injurious behavior with the intent to cause death.²²

Assessment of Risk

The USPSTF recommends screening for depression in all adults regardless of risk factors. Risk factors for depression include a combination of genetic, biological, and environmental factors,^{1,23} such as a family history of depression, prior episode of depression or other mental health condition, a history of trauma or adverse life events, or a history of disease or illness (eg, cardiovascular disease).²⁴⁻³⁰

Prevalence rates vary by sex, age, race, ethnicity, education, marital status, geographic location, poverty level, and employment status.^{1,23} Women have twice the risk of depression compared with

Table 1. Summary of USPSTF Rationale: Screening for Depression

Rationale	Adults	Pregnant and postpartum persons	Older adults
Detection	Convincing evidence that screening instruments for depression can accurately identify depression.	Convincing evidence that screening instruments for depression can accurately identify depression.	Adequate evidence that screening instruments for depression can accurately identify depression.
Benefits of early detection and intervention	<ul style="list-style-type: none"> Adequate evidence that depression screening programs in primary care or comparable settings result in improved health outcomes associated with a magnitude of moderate benefit. Convincing evidence that treatment (ie, psychotherapy or pharmacotherapy) of depression results in improved health outcomes associated with a magnitude of moderate benefit. 	<ul style="list-style-type: none"> Adequate evidence that depression screening programs in primary care or comparable settings result in improved health outcomes associated with a magnitude of moderate benefit. Adequate evidence that psychotherapy treatment of depression results in improved health outcomes associated with a magnitude of moderate benefit. Inadequate evidence on pharmacotherapy in pregnant and postpartum persons. 	<ul style="list-style-type: none"> Adequate evidence that depression screening programs in primary care or comparable settings result in improved health outcomes associated with a magnitude of moderate benefit. Convincing evidence that psychotherapy treatment of depression results in improved health outcomes associated with a magnitude of moderate benefit. Adequate evidence that pharmacotherapy treatment of depression results in improved health outcomes associated with a magnitude of moderate benefit.
Harms of early detection and intervention	<ul style="list-style-type: none"> Inadequate direct evidence of screening harms. Adequate evidence to bound the magnitude of harms from psychotherapy as no greater than small, based on the likely minimal harms of using screening tools, limited evidence of treatment harms, and the noninvasive nature of psychotherapy interventions. (When direct evidence is limited, absent, or restricted to select populations or clinical scenarios, the USPSTF may place conceptual upper or lower bounds on the magnitude of benefit or harms.) Adequate evidence that harms of pharmacotherapy are likely no greater than moderate. 	<ul style="list-style-type: none"> Inadequate direct evidence of screening harms. Adequate evidence to bound the magnitude of harms from psychotherapy as no greater than small, based on the likely minimal harms of using screening tools, limited evidence of treatment harms, and the noninvasive nature of psychotherapy interventions. (When direct evidence is limited, absent, or restricted to select populations or clinical scenarios, the USPSTF may place conceptual upper or lower bounds on the magnitude of benefit or harms.) Inadequate evidence on harms of pharmacotherapy in pregnant and postpartum persons. 	<ul style="list-style-type: none"> Inadequate direct evidence of screening harms. Adequate evidence to bound the magnitude of harms from psychotherapy as no greater than small, based on the likely minimal harms of using screening tools, limited evidence of treatment harms, and the noninvasive nature of psychotherapy interventions. (When direct evidence is limited, absent, or restricted to select populations or clinical scenarios, the USPSTF may place conceptual upper or lower bounds on the magnitude of benefit or harms.) Adequate evidence that harms of pharmacotherapy are likely no greater than moderate.
USPSTF assessment	Moderate certainty that screening for depression has a moderate net benefit.	Moderate certainty that screening for depression has a moderate net benefit.	Moderate certainty that screening for depression has a moderate net benefit.

Abbreviation: USPSTF, US Preventive Services Task Force.

Table 2. Summary of USPSTF Rationale: Screening for Suicide Risk

Rationale	Adults, pregnant and postpartum persons, and older adults
Detection	Inadequate evidence about the accuracy of screening tools for suicide risk in the adult population, including pregnant and postpartum persons and older adults. Minimal evidence was found on the test performance of suicide risk screening tools. No instrument was addressed in more than 1 study.
Benefits of early detection and intervention	<ul style="list-style-type: none"> Inadequate evidence on the benefits of screening for suicide risk on health outcomes in screened vs unscreened persons; evidence is available only from a single study. Inadequate evidence on the effectiveness of treatment (ie, psychotherapy or pharmacotherapy) of suicide risk in improving health outcomes in the adult population (including pregnant and postpartum persons and older adults). Studies reported few health outcome events (suicide deaths), making determination of benefits uncertain.
Harms of early detection and intervention	<ul style="list-style-type: none"> Inadequate evidence to assess the potential harms of screening for suicide risk in the adult population (including pregnant and postpartum persons and older adults). Inadequate evidence to assess the potential harms of psychotherapy and pharmacotherapy for treatment of suicide risk in the adult population, including pregnant and postpartum persons and older adults.
USPSTF assessment	The evidence on the benefits and harms of screening for suicide risk in the adult population, including pregnant and postpartum persons and older adults, in primary care is insufficient, and the balance of benefits and harms cannot be determined.

Abbreviation: USPSTF, US Preventive Services Task Force.

men.^{31,32} Young adults, multiracial individuals, and Native American/Alaska Native individuals have higher rates of depression.³³

Risk factors for perinatal depression include life stress, low social support, history of depression, marital or partner dissatisfaction, and a history of abuse.³⁴

Screening Tests

Many brief tools have been developed that screen for depression and are appropriate for use in primary care. All positive screening results should lead to additional assessments to confirm the diagnosis, determine symptom severity, and identify comorbid psychological problems.

Commonly used depression screening instruments include the Patient Health Questionnaire (PHQ) in various forms in adults, the Center for Epidemiologic Studies Depression Scale (CES-D), the Geriatric Depression Scale (GDS) in older adults, and the Edinburgh Postnatal Depression Scale (EPDS) in postpartum and pregnant persons.¹

Screening instruments for suicide risk include the Beck Hopelessness Scale, the SAD PERSONS Scale (Sex, Age, Depression, Previous attempt, Ethanol abuse, Rational thinking loss, Social supports lacking, Organized plan, No spouse, Sickness), and the SAFE-T (Suicide Assessment Five-step Evaluation and Triage).¹ Some depression screening instruments, such as the PHQ-9, incorporate questions that ask about suicidal ideation.¹

Figure. Clinician Summary: Screening for Depression and Suicide Risk in Adults

What does the USPSTF recommend?	<p>Adults, including pregnant and postpartum persons, and older adults (65 years or older): Screen for major depressive disorder (MDD). Grade: B</p> <p>Adults, including pregnant and postpartum persons, and older adults (65 years or older): The evidence is insufficient to assess the balance of benefits and harms of screening for suicide risk. Grade: I statement</p>
To whom does this recommendation apply?	This recommendation applies to adults (19 years or older), pregnant and postpartum persons, and older adults (65 years or older) who do not have a diagnosed mental health disorder and are not showing recognized signs or symptoms of depression or suicide risk.
What's new?	This recommendation is consistent with the 2014 USPSTF recommendation statement on screening for suicide risk in adults and older adults and the 2016 recommendation statement on screening for MDD in adults.
How to implement this recommendation?	<ul style="list-style-type: none"> • Treatment for MDD in adults includes psychotherapy or pharmacotherapy. Collaborative care is a multicomponent, health care system-level intervention that uses care managers to link primary care clinicians, patients, and mental health specialists to ensure patients receive the best care. Clinicians should be aware of the risk factors, signs, and symptoms of depression and suicide; listen to any patient concerns; and make sure that persons who need help get it. • To achieve the benefit of depression screening and reduce disparities in depression-associated morbidity, it is important that persons who screen positive are evaluated further for diagnosis and, if appropriate, are provided or referred for evidence-based care. • Clinicians are encouraged to consider the unique balance of benefits and harms in the perinatal period when deciding the best treatment for depression for a pregnant or breastfeeding person. • The USPSTF found no evidence on the optimal frequency of screening for depression. In the absence of evidence, a pragmatic approach might include screening adults who have not been screened previously and using clinical judgment while considering risk factors, comorbid conditions, and life events to determine if additional screening of patients at increased risk is warranted. Ongoing assessment of risks that may develop during pregnancy and the postpartum period is also a reasonable approach.
What additional information should clinicians know about this recommendation?	<ul style="list-style-type: none"> • The USPSTF recommends screening for depression in all adults regardless of risk factors. However, there are some factors that increase risk. These include family history of depression, prior episodes of depression or other mental health conditions, a history of trauma or adverse life events, or a history of disease or illness. • Risk factors for perinatal depression include life stress, low social support, history of depression, marital or partner dissatisfaction, and a history of abuse. • Women, young adults, multiracial individuals, and Native American/Alaska Native individuals have higher rates of depression. • Anxiety and depressive disorders often overlap. • In the absence of evidence, health care professionals should use their judgment, based on individual patient circumstances, when determining whether to screen for suicide risk in adults not showing signs or symptoms.
Why is this recommendation and topic important?	MDD is a common disorder in the US that can have a substantial impact on an individual's life. Depression is common in postpartum and pregnant persons and affects both the birthing parent and infant. Suicide is the 10th-leading cause of death in US adults.
What are other relevant USPSTF recommendations?	<ul style="list-style-type: none"> • Screening for anxiety disorders in adults • Preventive counseling interventions for perinatal depression • Information on additional mental health recommendations for adults from the USPSTF are available at https://www.uspreventiveservicestaskforce.org/
What are additional tools and resources?	<ul style="list-style-type: none"> • The Community Preventive Services Task Force recommends: <ul style="list-style-type: none"> ◦ Home-based depression care and depression care management in primary care clinics for older adults (https://www.thecommunityguide.org/findings/mental-health-and-mental-illness-interventions-reduce-depression-among-older-adults-clinic.html) ◦ Collaborative care for the management of depressive disorders (https://www.thecommunityguide.org/findings/mental-health-and-mental-illness-collaborative-care-management-depressive-disorders) ◦ Mental health benefits legislation to increase appropriate utilization of mental health services for persons with mental health conditions (https://www.thecommunityguide.org/findings/mental-health-and-mental-illness-mental-health-benefits-legislation.html) • The Substance Abuse and Mental Health Services Administration maintains a national registry of evidence-based programs and practices for substance abuse and mental health interventions (https://www.samhsa.gov/resource-search/ebp) • Perinatal Psychiatry Access Programs aim to increase access to perinatal mental health care (https://www.umassmed.edu/lifeline4moms/Access-Programs/) • The Suicide Prevention Resource Center, supported by the Substance Abuse and Mental Health Services Administration, offers various resources on suicide prevention (https://www.sprc.org/)
Where to read the full recommendation statement?	Visit the USPSTF website (https://www.uspreventiveservicestaskforce.org/) or the JAMA website (https://jamanetwork.com/collections/44068/united-states-preventive-services-task-force) to read the full recommendation statement. This includes more details on the rationale of the recommendation, including benefits and harms; supporting evidence; and recommendations of others.

The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision-making to the specific patient or situation.

USPSTF indicates US Preventive Services Task Force.

Screening Intervals

There is little evidence regarding the optimal timing for screening for depression; more evidence is needed in both perinatal and general adult populations. In the absence of evidence, a pragmatic approach might include screening adults who have not been screened previously and using clinical judgment while considering risk factors, comorbid conditions, and life events to determine if additional screening of patients at increased risk is warranted. Ongoing assessment of risks that may develop during pregnancy and the postpartum period is also a reasonable approach.

Treatment or Interventions

Effective treatment of depression in adults generally includes antidepressant medication or psychotherapy (eg, cognitive behavioral therapy or brief psychosocial counseling), alone or in combination.¹ Clinicians are encouraged to consider the unique balance of benefits and harms in the perinatal period when deciding the best treatment for depression for a pregnant or breastfeeding person.

Implementation

Adequate systems and clinical staff are needed to ensure that patients are screened and, if they screen positive, are appropriately diagnosed and treated with evidence-based care or referred to a setting that can provide the necessary care. Inadequate support and follow-up may result in treatment failures or harm, including those indicated by the US Food and Drug Administration boxed warning for selective serotonin reuptake inhibitors (SSRIs).¹ These essential functions can be provided through a wide range of different arrangements of clinician types and settings, including primary care clinicians, mental health specialists, or both working collaboratively, such as within a collaborative care model.^{1,35} Collaborative care is a multicomponent, health care system-level intervention that uses care managers to link primary care clinicians, patients, and mental health specialists.^{1,35} Additional components of support include training and materials to improve clinicians' knowledge and skills surrounding diagnosis and treatment of depression, facilitation or improvement of the referral process, and patient-specific treatment materials.^{1,35}

Potential barriers to screening include clinician knowledge and comfort level with screening, inadequate systems to support screening or to manage positive screening results, and impact on care flow, given the time constraints faced by primary care clinicians. Clinicians should be cognizant of stigma issues associated with mental health diagnoses and should aim to develop trusting relationships with patients, free of implicit bias, by being sensitive to cultural issues.¹

Clinicians should also be cognizant of the barriers that keep individuals with depression, particularly those identified through screening, from receiving adequate treatment. It is estimated that only 50% of patients with major depression are identified.³⁶ Only 35% of adults in the US with a depressive disorder receive care within the first year of condition onset.³⁷ Systemic barriers also exist, including lack of connection between mental health and primary care, patient hesitation to initiate treatment, and nonadherence to medication and therapy.^{38,39}

Racism and structural policies have contributed to wealth inequities in the US,⁴⁰ which can affect mental health services in underserved communities.¹ For example, wealth inequities may result in barriers to receiving mental health services, such as treatment costs and lack of insurance, which tend to have a greater impact on

Black persons and other racial and ethnic groups than on White persons.⁴¹ Black and Hispanic/Latino primary care patients are less likely to be diagnosed with depression or anxiety compared with White patients.^{37,42-44} Black and Hispanic/Latino patients are also less likely to receive mental health services than Asian American or White patients.^{45,46}

Suggestions for Practice Regarding the I Statement

Potential Preventable Burden

Suicide is the second-leading cause of death in individuals aged 10 to 34 years.² Eighty-three percent of individuals who die by suicide were seen in primary care in the previous year; 24% had any mental health diagnosis in their medical records in the month prior to death.⁴⁷

Factors resulting in increased risk for suicide attempts include severe psychological distress, major depressive episodes, alcohol use disorder, marital status of being divorced or separated, or being unemployed. Important risk factors for suicide deaths include previous suicide attempts (strongest predictor of future suicide death), mental health disorders and substance abuse, family history of suicide or mental health disorders, life stressors, family violence or abuse, incarceration or legal problems, certain medical conditions, chronic pain, or being a military veteran.¹

Suicide risk varies by age, sex, and race and ethnicity.¹ Men are more than 3 times more likely to die by suicide than women.⁴⁸ The highest suicide rates for women occur between the ages of 45 and 54 years, while for men the highest rates occur after age 65 years.⁴⁸ In the US, the highest suicide rates occur among White adults, followed by Native American/Alaska Native adults. Between 2014 and 2019, suicide rates increased in Asian or Native Hawaiian/Pacific Islander individuals by 16% and in Black individuals by 30%.⁴⁹

Potential Harms

Although evidence on harms of screening for suicide risk is limited, potential harms of screening include false-positive screening results that may lead to unnecessary referrals and treatment (and associated time and economic burden), labeling, anxiety, and stigma. Studies of suicide prevention interventions generally demonstrate that they are no more effective than usual care¹; however, 1 large pragmatic trial demonstrated an increased risk of self-harm with a dialectical behavioral therapy skills-building intervention.⁵⁰

Current Practice

Evidence is limited on the implementation of routine mental health screening in primary care settings in the US. No information on screening rates for depression and suicide risk in the US was identified. Suicide screening likely occurs as part of depression screening within settings that screen for suicide risk.

Screening instruments for suicide risk usually include components related to current suicidal ideation, self-harm behaviors, and assessments of past attempts and behaviors. It is unknown how often primary care clinicians detect elevated suicide risk in adults. Thirty-six percent of US primary care clinicians discussed suicide in encounters with patients showing symptoms of major depression or adjustment disorders or seeking antidepressants.⁵¹

Additional Tools and Resources

The Community Preventive Services Task Force (CPSTF) has several recommendations related to mental health conditions in adults.

The CPSTF recommends collaborative care for managing depressive disorders. It recommends both home-based depression care and depression care management in primary care clinics for older adults. The CPSTF also recommends mental health benefits legislation in increasing appropriate utilization of mental health services for persons with mental health conditions. More information about the CPSTF and its recommendations on depression interventions is available on its website (<https://www.thecommunityguide.org>).

The Substance Abuse and Mental Health Services Administration maintains a national registry of evidence-based programs and practices for substance abuse and mental health interventions (<https://www.samhsa.gov/resource-search/ebp>) that may be helpful for clinicians looking for models of how to implement depression screening. The Suicide Prevention Resource Center, supported by the Substance Abuse and Mental Health Services Administration, offers various resources on suicide prevention (<https://sprc.org/>).

In 2021, the US Surgeon General released a Call to Action that seeks progress toward full implementation of the National Strategy for Suicide Prevention (<https://www.hhs.gov/surgeongeneral/reports-and-publications/suicide-prevention/index.html>).

Perinatal Psychiatry Access Programs are population-based programs that aim to increase access to perinatal mental health care (<https://www.umassmed.edu/lifeline4moms/Access-Programs/>). These programs build the capacity of medical professionals to address perinatal mental health and substance use disorders.

Other Related USPSTF Recommendations

The USPSTF has recommendations on other mental health topics pertaining to adults, including screening for anxiety,⁵² preventive counseling interventions for perinatal depression,⁵³ screening for unhealthy drug use,⁵⁴ and screening and behavioral counseling interventions for alcohol use.⁵⁵

Update of Previous USPSTF Recommendations

This recommendation will replace the 2014 USPSTF recommendation statement on screening for suicide risk in adults⁵⁶ and the 2016 recommendation statement on screening for MDD in adults.⁵⁷ Previously, the USPSTF concluded that there was insufficient evidence to assess the balance of benefits and harms of screening for suicide risk in adults and older adults in primary care (I statement). The USPSTF recommended screening for MDD in in the general adult population, including pregnant and postpartum persons, noting that screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up (B recommendation). The current recommendation statement is consistent with these previous recommendations.

Supporting Evidence

Scope of Review

The USPSTF commissioned a systematic review^{1,58} to evaluate the benefits and harms of screening, accuracy of screening, and benefits and harms of treatment of MDD and suicide risk in asymptomatic adults that would be applicable to primary care settings.

Accuracy of Screening Tests

The USPSTF examined evidence on the most widely used or recommended screening tools for depression: PHQ, any version; CES-D; EPDS for perinatal persons; and GDS for older adults.^{1,58}

The USPSTF found 14 primary studies ($n = 8819$) and 10 existing systematic reviews ($n \approx 75\,000$) on accuracy of screening tests for detecting depression.^{1,58} The existing systematic reviews assessed different versions of the PHQ, 2- and 3-item Whooley screening questions, CES-D, and EPDS.^{1,58} One study conducted a series of individual patient data meta-analyses to compare several versions of the PHQ with structured or semistructured interviews. In the individual patient data meta-analyses, the PHQ-9 identified 85% of participants with major depression and 85% of those without major depression, at the standard cutoff of 10 or greater, when compared with a semistructured interview reference standard (sensitivity, 0.85 [95% CI, 0.79-0.89]; specificity, 0.85 [95% CI, 0.82-0.87]; 47 studies [$n = 11\,234$]).^{1,58}

At the standard cutoff of 2 or greater and when compared with a semistructured interview, the PHQ-2 was more sensitive than the PHQ-9, identifying 91% of participants with major depression (sensitivity, 0.91 [95% CI, 0.88-0.94]; 48 studies [$n = 11\,703$]). However, specificity at that cutoff was lower, identifying 67% of participants without depression (specificity, 0.67 [95% CI, 0.64-0.71]; 48 studies [$n = 11\,703$]). The Whooley screening questions and the CES-D demonstrated accuracy comparable with the PHQ-2.^{1,58} The accuracy of the EPDS was also similar to that of the PHQ-2, with sensitivity ranging from 81% to 90% and specificity ranging from 83% to 88% at cutoffs of 11 and 12, compared with a fully structured diagnostic interview.^{1,58}

The 14 primary studies covered multiple versions of the GDS; the GDS-15 was the most common version. In the studies, participants were 55 years or older (mean age, 69-85 years). Fifty percent to 70% of participants were women. Race or ethnicity was reported in only 4 studies. In these 4 studies, patients were primarily White, although 1 study from the UK included only Afro-Caribbean participants.^{1,58} The standard cutoff of 5 or greater had an acceptable balance of sensitivity and specificity. In a pooled analysis, the GDS-15 accurately identified participants with major depression (sensitivity, 0.94 [95% CI, 0.85-0.98]; $I^2 = 85.7\%$; specificity, 0.81 [95% CI, 0.70-0.89]; $I^2 = 99.2\%$), with a cutoff score of 5.^{1,58}

Three studies ($n = 1801$) assessed screening instruments for suicidal ideation.^{1,58-61} Two studies evaluated general adult populations and 1 study evaluated older adults. The study with the most events was limited to older adults.^{1,58} Individual screening tests (GDS-15, GDS-SI [GDS-Suicide Ideation], and SDDS-PC [Symptom Driven Diagnostic System for Primary Care]) were not examined in more than 1 study. Most screening instruments reported sensitivity and specificity above 0.80 for at least 1 reported cutoff score.^{1,58}

None of the studies on the accuracy of screening tests defined optimal screening timing or intervals for either general adult or perinatal populations.

Benefits of Early Detection and Treatment

Seventeen screening trials ($n = 18\,437$ participants) directly addressed the benefits of screening for depression on health outcomes. Four trials included unscreened control groups. The remaining trials screened all participants but provided the screening results only to the intervention groups' clinicians.¹ Trial participants

included adults of all ages and perinatal populations; 6 studies included general adult populations, 4 studies were limited to older adults, 6 studies were limited to postpartum patients (between 2 and 12 weeks postpartum), and 1 study was limited to pregnant patients.^{1,58}

Nine of the studies were conducted in the US. The remaining studies were conducted in the UK, Hong Kong, and Northern European countries.^{1,58} All studies took place in primary care, general practice, obstetrics-gynecology, or other maternal or child wellness settings.^{1,58} The mean age of trial participants was 38.2 years. Across all studies, 93% of all participants were women. Women also comprised a majority of participants in studies focused on general adult populations (73% women) and older adults (66% women). Among studies conducted in the US, the proportion of Black participants ranged from 7.1% to 51.2% (6 studies); of Hispanic/Latino study participants, from 4.5% to 59.3% (4 studies); and of White study participants, from 29% to 94.1% (6 studies). Only 1 study reported the percentage of participants of Asian descent, and none reported the percentage who were Native American/Alaska Native.^{1,58} Depression outcomes included the proportion of participants meeting criteria for depression or who were above a prespecified depression symptom score ("prevalence"), the proportion who no longer met criteria for depression or were below a prespecified symptom score ("remission"), the proportion whose depression symptoms were reduced by a specified amount ("response"), and mean symptom scores.

The direct evidence from the 17 screening trials demonstrated increased rates of depression remission or scoring below a specified symptom severity threshold after 6 to 12 months in general adult and perinatal populations.^{1,58} Screening interventions, most of which also included other care management components, were associated with a lower prevalence of depression or clinically important depressive symptomatology at 6 months postbaseline or postpartum (or the closest follow-up to 6 months) (odds ratio [OR], 0.60 [95% CI, 0.50-0.73]; 8 randomized clinical trials [RCTs] [n = 10 244]; $I^2 = 0\%$). Among participants scoring above a predefined symptom level at baseline, screening interventions were associated with a greater likelihood of remission or scoring below a specified level of depression symptomatology (OR, 1.58 [95% CI, 1.23-2.02]; 8 RCTs [n = 2302]; $I^2 = 0\%$) after 6 months (or the closest follow-up to 6 months). However, no benefit in symptom severity measures was found (pooled mean difference in change, -1.0 [95% CI, -2.3 to 0.3]; 9 studies [n = 5543]; $I^2 = 74.4\%$).^{1,58}

The evidence in older adult populations demonstrated smaller effects. Four trials examined screening only in older adults and only 1 trial used a depression measure that was specifically designed for older adults. Trials among general adult populations included older adults; however, none of the trials reported subgroup effects by age.^{1,58} There was also a lack of evidence on the optimal time to screen or screening intervals.

Forty existing systematic reviews evaluated treatment for depression; 30 (≈346 RCTs [n ≈ 45 078]) addressed psychological treatment and 10 addressed pharmacologic treatment (≈522 studies [n ≈ 116 477]). One existing systematic review reported both psychological and pharmacotherapy treatment.^{1,58} Psychotherapy treatment improved depression and other health outcomes such as anxiety symptoms, hopelessness, quality of life, and functioning in primary care patients, perinatal populations, and older adults. The broadest analysis (any type of psychotherapy compared with any

kind of control condition, measuring the depression outcome immediately after treatment [typically 2-6 months postbaseline]) demonstrated a moderate to large effect on depression (standardized mean difference [SMD], -0.72 [95% CI, -0.78 to -0.67]; 385 studies [N not reported but estimated at ≈33 000]). The effect was smaller but still statistically significant when limited to studies in primary care patients (SMD, -0.42 [95% CI, -0.56 to -0.29]; 59 studies [N not reported]).^{1,58} Remission and response to treatment were rarely reported. There were limited data for populations according to racial or ethnic group or whether participants were socially or economically disadvantaged. The limited evidence available suggested benefits of psychological treatment in these populations.^{1,58}

Pooled analyses of antidepressant medications demonstrated increased rates of remission and response to treatment and small but statistically significant reductions in depressive symptom severity in the short term (typically 8 weeks).^{1,58} Fluoxetine (117 studies) was associated with a small reduction in symptom severity (SMD, -0.23 [95% CI, -0.28 to -0.19]), an increase in the odds of remission (OR, 1.46 [95% CI, 1.34-1.60]), and an increase in the odds of treatment response (OR, 1.52 [95% CI, 1.40-1.66]).^{1,58} Limited evidence was available on the longer-term impact of antidepressants and on the benefits of pharmacologic treatment in older adults and pregnant persons.^{1,58}

Only 1 short-term RCT (n = 443) examined screening for suicide risk, which was limited to primary care patients who had screened positive for depression.^{1,58} This trial reported no statistically significant group differences in suicidal ideation at 2 weeks' follow-up, with 1 suicide attempt among all study participants.^{1,58}

Twenty-three RCTs (n = 22 632) of suicide prevention among persons at increased risk of suicide were included.^{1,58} One trial evaluated lithium; the remaining trials studied behavioral interventions. The effectiveness of psychological interventions for suicide prevention on suicide deaths and suicide attempts could not be determined due to the small number of events. One suicide death was reported. Most studies reported 5 or fewer suicide attempts per study group, and the pooled effect was not statistically significant (OR, 0.94 [95% CI, 0.73-1.22]; 12 RCTs [n = 14 573]; $I^2 = 11.2\%$).^{1,58} Pooled analyses did not demonstrate improvement over usual care for suicidal ideation, self-harm, or depression symptom severity.^{1,58}

Harms of Screening and Treatment

One depression screening RCT (n = 462) evaluated harms. This trial was among postpartum patients, and no adverse events were reported in the intervention and placebo groups. Across all other depression screening studies that evaluated the benefits of screening, there was no pattern of effects indicating that screening might paradoxically worsen any outcomes the interventions were intending to benefit.^{1,58}

Four existing systematic reviews (≈63 RCTs [n ≈ 8466]) addressed the harms of psychotherapy in the general adult and perinatal populations. Psychological interventions with any psychological treatment, self-guided internet-based cognitive behavioral therapy, or guided internet-based interventions did not increase the risk of harm, measured as a worsening of depressive symptoms.^{1,58} In 3 existing systematic reviews, the deterioration rates were lower with psychological interventions or did not differ statistically from the control group. In an existing systematic review of older adults, 14 included trials did not report safety data.^{1,58}

Twenty-two existing systematic reviews (≈ 522 RCTs and 175 observational studies [$n > 9$ million]) and 1 cohort study ($n = 358\,351$) addressed the harms of pharmacotherapy in adults of all ages and perinatal persons.^{1,58} Two existing systematic reviews assessed perinatal patients, 4 evaluated older adults, and the remaining reviews included adults of any age.^{1,58} Pharmacologic agents evaluated included SSRIs and other second-generation antidepressants. Harm outcomes included any adverse events, dropout due to adverse events, serious adverse events, suicide deaths, suicide attempts, and suicidal ideation.^{1,58}

Pharmacologic treatment was associated with a higher risk of dropout due to adverse events. There was also an increased risk of serious adverse events with SSRI use compared with placebo (OR, 1.39 [95% CI 1.12-1.72]; 44 RCTs [n not reported]; $I^2 = 0\%$). The absolute risk of serious adverse events was low, and evidence for specific serious adverse events was limited. There were too few suicide deaths to examine the association between antidepressant use and suicide death. However, RCT and observational evidence demonstrated a small absolute increase in risk of suicide attempts with second-generation antidepressant use among adults up to age 65 years (OR, 1.53 [95% CI, 1.09-2.15] [$n = 41\,861$]; 0.7% of antidepressant users vs 0.3% of placebo users). Evidence of other harmful outcomes (eg, cardiovascular-related, bleeding, mortality, risk of falls, fractures, or dementia) was limited and mostly included observational evidence. Evidence was also almost entirely limited to observational studies for serious harms of pharmacotherapy in pregnant or postpartum persons (eg, preeclampsia, gestational diabetes, postpartum hemorrhage, and spontaneous abortion).^{1,58}

A short-term study (2 weeks' follow-up) among primary care patients ($n = 443$) who screened positive for depression assessed the harms of suicide risk screening.⁶² Although absolute scores were higher on 2 of the 3 suicidal ideation measures, compared with no screening, the findings were not statistically significant.^{1,58}

Two RCTs of suicide prevention treatment reported on harms. There were no differences between groups at follow-up on an instrument developed to evaluate the perceived level of coercion experienced by service users during hospital admission.^{63,64} A lithium trial found a higher rate of nonserious adverse events (75.7% with lithium, 69% with placebo; P value not reported) and of serious adverse events (38.8% with lithium, 34.1% with placebo; P value not reported).⁶⁴ However, there was no difference in withdrawals due to adverse events (1.2% with lithium, 1.5% with placebo; P value not reported). Treatment trials did not show results indicating paradoxical harms.

One large trial ($n = 18\,882$) assessed 2 suicide prevention interventions among adults with an elevated risk of suicide based on the PHQ-9 (question 9).⁶⁵ A care management intervention, compared with usual care, had no impact on the rate of suicide attempts (hazard ratio, 1.07 [97.5% CI, 0.84 to 1.37]; $P = .52$). A low-intensity online skills training intervention was associated with an increased risk of suicide attempts (hazard ratio, 1.29 [97.5% CI, 1.02 to 1.64]; $P = .02$).^{1,50,58}

Response to Public Comment

A draft version of this recommendation statement was posted for public comment on the USPSTF website from September 20, 2022, to October 17, 2022. In response to comments, the USPSTF added text in the Practice Considerations section to address barriers

to screening such as lack of clinician training, time constraints, and lack of systems to ensure adequate follow-up. The USPSTF added language about treatment harms of suicide interventions to the Suggestions for Practice Regarding the I Statement and Supporting Evidence sections. The USPSTF incorporated additional language regarding screening intervals into the Practice Considerations section and highlighted it as an evidence gap. The USPSTF addressed the use of pharmacotherapy in pregnant and postpartum persons in the Practice Considerations section and added a resource to help clinicians in the Additional Tools and Resources section.

Research Needs and Gaps

More evidence on whether and how screening for suicide risk can improve health outcomes is needed. There are several critical evidence gaps; more research is needed on the following.

- Epidemiology and natural history of suicide risk. Persons who attempt suicide and survive and those who die by suicide are overlapping populations. More research is needed to understand these groups and to determine how primary care can improve health outcomes in these groups.
- Foundational research is needed in primary care populations and pregnant and postpartum persons, including determining which tools should be used and how screening for suicide risk should be implemented.
- Accuracy of single-item suicide screeners within depression screening instruments among patients who have screened positive for depression.
- Whether more individuals with screen-detected suicidal ideation could be helped before they act.
- Treatment studies in populations with screen-detected suicide risk in all age groups.
- Potential harms of suicide risk interventions.
- Benefits and potential harms of targeted vs general screening for suicide risk.
- Targeting persons at high risk for suicide, such as Hispanic/Latino and Native American/Alaska Native persons or persons with depression, may help determine whether tailored therapies are more effective in these populations.

Although the evidence is clear that providing depression screening in adults and pregnant and postpartum patients is beneficial, more research is needed to ensure that all patients receive depression screening equitably. Studies are needed that provide more information on the following.

- The effect of depression screening and the most accurate screening tools among Asian American, Black, Hispanic/Latino, and Native American/Alaska Native communities and other underrepresented groups (eg, populations defined by sex, race and ethnicity, sexual orientation, and gender identity).
- Barriers to establishing adequate systems of care and how these barriers can be addressed; there are also limitations to understanding the direct effect of screening relative to other depression management supports.
- Rigorous examination of implementation programs is needed that reports the percentage of patients being screened, referred, and treated for depression, as well as patient health outcomes.

Recommendations of Others

The American College of Physicians recommends depression screening in all adults. It defines adults who are postpartum, have a personal or family history of depression, or have comorbid medical illnesses as being at increased risk.⁶⁶ The American College of Preventive Medicine recommends universal screening for depression for all adults.⁶⁷ The Institute for Clinical Systems Improvement recommends universal screening for suspected depression based on patient presentation, risk factors, and special

populations (eg, pregnant and postpartum persons and individuals with cognitive impairment).⁶⁸ The American College of Obstetricians and Gynecologists recommends screening patients at least once during the perinatal period for depression and anxiety symptoms using a standardized, validated tool.²⁰ It also recommends that clinicians complete a full assessment of mood and emotional well-being (including screening for postpartum depression and anxiety with a validated instrument) during the comprehensive postpartum visit for each patient.²⁰ The US Department of Veterans Affairs recommends universal screening for suicide risk in veterans.⁶⁹

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