JAMA | US Preventive Services Task Force | RECOMMENDATION STATEMENT

Screening for Chlamydia and Gonorrhea
US Preventive Services Task Force Recommendation Statement

US Preventive Services Task Force

IMPORTANCE Chlamydia and gonorrhea are among the most common sexually transmitted infections in the US. Infection rates are highest among adolescents and young adults of both sexes. Chlamydial and gonococcal infections in women are usually asymptomatic and may lead to pelvic inflammatory disease and its associated complications. Newborns of pregnant persons with untreated infection may develop neonatal chlamydial pneumonia or gonococcal or chlamydial ophthalmia. Infection in men may lead to urethritis and epididymitis. Both types of infection can increase risk of acquiring or transmitting HIV.

OBJECTIVE To update its 2014 recommendation, the US Preventive Services Task Force (USPSTF) commissioned a systematic review to evaluate the benefits and harms of screening for chlamydia and gonorrhea in sexually active adolescents and adults, including pregnant persons.

POPULATION Asymptomatic, sexually active adolescents and adults, including pregnant persons.

EVIDENCE ASSESSMENT The USPSTF concludes with moderate certainty that screening for chlamydia in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection has moderate net benefit. The USPSTF concludes with moderate certainty that screening for gonorrhea in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection has moderate net benefit. The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men.

RECOMMENDATION The USPSTF recommends screening for chlamydia in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection. (B recommendation) The USPSTF recommends screening for gonorrhea in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection. (B recommendation) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men. (I statement)

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Summary of Recommendations

Population	Recommendation	Grade
Sexually active women, including pregnant persons	The USPSTF recommends screening for chlamydia in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection.	B
Sexually active women, including pregnant persons	The USPSTF recommends screening for gonorrhea in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection.	B
Sexually active men	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men.	I

See the Figure for a more detailed summary of the recommendations for clinicians. USPSTF indicates US Preventive Services Task Force.

See the Summary of Recommendation figure.

Table. Summary of USPSTF Rationale

Rationale	Assessment
Detection	• Convincing evidence that screening tests can accurately detect chlamydia and gonorrhea in asymptomatic women and men.
Benefits of early detection and intervention and treatment	• Adequate direct evidence that screening for chlamydia in sexually active women at increased risk reduces infection complications, with a moderate magnitude of benefit. • Adequate evidence that screening for gonorrhea in sexually active women at increased risk results in a moderate magnitude of benefit, based on the large proportion of cases that are asymptomatic, the effectiveness of antibiotic treatment to reduce infections, and the high morbidity associated with untreated infections. • Inadequate evidence that screening for chlamydia and gonorrhea in men reduces infection complications and transmission or acquisition of either disease or HIV.
Harms of early detection and intervention and treatment	• Adequate evidence to bound the harms of screening for chlamydia and gonorrhea in both women and men as small to none, based on the nature of the interventions, low likelihood of serious harms, and available information from studies reporting few harms. 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.
USPSTF assessment	• Moderate certainty that screening for chlamydia in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection has moderate net benefit. • Moderate certainty that screening for gonorrhea in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection has moderate net benefit. • Insufficient evidence to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men. Evidence is lacking that screening men reduces infection complications and transmission or acquisition of either disease or HIV.

Abbreviation: USPSTF, US Preventive Services Task Force.

Importance

Chlamydia and gonorrhea are among the most common sexually transmitted infections (STIs) in the US.[1] Approximately 1.8 million cases of chlamydia and more than 600 000 cases of gonorrhea were reported to the Centers for Disease Control and Prevention (CDC) in 2019. The rate of chlamydia infection among women (698.9 cases per 100 000 women) was nearly double the rate among men (399.9 cases per 100 000 men). Gonorrhea infection was more prevalent in men (224.4 cases per 100 000 men) than in women (152.6 cases per 100 000 women). Infection rates are highest among adolescents and young adults of both sexes. In 2019 almost two-thirds (61.0%) of all reported chlamydia infections, and in 2018 more than half (54.1%) of new gonococcal infections, were among persons aged 15 to 24 years.[1,2]

Chlamydial and gonococcal infections in women are usually asymptomatic and may lead to pelvic inflammatory disease (PID) and its associated complications, such as ectopic pregnancy, infertility, and chronic pelvic pain.[3-5] Newborns of pregnant persons with untreated infection may develop neonatal chlamydial pneumonia or gonococcal or chlamydial ophthalmia.[6,7] Infection in men may lead to urethritis and epididymitis.[8-11] Men are often asymptomatic; however, gonorrhea is more likely than chlamydia to cause symptoms in men than in women.[12] Both types of infection can increase risk of acquiring or transmitting HIV.[13,14]

USPSTF Assessment of Magnitude of Net Benefit

The US Preventive Services Task Force (USPSTF) concludes with moderate certainty that screening for chlamydia in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection has **moderate net benefit**.

The USPSTF concludes with moderate certainty that screening for gonorrhea in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection has **moderate net benefit**.

The USPSTF concludes that the current **evidence is insufficient** to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men.

See the **Table** for more information on the USPSTF recommendation rationale and assessment and the eFigure in the Supplement for information on the recommendation grade. See the **Figure** for a summary of the recommendation for clinicians. For more details on the methods the USPSTF uses to determine the net benefit, see the USPSTF Procedure Manual.[15]

Practice Considerations

Patient Population Under Consideration

This recommendation applies to asymptomatic, sexually active adolescents and adults, including pregnant persons.

In this recommendation statement, the recommendations are stratified by "men" and "women," although the net benefit estimates are driven by biological sex (ie, male/female) rather than gender identity. Persons should consider their sex at birth and current anatomy (especially presence of a cervix/vagina) and consult with their own clinician, if necessary, to determine which recommendation best applies to them.

Assessment of Risk

Age is a strong predictor of risk for chlamydial and gonococcal infections, with the highest infection rates in women occurring during ages 15 to 24 years.[1] Women 25 years or older are at increased risk if they have a new sex partner, more than 1 sex partner, a sex partner with concurrent partners, or a sex partner who has an STI; practice inconsistent condom use when not in a mutually monogamous relationship; or have a previous or coexisting STI. Exchanging sex for money or drugs and history of incarceration also are associated with increased risk.[16] Clinicians should consider the

Figure. Clinician Summary: Screening for Chlamydia and Gonorrhea

What does the USPSTF recommend?	**For sexually active women, including pregnant persons:** **Screen** for chlamydia if they are • 24 years or younger • 25 years or older and at increased risk for infection Grade: B **Screen** for gonorrhea if they are • 24 years or younger • 25 years or older and at increased risk for infection Grade: B See below how to implement this recommendation.
	For sexually active men: The USPSTF found that the evidence is insufficient to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men. More research is needed. I statement
To whom does this recommendation apply?	Sexually active adolescents and adults, including pregnant persons, without signs and symptoms of chlamydia or gonorrhea infection.
What's new?	This recommendation is consistent with the 2014 USPSTF recommendation.
How to implement this recommendation?	**1. Assess risk:** • Women aged 15 to 24 y have the highest infection rates. • Women 25 years or older are at increased risk if they have ◦ A previous or coexisting STI ◦ A new or more than 1 sex partner ◦ A sex partner having sex with other partners at the same time ◦ A sex partner with an STI ◦ Inconsistent condom use when not in a mutually monogamous relationship ◦ A history of exchanging sex for money or drugs ◦ A history of incarceration Clinicians should consider the communities they serve and may want to consult local public health authorities for information about local epidemiology and guidance on determining who is at increased risk. **2. Screen for chlamydia and gonorrhea in sexually active women:** • 24 years or younger • 25 years or older and at increased risk for infection Screen for chlamydia and gonorrhea using a NAAT. NAATs can test for infection at urogenital and extragenital sites,including urine, endocervical, vaginal, male urethral, rectal, and pharyngeal. Both chlamydia and gonorrhea can be tested for at the same time with the same specimen.
What are other relevant USPSTF recommendations?	The USPSTF has issued recommendations on screening for other STIs, including hepatitis B, hepatitis C, genital herpes, HIV, and syphilis. The USPSTF has also issued recommendations on behavioral counseling for all sexually active adolescents and for adults at increased risk for STIs. These recommendations are available at https://www.uspreventiveservicestaskforce.org
Where to read the full recommendation statement?	Visit the USPSTF website (https://www.uspreventiveservicestaskforce.org) 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.

NAAT indicates nucleic acid amplification test; STI, sexually transmitted infection; USPSTF, US Preventive Services Task Force.

communities they serve and may want to consult local public health authorities for information about local epidemiology and guidance on determining who is at increased risk.

Screening Tests

Nucleic acid amplification tests (NAATs) for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* infections are usually used for screening because their sensitivity and specificity are high for detecting these infections.[17] The US Food and Drug Administration approves NAATs for use on urogenital and extragenital sites, including urine, endocervical, vaginal, male urethral, rectal, and pharyngeal specimens.[17,18] Urine testing with NAATs is at least as sensitive as testing with endocervical specimens, clinician- or self-collected vaginal specimens, or urethral specimens in clinical settings. The same specimen can be used to test for chlamydia and gonorrhea.[19]

Screening Intervals

In the absence of studies on screening intervals, a reasonable approach would be to screen patients whose sexual history reveals new or persistent risk factors since the last negative test result.

Treatment or Interventions

Chlamydial and gonococcal infections respond to treatment with antibiotics. Because treatment varies depending on the individual patient, and antibiotic resistance for gonorrhea is increasing, clinicians are encouraged to consult the most up-to-date guidance on treatment from the CDC.[16,20]

Implementation

Although the prevalences of chlamydia and gonorrhea differ, the risk factors for infection overlap, and the USPSTF recommends screening for both simultaneously. The USPSTF did not review evidence on screening for chlamydia and gonorrhea in persons living with HIV or taking HIV preexposure prophylaxis. The CDC provides recommendations for these and other specific groups. The CDC also describes ways to increase adherence to treatment and interventions to decrease the likelihood of reinfection.[16,20,21]

Other Related USPSTF Recommendations

The USPSTF has issued recommendations on screening for other STIs, including hepatitis B,[22,23] hepatitis C,[24] genital herpes,[25] HIV,[26,27] and syphilis.[28,29] The USPSTF has also issued recommendations on behavioral counseling for all sexually active adolescents and for adults who are at increased risk for STIs.[30]

Additional Tools and Resources

The CDC provides more information about STIs, including chlamydia and gonorrhea, at https://www.cdc.gov/std/default.htm, as well as guidance for clinicians on providing quality STI clinical services, at https://www.cdc.gov/mmwr/volumes/68/rr/rr6805a1.htm.

The National Academies of Sciences, Engineering, and Medicine provides a comprehensive systems-based approach for prevention and control of STIs at https://www.nap.edu/catalog/25955/sexually-transmitted-infections-adopting-a-sexual-health-paradigm.

The Community Preventive Services Task Force has issued several recommendations on the prevention of HIV/AIDS, other STIs, and teen pregnancy. The Community Guide discusses interventions that have been efficacious in school settings, and for men who have sex with men, at https://www.thecommunityguide.org/topic/hiv-stis-and-teen-pregnancy.

The Public Health Agency of Canada guidelines on STIs are available at https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/sexually-transmitted-infections.html.

Suggestions for Practice Regarding the I Statement

Potential Preventable Burden

Chlamydial and gonococcal infections are often asymptomatic in men but may result in urethritis, epididymitis, and proctitis. Uncommon complications include reactive arthritis (chlamydia) and disseminated gonococcal infection.[16] Urogenital positivity among men who have sex with men was 6% for chlamydia and 7% for gonorrhea across 11 Sexually Transmitted Disease Surveillance Network jurisdictions in 2019.[1] Infections at extragenital sites (such as the pharynx and rectum) are typically asymptomatic. Chlamydial and gonococcal infections may increase risk of acquiring or transmitting HIV.[13,14]

Potential Harms

Potential harms of screening for chlamydia and gonorrhea include false-positive or false-negative results as well as labeling and anxiety associated with positive results.

Current Practice

A review of health care claims of 4296 male and female patients presenting for general medical or gynecologic examinations from 2000 to 2003 found that a large proportion of patients with high-risk sexual behaviors did not receive STI or HIV testing during their visit.[31] According to a review of diagnostic billing codes for 1074 patients with high-risk sexual behaviors, men were significantly less likely than women to be tested for chlamydia (20.7% vs 56.9%) and gonorrhea (20.7% vs 50.9%), although they were more likely to be tested for HIV (79.3% vs 38.8%) and syphilis (39.1% vs 27.6%).[31]

Update of Previous USPSTF Recommendation

This recommendation updates the USPSTF's 2014 recommendation on screening for chlamydia and gonorrhea.

In 2014, the USPSTF recommended screening for chlamydia in sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection. It also recommended screening for gonorrhea in sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection. Both recommendations included pregnant persons. The USPSTF found insufficient evidence to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men.

Supporting Evidence

Scope of Review

The USPSTF commissioned a systematic review[19,32] to update its recommendation on screening for chlamydia and gonorrhea. The review evaluated the benefits and harms of screening for chlamydia and gonorrhea in all sexually active adolescents and adults, including pregnant persons. Key differences between the current review and the prior review are that the current review combined all populations, including pregnant persons, into a single analytic framework; evaluated the accuracy of risk stratification and screening strategies for identifying persons at increased risk; and focused evaluation of diagnostic accuracy on anatomical site–specific testing.[19,32,33] Because the USPSTF had previously determined that treatments for these infections are effective and well established, this review did not include a review of treatments.[19,32]

Accuracy of Screening Tests and Risk Assessment

The USPSTF found convincing evidence that clinicians could identify sexually active women at increased risk for chlamydial and gonococcal infections. It found adequate evidence that clinicians could identify sexually active men at increased risk for chlamydial and gonococcal infections. Seven new fair-quality studies with more than 93 000 participants were included in the analysis.[34-39] In asymptomatic individuals, 3 studies with 71 636 participants that used a risk score to identify persons with chlamydial or gonococcal infections reported an area under the curve of 0.64 to 0.73.[34-36] One study showed that age (younger than 22 years) alone had accuracy similar to that for the use of more extensive risk criteria.[39]

The USPSTF found convincing evidence that available screening tests can accurately diagnose chlamydial and gonococcal

infections in both women and men. Nine fair-quality studies in more than 16 000 participants indicated that screening for chlamydia and gonorrhea with NAATs is highly accurate for specimens from various anatomical sites and different collection methods for women and men.[40-48] Sensitivity of NAAT specimens collected from urogenital sites for detecting chlamydia and gonorrhea in women ranged from 72% to 100%, excluding 1 outlier study. Sensitivity among collection methods, including vaginal clinician- or self-collection or urine collection, varied little. NAATs for chlamydia and gonorrhea screening in men was highly accurate, with sensitivities ranging from 89% to 100% for urethral, meatal, and urine testing. NAATs were also highly sensitive for detecting rectal and pharyngeal gonorrhea and rectal chlamydia in men (89% to 93%); they had moderate sensitivity (69%) for detecting pharyngeal chlamydia in men. Specificity for several sites was high, ranging from 90% to 100% for both infections in men and women. Specificity was not reported for gonorrhea in women at the urethral site and in men at the urethral, rectal, or pharyngeal sites.[19]

Benefits of Early Detection and Treatment

The USPSTF reviewed 4 trials and concluded that screening was associated with reduced risk of PID vs no screening.[49-52] One recent large, good-quality trial of men and women (n = 63 338) in primary care clinics found that screening for chlamydia was associated with a reduction in risk of hospital-diagnosed PID compared with usual care (relative risk, 0.6 [95% CI, 0.4-1.0]), but the absolute difference was small (0.24% vs 0.38%). No differences were seen in rates of PID or epididymitis in clinics.[52] No studies reported the association between screening and disease acquisition or transmission or between screening and clinical outcomes other than PID or epididymitis.[19]

The USPSTF previously found fair-quality evidence that treatment of chlamydial infection during pregnancy is associated with improved outcomes for infants and mothers.[53,54] The USPSTF reviewed large cohort studies of screening at the first prenatal visit in pregnant women (with a total of 11 544 participants) at increased risk for infection. These studies found that treatment of chlamydial infection was associated with significantly lower rates of preterm delivery, early rupture of membranes, and infants with low birth weight compared with no treatment or treatment failure.[53,54] No subsequent studies met inclusion criteria for the current USPSTF review.[19,32]

The USPSTF found little direct evidence on the effectiveness of screening for chlamydia in men or low-risk women in reducing infection complications or disease transmission or acquisition. It found that the overall prevalence of chlamydial infection in the general population varies widely depending on age and other risk factors. Chlamydial infection may cause urethritis and epididymitis in men, but serious complications are not common. Screening and treating young men at increased risk may reduce the incidence of chlamydial infection; however, the USPSTF found very limited published randomized trials or observational studies of the effect of routine screening in men or comparison with the strategy of screening women and treating their male partners.[19,32] The USPSTF found no studies on the benefits of screening women, including pregnant women, who are not at increased risk for infection.[19,32]

The USPSTF found no studies that directly evaluated the effectiveness of screening for gonorrhea in its current or previous reviews.[19,32,33] It previously found indirect evidence of the benefits of early detection and treatment in women at increased risk based on the substantial prevalence of asymptomatic infection, the availability of accurate screening tests and effective treatments, and the high morbidity associated with untreated infection in women.[55] Gonococcal infections in women are frequently asymptomatic but represent an important reservoir of infection that could lead to reproductive complications and life-threatening conditions.

Based on indirect evidence, early detection and treatment of gonorrhea in pregnant women at increased risk for infection may decrease morbidity from infection-related obstetric complications. In women not at increased risk for gonorrhea, there is a low prevalence of infection, and universal ocular prophylaxis in newborns is effective and well established. Accordingly, the USPSTF concluded that the net benefit of screening for gonorrhea in pregnant women who are not at increased risk for infection is small.

The USPSTF found little evidence on the effectiveness of screening for gonorrhea in men or low-risk women. Prevalence in these groups is low.[1] Moreover, the majority of genital gonococcal infections in men are symptomatic, which can result in more timely clinical presentation and lead to diagnosis and treatment that prevents serious complications.

The USPSTF found no studies comparing the effectiveness of cotesting for concurrent STIs or using different screening intervals.[19,32]

Harms of Screening and Treatment

The USPSTF reviewed several studies, including 4 recent studies (n = 5666), assessing harms of site-specific chlamydia and gonorrhea testing as well as harms of collection methods in women. The false- positive, false-negative, false alarm, and false reassurance rates varied by anatomical site but were overall generally low across all NAATs and specimen types.[19,32]

No studies of psychosocial harms, such as anxiety, related to testing met inclusion criteria for this or prior reviews.[19,32]

Response to Public Comment

A draft version of this recommendation statement was posted for public comment on the USPSTF website from March 2 through March 29, 2021. Several comments expressed concern that the USPSTF found insufficient evidence to screen men and did not provide separate recommendations for specific high-risk populations. The USPSTF did not identify enough evidence to support that screening men for chlamydia and gonorrhea improves health outcomes by reducing infection complications or disease transmission or acquisition, including HIV. In the Research Needs and Gaps section, the USPSTF calls for more research on screening in men and other groups such as men who have sex with men; the lesbian, gay, bisexual, transgender, queer/questioning (LGBTQ+) community; and racial and ethnic minorities. The USPSTF also clarified to whom the recommendation applies regarding sex and gender in the Practice Considerations section. Some comments requested that universal, rather than risk-based, screening be recommended for women 25 years or older. Based on available disease prevalence data and accuracy of risk assessment tools, the

USPSTF found that younger age was a strong predictor of disease risk, which was clarified in the Practice Considerations section. Comments also asked for clarification on screening intervals. Given the lack of available evidence on optimal screening frequency, the USPSTF provides a reasonable approach for rescreening in the Practice Considerations section.

How Does Evidence Fit With Biological Understanding?

Chlamydial and gonococcal infections are often asymptomatic in women. Untreated infections may progress to PID-related complications such as chronic pelvic pain, ectopic pregnancy, or infertility. Infections may also be transmitted to sex partners and newborn children. Accurate screening tests and effective antibiotic treatments are available for chlamydia and gonorrhea.

In men, gonococcal infections are more commonly symptomatic compared with women. Serious complications from infection are less common in men.

Research Needs and Gaps

Studies on assessing risk and for whom screening may be most effective are a high priority.

- Studies evaluating the effectiveness of screening asymptomatic men to reduce infection complications and transmission or acquisition of either disease or HIV are needed.
- Studies are needed to better understand the benefits and harms of screening specific populations at risk such as men who have sex with men, members of the LGBTQ+ community, and persons with nonbinary gender identity.
- Prevalence of chlamydia and gonorrhea is high among American Indian/Alaska Native, Black, Hispanic/Latino, and Native Hawaiian/Pacific Islander persons. Studies providing information on differential access and effective prevention strategies for these populations may help reduce racial and ethnic disparities.
- Studies with direct evidence on the effectiveness of screening pregnant persons, testing extragenital sites, cotesting for concurrent STIs, and screening intervals would help provide more information for best practices.

Recommendations of Others

The CDC recommends annual chlamydia and gonorrhea testing in all sexually active women younger than 25 years and in older women at increased risk of infection (ie, those who have a new or multiple sex partners or a sex partner who has an STI). It also recommends screening for both infections in pregnant women younger than 25 years and in older pregnant women at increased risk for infection during their first prenatal visit and again during their third trimester if risk remains high.[16]

The CDC recommends that clinicians consider screening for chlamydia in sexually active young men in high-prevalence areas and populations. It recommends annual screening for chlamydia and gonorrhea at appropriate anatomical sites of exposure in men who have sex with men, with more frequent screening if risk behaviors persist or if they or their sex partners have multiple partners. The CDC recommends screening transgender individuals on the basis of their sexual practices and anatomy. Because of high rates of STIs in persons entering correctional facilities, the CDC recommends chlamydia and gonorrhea screening at intake in correctional facilities in women 35 years or younger and in men younger than 30 years. Because of the high likelihood of reinfection, the CDC recommends retesting all patients diagnosed with chlamydial or gonococcal infections 3 months after treatment, regardless of whether they believe their partners have been treated.[16]

The American College of Obstetricians and Gynecologists follows the CDC's recommendations for annual chlamydia and gonorrhea screening in all sexually active women younger than 25 years and in older women with risk factors. However, it recommends that all pregnant women be tested for chlamydia early in pregnancy, with a repeat test in the third trimester for women with risk factors. It recommends testing for gonorrhea in pregnant women 25 years or younger or for those living in an area where gonorrhea is common.[56,57]

The American Academy of Family Physicians follows the 2014 USPSTF chlamydia and gonorrhea screening recommendations.[58] The American Academy of Pediatrics recommendations align with the CDC guidelines.[59]

ARTICLE INFORMATION

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Additional Information: 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. 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. Published by JAMA®–Journal of the American Medical Association under arrangement with the Agency for Healthcare Research and Quality (AHRQ).

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