

U.S. Preventive Services Task Force

Behavioral Counseling Interventions to Prevent Sexually Transmitted Infections: Recommendation Statement

Summary of Recommendation

The USPSTF recommends behavioral counseling for all sexually active adolescents and for adults who are at increased risk for sexually transmitted infections (STIs) (*Table 1*). **B recommendation.**

See the Practice Considerations section for more information on populations at increased risk for acquiring STIs.

Importance

Bacterial and viral STIs are common in the United States. Approximately 20 million new cases of bacterial or viral STIs occur each year in the United States, and about one-half of these cases occur in persons aged 15 to 24 years.^{1,2} Rates of chlamydial, gonococcal, and syphilis infection continue to increase in all regions.² STIs are frequently asymptomatic, which may delay diagnosis and treatment and lead persons to unknowingly transmit STIs to others. Serious consequences of STIs include pelvic inflammatory disease, infertility, cancer, and AIDS. Untreated STIs that present during pregnancy or birth may cause harms to the mother and infant, including perinatal infection, serious physical and developmental disabilities, and death.^{3,4}

USPSTF Assessment of Magnitude of Net Benefit

The USPSTF concludes with moderate certainty that behavioral counseling interventions reduce the likelihood of

acquiring STIs in sexually active adolescents and in adults at increased risk, resulting in a **moderate net benefit**.

See *Table 2* for more information on the USPSTF recommendation rationale and assessment. For more details on the methods the USPSTF uses to determine the net benefit, see the USPSTF Procedure Manual.⁵

Practice Considerations

PATIENT POPULATION UNDER CONSIDERATION

This recommendation applies to all sexually active adolescents and to adults at increased risk for STIs.

DEFINITION OF STIS

STIs are transmitted through sexual activity and intimate physical contact. In the United States, common STIs with significant clinical and public health effects include HIV, herpes simplex virus, human papillomavirus, hepatitis B virus, *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Treponema pallidum* (syphilis), and *Trichomonas vaginalis*.¹⁻⁴

ASSESSMENT OF RISK

All sexually active adolescents are at increased risk for STIs because of the high rates of STIs in this age group and should receive behavioral counseling interventions. Adults at increased risk for STIs include those who currently have an STI or were diagnosed with one within the past year, do not consistently use condoms, have multiple sex partners, or have sex partners within populations with a high prevalence of STIs. Populations with a high prevalence of STIs include persons who seek STI testing or attend STI clinics; sexual and gender minorities; persons who are living with HIV, inject drugs, have exchanged sex for money or drugs, or have entered correctional facilities; and some racial/ethnic minority groups.¹⁻⁴ Difference in STI rates among racial/ethnic groups may reflect differences in social determinants of health.² To determine which adolescents are sexually active and which adults might engage in activities that may increase their risk for STIs, clinicians should routinely ask their patients for pertinent information about their sexual history.

See related Putting Prevention into Practice on page 623.

As published by the USPSTF.

This summary is one in a series excerpted from the Recommendation Statements released by the USPSTF. These statements address preventive health services for use in primary care clinical settings, including screening tests, counseling, and preventive medications.

The complete version of this statement, including supporting scientific evidence, evidence tables, grading system, members of the USPSTF at the time this recommendation was finalized, and references, is available on the USPSTF website at <https://www.uspreventiveservicestaskforce.org/>.

This series is coordinated by Kenny Lin, MD, MPH, deputy editor.

A collection of USPSTF recommendation statements published in *AFP* is available at <https://www.aafp.org/afp/uspstf>.

TABLE 1

Behavioral Counseling Interventions to Prevent STIs: Clinical Summary of the USPSTF Recommendation

What does the USPSTF recommend?	For sexually active adolescents and for adults at increased risk: Provide behavioral counseling to prevent STIs. Grade: B
To whom does this recommendation apply?	All sexually active adolescents and adults at increased risk for STIs.
What's new?	This recommendation is consistent with the 2014 USPSTF recommendation. The current recommendation offers a broader range of effective counseling approaches, including those involving less than 30 minutes of counseling.
How to implement this recommendation?	<ol style="list-style-type: none"> Assess whether adolescents are sexually active and, for adults, assess risk for STIs. Factors that put a person at increased risk include: <ol style="list-style-type: none"> Being diagnosed with an STI within the past year Not consistently using condoms Having multiple sex partners or having a partner(s) at high risk for STIs Belonging to a population that has a high STI prevalence (such as persons seeking STI testing or attending an STI clinic, sexual and gender minorities, persons living with HIV, persons with injection drug use, persons who exchange sex for money or drugs, persons who have recently been in a correctional facility, and some racial/ethnic minority groups) Provide behavioral counseling to sexually active adolescents and to adults at increased risk: <ol style="list-style-type: none"> Deliver counseling in person, refer patients to outside counseling services, or inform patients about media-based interventions Interventions that include group counseling, involve more than 120 minutes of counseling, and are delivered over several sessions have the strongest effect in preventing STIs Counseling interventions shorter than 30 minutes delivered in a single session may also be effective Provide information on common STIs and STI transmission; aim to increase motivation or commitment to safer sex practices; and provide training in condom use, communication about safer sex, problem solving, and other pertinent skills.
What are other relevant USPSTF recommendations?	<p>The USPSTF has issued relevant recommendations on the following:</p> <ul style="list-style-type: none"> Screening for chlamydia and gonorrhea (https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/chlamydia-and-gonorrhea-screening) Screening for syphilis in nonpregnant persons (https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/syphilis-infection-in-nonpregnant-adults-and-adolescents) and pregnant persons (https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/syphilis-infection-in-pregnancy-screening) Screening for HIV (https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/human-immunodeficiency-virus-hiv-infection-screening) Preexposure prophylaxis for HIV (https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/prevention-of-human-immunodeficiency-virus-hiv-infection-pre-exposure-prophylaxis) Screening for intimate partner violence (https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/intimate-partner-violence-and-abuse-of-elderly-and-vulnerable-adults-screening)
Where to read the full recommendation statement?	Visit the USPSTF website (https://www.uspreventiveservicestaskforce.org/uspstf/) 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.

STI = sexually transmitted infection; USPSTF = U.S. Preventive Services Task Force.

TABLE 2

Summary of USPSTF Rationale

Rationale	Assessment
Recognition of behavior	Primary care clinicians can identify sexually active adolescents and adults at increased risk for acquiring STIs. (See the "Practice Considerations" section for information on risk assessment.)
Benefits of behavioral counseling	Adequate evidence that behavioral counseling using in-person (individual or group), media-based, or both formats can reduce the likelihood of acquiring STIs, resulting in a moderate benefit.
Harms of behavioral counseling	Evidence is adequate to bound the magnitude of the overall harms of interventions as no greater than small, based on the few studies reporting no serious harms, the nature of the interventions, and the low likelihood of serious 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 behavioral counseling for adolescents and adults at increased risk for acquiring STIs has a moderate net benefit.

STI = sexually transmitted infection; USPSTF = U.S. Preventive Services Task Force.

BEHAVIORAL COUNSELING INTERVENTIONS

Intervention approaches include in-person counseling, videos, websites, written materials, telephone support, and text messages. Most successful approaches provide information on common STIs and STI transmission; assess the person's risk for acquiring STIs; aim to increase motivation or commitment to safer sex practices; and provide training in condom use, communication about safer sex, problem solving, and other pertinent skills. Interventions that include group counseling and involve high total contact times (defined in the evidence review as more than 120 minutes), often delivered over multiple sessions, are associated with larger STI prevention effects. However, some less intensive interventions have been shown to reduce STI acquisition, increase condom use, or decrease number of sex partners. Interventions shorter than 30 minutes tended to be delivered in a single session. There is not enough evidence to determine whether several intervention characteristics were independently related to effectiveness, including degree of cultural tailoring, counselor characteristics, or setting.

IMPLEMENTATION

Primary care clinicians can deliver in-person behavioral counseling interventions, refer patients to behavioral counseling interventions

in other settings, or inform patients about media-based interventions. For more information about risk assessment methods and behavioral counseling interventions, see the Additional Tools and Resources section and *Table 3*.⁶⁻²⁶

ADDITIONAL TOOLS AND RESOURCES

The following resources may help clinicians implement this recommendation.

- The Centers for Disease Control and Prevention provides a tool for STI risk assessment suitable for primary care settings (<https://www.cdc.gov/std/products/provider-pocket-guides.htm>); provides information about behavioral counseling and other STI prevention strategies (<https://www.cdc.gov/std/prevention>); and maintains a compendium of evidence-based behavioral counseling interventions that have been shown to reduce STI acquisition or increase safer sexual behaviors (<https://www.cdc.gov/hiv/research/interventionresearch/compendium/rr/complete.html>).
- The Community Preventive Services Task Force has issued recommendations on preventing HIV, other STIs, and teen pregnancy and has described effective individual- and group-level community interventions for school-aged youth (<https://www.thecommunityguide.org/findings/hiv-other-stis-and-teen-pregnancy-group-based->

TABLE 3

Behavioral Counseling Interventions to Reduce Risk for STI Acquisition in Persons at Increased Risk for STIs*

Characteristic	Intervention type		
	In-person behavioral counseling (group only or group + individual)†	In-person behavioral counseling (individual only)†	Media-based interventions without in-person counseling
References‡	DiClemente, et al., ⁶ 2004§ Shain, et al., ⁷ 2004§ Jemmott, et al., ⁸ 2005§ Jemmott, et al., ⁹ 2007§ Kershaw, et al., ¹⁰ 2009 Neumann, et al., ¹¹ 2011§ Champion and Collins, ¹² 2012§ Wingood, et al., ¹³ 2013§	Jemmott, et al., ⁹ 2007§ Crosby, et al., ¹⁴ 2009§ Marrazzo, et al., ¹⁵ 2011 Berenson and Rahman, ¹⁶ 2012 Metsch, et al., ¹⁷ 2013	Peipert, et al., ¹⁸ 2008 Warner, et al., ¹⁹ 2008§ Carey, et al., ²⁰ 2015 Bailey, et al., ²¹ 2016 Free, et al., ²² 2016 Tzilos Wernet, et al., ²³ 2018 Shafii, et al., ²⁴ 2019
Intervention intensity	Most interventions with group counseling involved total contact times of more than 120 minutes and multiple sessions over 1 to 12 months Group counseling interventions often focused on specific demographic groups defined by age range, race/ethnicity, or both	Most individual counseling interventions involved more than 30 minutes of total contact time and a single session	Approximately one-half of media-only interventions involved total contact times of 30 to 90 minutes; others involved less than 30 minutes Interventions involving video or computer interaction entailed fewer sessions than those involving repeated text messages or emails over many months
Intervention settings	Primary care clinics, research clinics, or STI clinics¶		Persons identified at STI, primary care, family planning, prenatal, and obstetrics-gynecology clinics or through advertisements or community media received interventions in homes, their community, or STI clinic waiting areas¶
Person delivering intervention	Researchers, facilitators, nursing professionals, counselors, health educators, trained peer counselors, or clinicians delivered group and individual counseling		Self-directed (such as interactive computer-based intervention) or passively received (such as video)
Intervention participants at increased risk for STIs**	Most study participants were adolescents or adults younger than 30 years and were members of racial/ethnic minority populations; the majority engaged in STI risk behaviors (such as unprotected intercourse or multiple sex partners) or had a history of STIs		
Behavior change goals and techniques	Most interventions provided information about common STIs and how STIs are transmitted; aimed to increase motivation or commitment to safer sex practices; and provided training in pertinent skills, such as condom use and negotiation, communication about safer sex, and problem solving Interventions used varied therapeutic approaches (such as motivational interviewing and cognitive behavioral therapy) and some applied specific theoretical models of behavior change (such as social cognitive theory, the Information-Motivational-Behavioral Skills Model, and the AIDS Risk Reduction Model)		

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comprehensive-risk-reduction-interventions) and for men who have sex with men (<https://www.thecommunityguide.org/findings/hiv-interventions-reduce-sexual-risk-behaviors-or-increase-protective-behaviors-prevent>).

- The National Coalition of Sexually Transmitted Disease Directors and the National Alliance of

State and Territorial AIDS Directors have developed optimal care checklists for clinicians serving male patients who have sex with men (https://www.ncsddc.org/wp-content/uploads/2017/08/provider_brochure2.pdf).

Additionally, the Centers for Disease Control and Prevention provides the following resources

TABLE 3 (continued)

Behavioral Counseling Interventions to Reduce Risk for STI Acquisition in Persons at Increased Risk for STIs*

Characteristic	Intervention type		
	In-person behavioral counseling (group only or group + individual)†	In-person behavioral counseling (individual only)†	Media-based interventions without in-person counseling
Demonstrated benefit	<p>Behavioral counseling for persons at increased risk for STIs can reduce the likelihood of acquiring STIs (OR, 0.66 [95% CI, 0.54-0.81]) and also increase condom use or decrease the occurrence of unprotected intercourse²⁵</p> <p>Interventions with the largest effects for STI prevention tended to involve more than 120 minutes of total contact time and group counseling, often delivered over multiple sessions for up to 1 year; it is unclear whether the group counseling format, total contact time, or both were responsible for intervention effects because all but 1 intervention involving group counseling had total contact times of more than 120 minutes</p> <p>A few interventions with less total contact time have been shown to reduce STI acquisition or promote safer sexual behaviors</p>		

OR = odds ratio; STI = sexually transmitted infection; USPSTF = U.S. Preventive Services Task Force.

*—Table adapted from Appendix F Table 1 in the full evidence review²⁵ and a modified Template for Intervention Description and Replication checklist.²⁶

†—Some interventions combined several methods, such as in-person counseling followed by personalized text messages or emails.

‡—The USPSTF does not endorse any specific intervention.

§—Study reported statistically significant reduction in 1 or more STI acquisition outcome.

||—Study included multiple intervention groups, including those with group counseling or individual counseling.

¶—Studies in STI clinics tested interventions in persons who had sought care for STI symptoms or had known or suspected exposure to sex partners with STIs. Interventions for STI clinic patients with recent or current STIs often focus on reducing the risk for a subsequent STI, including those caused by reinfection by untreated partners.

**—The evidence review defined persons at increased risk for STI acquisition as sexually active adolescents or adults who reported STIs within the past year or current STIs, inconsistent condom use, multiple sex partners, or demographic characteristics associated with high STI incidence.

Information from references 6-26.

on how to help persons experiencing sexual violence or sex trafficking.

- <https://www.cdc.gov/violenceprevention/sexualviolence/index.html>
- <https://www.cdc.gov/violenceprevention/sexualviolence/resources.html>

OTHER RELATED USPSTF RECOMMENDATIONS

The USPSTF has issued several recommendations about screening for STIs (chlamydia,²⁷ gonorrhea,²⁷ syphilis,²⁸ HIV,²⁹ hepatitis B virus,³⁰ and human papillomavirus³¹) and cervical cancer³¹ and offering preexposure prophylaxis to prevent HIV acquisition.³² The USPSTF has also issued a recommendation on screening for intimate partner violence and elder abuse.³³

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The "Update of Previous USPSTF Recommendations," "Supporting Evidence," "Research Needs and Gaps," and "Recommendations of Others" sections of this recommendation statement are available at <https://www.uspreventiveservicestaskforce.org/uspstf/>

recommendation/sexually-transmitted-infections-behavioral-counseling#fullrecommendationstart.

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

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