USPSTF Recommendations for STI Screening

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Since 2000, the U.S. Preventive Services Task Force (USPSTF) has issued eight clinical recommendation statements on screening for sexually transmitted infections. This article, written on behalf of the USPSTF, is an overview of these recommendations. The USPSTF recommends that women at increased risk of infection be screened for chlamydia, gonorrhea, human immunodeficiency virus, and syphilis. Men at increased risk should be screened for human immunodeficiency virus and syphilis. All pregnant women should be screened for hepatitis B, human immunodeficiency virus, and syphilis; pregnant women at increased risk also should be screened for chlamydia and gonorrhea. Nonpregnant women and men not at increased risk do not require routine screening for sexually transmitted infections. Engaging in high-risk sexual behavior places persons at increased risk of sexually transmitted infections. The USPSTF recommends that all sexually active women younger than 25 years be considered at increased risk of chlamydia and gonorrhea. Because not all communities present equal risk of sexually transmitted infections, the USPSTF encourages physicians to consider expanding or limiting the routine sexually transmitted infection screening they provide based on the community and populations they serve. (Am Fam Physician. 2008;77(6):819-824. Copyright © 2008 American Academy of Family Physicians.)

**STI** The USPSTF recommends chlamydia, gonorrhea, human immunodeficiency virus, and syphilis screening for all sexually active women younger than 25 years. Rather than considering each recommendation separately, physicians can cluster STI screening at the time of a periodic health examination. The USPSTF recommendations are directed toward three populations: nonpregnant women, pregnant women, and men. For each of these groups, physicians need to consider what risk factors, both behavioral and demographic, place individual patients at increased risk of infection.

**Nonpregnant Women**

For nonpregnant women, physicians should consider two main factors to determine if a patient has an increased risk of STIs: high-risk sexual behavior and age. The USPSTF recommends chlamydia, gonorrhea, HIV, and syphilis screening for women who engage in high-risk sexual behavior (e.g., having multiple current partners, having a new partner, using condoms inconsistently, having sex while under the influence of alcohol or drugs, having sex in exchange for money or drugs).2-5 The USPSTF further recommends chlamydia and gonorrhea screening for all sexually active women younger than 25 years.
STI Screening: USPSTF

including adolescents), even if they are not engaging in high-risk sexual behaviors.2-3 Younger women have a higher risk of gonorrhea and chlamydia infection than older women; this is because younger women may have more new sex partners and because of the relative immaturity of their immune systems and the presence of columnar epithelium on the adolescent exocervix.11

The USPSTF does not recommend STI screening for women 25 years and older who do not engage in high-risk sexual behavior.2-8 After reviewing the evidence, the USPSTF noted that some women who do not engage in high-risk sexual behavior may benefit from screening for chlamydia and HIV.2,5 It was concluded, however, that because of the low prevalence of infection in the

### Table 1. USPSTF Recommendation Grades for STI Screening

<table>
<thead>
<tr>
<th>STI</th>
<th>Nonpregnant women</th>
<th>Pregnant women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at increased risk</td>
<td>At increased risk</td>
<td></td>
</tr>
<tr>
<td>Chlamydia2</td>
<td>C</td>
<td>A</td>
<td>C</td>
</tr>
<tr>
<td>Gonorrhea3</td>
<td>D</td>
<td>B</td>
<td>I</td>
</tr>
<tr>
<td>Syphilis4</td>
<td>D</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>HIV5</td>
<td>C</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Hepatitis B6</td>
<td>D</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>Hepatitis C7</td>
<td>D</td>
<td>I</td>
<td>—</td>
</tr>
<tr>
<td>HSV8</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>HPV9,10</td>
<td>I</td>
<td>I</td>
<td>—</td>
</tr>
</tbody>
</table>

**Note:** Recommendations for chlamydia screening use new USPSTF language (Table 2); all other STI screening recommendations use former language (http://www.ahrq.gov/clinic/3rduspstf/ratings.html); if no grade is given, no USPSTF recommendation is available.

USPSTF = U.S. Preventive Services Task Force; STI = sexually transmitted infection; HIV = human immunodeficiency virus; HSV = herpes simplex virus; HPV = human papillomavirus.

*: Increased risk for pregnant and nonpregnant women is defined as high-risk sexual behavior for all STIs; as age younger than 25 years for chlamydia and gonorrhea; and as high community prevalence for chlamydia, gonorrhea, and syphilis.

†: Increased risk for men is defined as high-risk sexual behavior for all STIs and as high community prevalence for syphilis.

‡: No treatment available; currently used to stratify risk of cervical neoplasia.

Information from references 2 through 9.
overall population, the net benefits of chlamydia and HIV screening do not justify routine screening in all women. The USPSTF explicitly recommends against screening asymptomatic women for hepatitis B and herpes simplex virus (HSV).\(^4\)\(^,\)\(^6\) Although screening can identify women with these infections, there is no evidence that treating an asymptomatic patient improves long-term health outcomes.

### Pregnant Women

In general, physicians should determine a pregnant woman’s risk status using the same factors that determine a nonpregnant woman’s risk status (i.e., high-risk sexual behavior and age). Because of the implications of treatment for the newborn, the USPSTF recommends that all pregnant women be screened for hepatitis B, HIV, and syphilis.\(^4\)\(^,\)\(^6\) Also, the USPSTF recommends that pregnant women younger than 25 years and those engaging in high-risk sexual behaviors also be screened for chlamydia and gonorrhea.\(^2\)\(^,\)\(^3\) Although the USPSTF does not recommend routine screening for chlamydia in pregnant women not at increased risk, it notes that individual circumstances may support screening.\(^2\) The USPSTF has made no recommendation about screening for gonorrhea in pregnant women who are not at increased risk, noting there is insufficient evidence to recommend for or against it.\(^3\)

### Men

The USPSTF does not recommend STI screening for men who are not at increased risk.\(^2\)\(^,\)\(^3\)\(^,\)\(^4\) The USPSTF recommends HIV and syphilis screening for men engaging in high-risk sexual behavior.\(^4\)\(^,\)\(^5\) Additionally, because of significant geographic and community variation, physicians should consider the risk in the community and populations they serve when making decisions about screening men for syphilis.\(^4\)

In men, as in women, it is important that physicians take a thorough sexual history to assess if the patient engages in high-risk sexual behavior. In men who have sex with men, it is important to focus on high-risk sexual behavior and not on sexual orientation.

### Demographic Risk Factors

Physicians should consider the demographics of the populations they serve in determining which STI screening tests to offer. In addition to evaluating a patient’s modifiable behaviors, physicians should consider the patient’s nonmodifiable demographics and social situation.

All communities do not present the same infection risk. In the United States, syphilis and gonorrhea have widely varying prevalence rates. Southern states and many urban centers have higher rates of STIs.\(^1\)\(^,\)\(^2\) Even within communities, there is often variability in STI prevalence. This is partially caused by social network and socioeconomic influences (e.g., effects of poverty and discrimination).
The USPSTF recommends that physicians be aware that in some communities black and Hispanic men and women (including pregnant women) may be at increased risk of chlamydia, gonorrhea, and syphilis, irrespective of age or sexual behaviors, and may need to be screened.\textsuperscript{2, 4} When used in this way, race and ethnicity serve as surrogate markers for the underlying social factors that increase STI risk.\textsuperscript{14}

Research has documented that many social-contextual factors contribute to varying STI prevalence rates within communities. Through a variety of direct and indirect mechanisms, factors in a community (e.g., poverty, discrimination, illicit drug use, male-to-female ratio, incarceration rate, racial segregation) influence sexual behaviors and networks, subsequently affecting the spread of infection. The concepts of social capital (e.g., trust, reciprocity, group membership) and the effect of social groups with common goals may be more predictive of STI risk than more traditional factors such as poverty and income inequalities.\textsuperscript{14}

When considering screening for STIs, physicians should consult with local public health officials, if possible; and should use national, regional, state, and local epidemiologic data to tailor screening programs based on the community and populations served.

**Age and Periodicity of Screening**

The USPSTF is not able to make an evidence-based recommendation about a specific age at which STI screening should begin. Age at first sexual encounter varies among populations and communities. The USPSTF uses epidemiologic data and data on the prevalence of risk behaviors to provide clinical guidance about what age to begin screening. Persons as young as 12 years may be having sexual intercourse, and the possibility of STIs and high-risk behavior should be considered in all adolescents when making screening decisions.

There is no evidence to support stopping screening at a specific age. Persons continue to be at risk of acquiring an STI if exposed to a pathogen, regardless of age; however, the clinical implications of untreated asymptomatic infections (e.g., infertility, ectopic pregnancy) are different in women of postreproductive age. For sexually active women who are at increased risk only because of demographic reasons (e.g., race, ethnicity, geographic location), the optimal age to end screening is not known. In the absence of direct evidence, it seems reasonable for physicians to consider stopping routine screening at menopause or at 55 years of age.

Similar to many other screening categories, little evidence is available to guide decision making about the periodicity of STI screening. Yearly screening for chlamydia in young women has been adopted as a pragmatic approach in the face of insufficient evidence.

**Recommendations From Other Professional Groups**

Almost all USPSTF recommendations on STI screening agree with CDC recommendations. Occasionally, recommendations from the two groups differ, primarily because of differences in mission and target audience. Although the CDC and the USPSTF strive to provide guidance in promoting health and preventing disease, the USPSTF focuses on the clinical setting and the CDC focuses on the public health arena. Other factors that may lead to differences between USPSTF and CDC recommendations include different methods used for evidence review and different emphases on the harms of screening.

The methodology of the USPSTF relies on evidence that screening improves important, specified health outcomes. Using this methodology, the USPSTF recommends that all adolescents and adults at increased risk of HIV infection and all pregnant women be screened for HIV, but it does not recommend for or against screening adults not at increased risk.\textsuperscript{3} In 2006, the CDC generated revised recommendations for HIV screening, which agreed with the USPSTF recommendation that all pregnant women should be screened. However, the CDC went further by recommending that all persons 13 to 64 years of age be screened, regardless of risk status.\textsuperscript{15}

The CDC largely based its HIV screening recommendations on the potential benefit of preventing secondary HIV transmission if knowledge of seropositive status leads to a reduction of risky behavior. The USPSTF found that the evidence the CDC reviewed for reduced secondary transmission was not convincing.\textsuperscript{5,15}

Although the USPSTF has not found evidence to support specific screening recommendations for men who have sex with men, based on the overall high STI prevalence rates in this population, the CDC currently recommends routine screening for HIV, syphilis, chlamydia, and gonorrhea.\textsuperscript{16}

Other professional organizations’ screening recommendations also may differ from the USPSTF. This may be because of different methodology for evidence reviews; the use of experts with vested interests (professional or economic) in the content area; and, most importantly, a desire to meet members’ needs for clinical guidance in the face of limited evidence or resources. Currently, there is general agreement about STI screening among the USPSTF, CDC, American Academy of Family Physicians, American Academy of Pediatrics, and American College of Obstetricians and Gynecologists (Tables 3 and 4).\textsuperscript{2, 9, 15, 25}
Table 3. Comparison of STI Screening Recommendations for Sexually Active Nonpregnant Women

<table>
<thead>
<tr>
<th>STI</th>
<th>USPSTF&lt;sup&gt;2-9&lt;/sup&gt;</th>
<th>CDC&lt;sup&gt;15-19&lt;/sup&gt;</th>
<th>AAFP&lt;sup&gt;20&lt;/sup&gt;</th>
<th>ACOG&lt;sup&gt;21-25&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>Screen women younger than 25 years and others at increased risk</td>
<td>Screen women 25 years and younger and others at increased risk</td>
<td>Screen women 25 years and younger and others at increased risk</td>
<td>Screen women 25 years and younger and others at increased risk</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>Screen women younger than 25 years and others at increased risk</td>
<td>Screen women at increased risk</td>
<td>Screen women younger than 25 years and others at increased risk</td>
<td>Screen adolescents and others at increased risk</td>
</tr>
<tr>
<td>Syphilis</td>
<td>Screen women at increased risk</td>
<td>Screen women exposed to syphilis</td>
<td>Screen women at increased risk</td>
<td>Screen women at increased risk</td>
</tr>
<tr>
<td>HIV</td>
<td>Screen women at increased risk</td>
<td>Screen all</td>
<td>Screen women at increased risk</td>
<td>Screen women at increased risk</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Do not screen general population</td>
<td>Provide prevaccination screening for women at increased risk</td>
<td>Do not screen general population</td>
<td>No specific recommendation</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>Do not screen general population; insufficient evidence to recommend for or against screening women at increased risk</td>
<td>Screen women at increased risk</td>
<td>Do not screen general population; insufficient evidence to recommend for or against screening women at increased risk</td>
<td>Screen women at increased risk</td>
</tr>
<tr>
<td>HSV</td>
<td>Do not screen</td>
<td>Do not screen general population</td>
<td>Do not screen</td>
<td>Screen if sexual partner has HSV</td>
</tr>
<tr>
<td>HPV*</td>
<td>Insufficient evidence to use as primary screening test for cervical cancer</td>
<td>Insufficient evidence to use as primary screening test for cervical cancer</td>
<td>Insufficient evidence to use as primary screening test for cervical cancer</td>
<td>Testing with a Pap smear is an option for women older than 30 years</td>
</tr>
</tbody>
</table>

STI = sexually transmitted infection; USPSTF = U.S. Preventive Services Task Force; CDC = Centers for Disease Control and Prevention; AAFP = American Academy of Family Physicians; ACOG = American College of Obstetricians and Gynecologists; HIV = human immunodeficiency virus; HSV = herpes simplex virus; HPV = human papillomavirus; Pap = Papanicolaou.

*—No treatment available; currently used to stratify risk of cervical neoplasia.

Information from references 2 through 9 and 15 through 25.

Table 4. Comparison of STI Screening Recommendations for Pregnant Women

<table>
<thead>
<tr>
<th>STI</th>
<th>USPSTF&lt;sup&gt;2-9&lt;/sup&gt;</th>
<th>CDC&lt;sup&gt;15-19&lt;/sup&gt;</th>
<th>AAFP&lt;sup&gt;20&lt;/sup&gt;</th>
<th>ACOG&lt;sup&gt;21-25&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>Screen women younger than 25 years and others at increased risk</td>
<td>Screen all</td>
<td>Screen women 25 years and younger and others at increased risk</td>
<td>Screen women at increased risk</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>Screen women younger than 25 years and others at increased risk</td>
<td>Screen women at increased risk</td>
<td>Screen women younger than 25 years and others at increased risk</td>
<td>Screen women at increased risk</td>
</tr>
<tr>
<td>Syphilis</td>
<td>Screen all</td>
<td>Screen all</td>
<td>Screen all</td>
<td>Screen all</td>
</tr>
<tr>
<td>HIV</td>
<td>Screen all</td>
<td>Screen all</td>
<td>Screen all</td>
<td>Screen all</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Screen all</td>
<td>Screen all</td>
<td>Screen all</td>
<td>Screen all</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>No specific recommendation</td>
<td>Screen women at increased risk</td>
<td>No specific recommendation</td>
<td>Screen women at increased risk</td>
</tr>
<tr>
<td>HSV</td>
<td>Do not screen</td>
<td>No specific recommendation</td>
<td>Do not screen</td>
<td>No specific recommendation</td>
</tr>
<tr>
<td>HPV*</td>
<td>No specific recommendation</td>
<td>No specific recommendation</td>
<td>No specific recommendation</td>
<td>No specific recommendation</td>
</tr>
</tbody>
</table>

STI = sexually transmitted infection; USPSTF = U.S. Preventive Services Task Force; CDC = Centers for Disease Control and Prevention; AAFP = American Academy of Family Physicians; ACOG = American College of Obstetricians and Gynecologists; HIV = human immunodeficiency virus; HSV = herpes simplex virus; HPV = human papillomavirus.

*—No treatment available; currently used to stratify risk of cervical neoplasia.

Information from references 2 through 9 and 15 through 25.
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