

Office-Based Screening for Sexually Transmitted Infections in Adolescents

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abstract

Almost 1 in 4 adolescents have a sexually transmitted infection (STI). These infections are preventable through safe sexual practices and routine screening. Pediatricians are the first line of clinical care for adolescents and are well positioned to offer sexual and reproductive health care counseling and services to their patients; yet, there is a paucity of sexual health screening provided at routine health supervision visits. This article addresses the epidemiology of STIs in adolescents, reviews the evidence of current clinical practice, presents recommended STI screening from government and medical agencies, and offers strategies to address barriers to providing care for adolescents and for sexual health screening in primary care.

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In the United States, adolescents account for most of the reported sexually transmitted infections (STIs), yet they make up only 25% of all ages reporting sexual activity.¹ Despite recommendations from national medical organizations to screen adolescents for STIs, pediatricians are not routinely screening these patients. There are several contributing factors, which include the following: adolescents are a challenging population to reach, adolescents may be reticent to seek care because of concerns of embarrassment and confidentiality, and pediatricians may prioritize other health topics, and not broach discussion of sexual health, during preventive health care visits.

PROVIDER STI-SCREENING PRACTICES

Screening for STIs is recommended by the American Academy of Pediatrics (AAP), the Centers for Disease Control and Prevention (CDC), the US Preventive Services Task Force, the American Academy of Family Physicians (AAFP), and the American College of Obstetricians and Gynecologists (ACOG)²⁻⁵ (Table 1); yet, screening rates for sexual health and STIs remain inadequately low in primary care and among pediatricians. One study found that, on average, pediatricians spend 36 seconds on the topic of sexual health with their adolescent patients.⁶ Numerous studies, including those using nationally representative data,⁷ report that pediatricians often do not adhere to sexual health screening recommendations.⁸⁻¹¹ The evidence of insufficient screening is similar regardless of geographic location or

type of clinic. In a study of Title X visit records of female patients 15 to 24 years of age in the northwestern United States, 75% were screened during comprehensive health visits compared with 34% who were screened during acute care visits, although this varied widely by state.⁸ A retrospective chart review study of female patients 14 to 25 years of age in the Midwest found that only 42% of those who met the Healthcare Effectiveness Data and Information Set criterion for *Chlamydia* (CT) screening were tested.⁹ In an academic center in the eastern United States, 65% of eligible patients were offered CT screening.¹² In a national survey of pediatricians, 46% reported routine screening of all sexually active patients for STIs, and 27% reported routine screening only for HIV.¹⁰

Lack of time has been identified as the most common barrier to providing sexual health counseling. Other barriers include cultural or language differences, discomfort among pediatricians with the topic, and acknowledging adolescent concerns about confidentiality.^{10,13} Disparities exist as to which patients get screened and which do not. Younger adolescents (14–15 years of age) are less likely to be screened, whereas African American and Latina female patients and patients with public insurance are more likely to be screened.⁹

ADOLESCENT AND CAREGIVER PERSPECTIVES

Many adolescents want to discuss sexual health with their pediatricians if there is a collegial, nonjudgmental

approach.¹⁴ When there is good pediatrician-patient communication, adolescents report feeling more satisfied with their pediatricians and the office visit.^{15,16} In a national survey of adolescents and young adults 15 to 25 years of age, reported reasons for declining STI testing included not thinking they were at risk for STIs and concerns about confidentiality.¹⁷ Just getting to preventive health visits is challenging for adolescents because of a lack of understanding of the necessity of health visits when they feel fine, lack of transportation, prolonged waiting room wait times, insufficient time spent with the pediatrician,¹⁶ and reliance on parents to cover health care costs.

Caregivers understand the importance of preventive health care visits, which includes addressing sexual health; however, there are varying opinions regarding the age at which sexual health screening should begin and knowing all that is discussed during the health care visit.^{16,18} Parents echo the concern of long wait times as a barrier to seeking preventive health care services.¹⁶

STI-SCREENING GUIDELINES FOR ADOLESCENTS

The following screening guidelines are recommended by the AAP, CDC, US Preventive Services Task Force, AAFP, and ACOG. All sexually active female patients <25 years of age (some agencies include 25-year-olds) should be screened annually for *C trachomatis* and *Neisseria gonorrhoeae* (Table 1); STI testing may be offered to all sexually active men, and CT and gonorrhea (GC) screening is recommended for males who have sex with males (MSM). Screening is also encouraged in clinical settings with high CT and GC prevalence, such as adolescent clinics, correctional facilities, geographical areas with high prevalence, and communities at increased risk.^{19,20} There are differing opinions on the necessity of routine

TABLE 1 Recommended STI Screening Guidelines for Adolescent Female Patients

Organization	Guideline
AAP	All sexually active patients ≤25 y old
ACOG	All sexually active adolescent patients
AAFP	All sexually active patients ≤24 y old
CDC	All sexually active patients <25 y old
USPSTF	All sexually active patients ≤24 y old

screening of female patients for *Trichomonas vaginalis*, and clinical practice is often based on population prevalence.

The CDC recommends that all sexually active people 13 to 64 years of age in the United States be tested for HIV at least once per year. Frequency of recommended screening depends on the level of patient risk. MSM and injection-drug users are considered to be at very high risk for HIV infection and may benefit from annual screening.^{2,4} MSM should also be screened for syphilis; otherwise, routine screening of asymptomatic adolescents is not recommended for syphilis, trichomoniasis, herpes simplex virus, or hepatitis A and B. Instead, pediatricians are advised to assess their local population prevalence and individual patient level of risk to determine the need for screening their patients. Many adolescents may be unaware that their behavior is risky or may be reticent to disclose risk factors when asked.

TESTING METHODS

Recommended tests for GC and CT have become more user-friendly for patients and pediatricians and do not add time to the pediatrician portion of the visit. No longer is there concern of pain with a penile swab, patient discomfort, or time-consuming pelvic examination. Nucleic-acid amplification tests that are approved by the Food and Drug Administration are the recommended specimen to screen for CT and GC. Screening may be as simple as collecting a urine sample and is the preferred sample type for male patients, with the same sensitivity and specificity observed as with urethral swabs in male patients with much less discomfort. Although self-collected vaginal swabs are the preferred method for female patients, not only because they have higher sensitivity than pediatrician-collected swabs but also because they are the

preferred collection method among patients,²¹⁻²⁶ urine is also acceptable and allows for simultaneous pregnancy testing. Pictorial instructions for self-collected vaginal swabs may be placed in clinic bathrooms.²⁷

It is recommended that MSM be screened for infection in the rectum (may also be self-collected²⁸) and oropharynx when screening for urethral infection. Screening should be considered for any male or female adolescent engaging in high-risk oral or anal sex. Nucleic-acid amplification tests are the recommended test for screening for GC and CT infection in the rectum and have recently been cleared by the Food and Drug Administration for testing for GC and CT in the oropharynx.

TREATMENT

Many of the barriers adolescents face in accessing care are also obstacles to ensuring appropriate treatment of STI-positive patients and their partners. There are concerns about confidentiality with paper prescriptions, lack of transportation to the pharmacy to pick up the medication, the cost of the medication, compliance with taking the medication as directed, and more generally, developmentally emerging but limited self-efficacy in negotiating the health care system. On-site witnessed treatment is the most effective method to administer medication in clinics where medication is stocked. However, more commonly, prescriptions are required for the patient and, when allowed by state law, should also be provided for all partners in the past 60 days or the most recent sex partner. Expedited Partner Therapy, when pediatricians provide medications or prescriptions to their patients for treatment of their partners, has been shown to decrease index patient reinfection rates and has been approved in most states.²⁹ Ensuring partner treatment is also

a challenge for adolescent patients because they may be embarrassed to notify partners of infection status, concerned about confidentiality in their peer group, or distraught from the likelihood of contracting an STI from their partner.

Considering all of the acknowledged barriers to accessing care, and if the adolescent patient feels well and asymptomatic, she or he often does not return to the clinic or is a “no show” for scheduled visits. Repeat testing for patients who test positive for CT and GC is recommended 3 months after treatment to test for reinfection. Test of cure to detect therapeutic failure (eg, repeat testing 3–4 weeks after completing therapy) is not necessary for patients who were treated with the recommended or alternative regimens unless therapeutic adherence is in question, symptoms persist, or reinfection is suspected. The most recent STI treatment guidelines are found on the CDC Web site³⁰ as well as via a free application for Apple and Android devices.

OVERCOMING BARRIERS TO CARE

Office-Based Settings

Providing confidential care to adolescents is the first step in successful office-based screening. Confidential care includes private, alone time with the adolescent separate from caregivers. Setting the stage early for caregivers about clinic policy and what to expect at the adolescent health visit is helpful in decreasing anxiety and questions from parents about why their children are being seen alone. Adolescents express an increased likelihood of seeking preventive health care services when they have an ongoing relationship with the pediatrician.¹⁶

Successful examples of enabling confidential care for adolescents include providing families with letters

explaining office practices of confidentiality and posting clinic policies in waiting areas and examination rooms. Clinics may opt to provide a standard of care, including screening for STIs in all adolescents regardless of sexual activity, so patients are not singled out as different in the eyes of their caregivers. Of utmost importance is identifying staff who enjoy working with adolescents, are sensitive to their developmental stages, and are credible in the eyes of the adolescent patient. To maximize the opportunity to reach adolescents and improve care delivery, there are efforts to screen for sexual health and STIs at health supervision visits and acute care visits. Online resources are available to foster an adolescent-friendly clinic.³¹

Previsit and Electronic Risk Screening

Prescreening patients in a private area of the clinic, separated from caregivers, with either paper or electronic screening questions helps with visit efficiency and potential pediatrician or patient discomfort with sensitive health topics. Electronic risk screening has been demonstrated to be effective in a variety of clinical settings and is acceptable and preferred by adolescents.^{32,33} If specific risk factors are identified through screening, then those should be addressed during the visit. Adding sexual health previsit screening to acute visits has greatly increased screening rates for some primary care practices. At these visits, consideration should be given to identify an adolescent-credible medical assistant or registered nurse to guide the screening and sample collection, thus decreasing the added time burden for pediatricians.

Technology-Assisted Follow-up and Partner Treatment

Using technology to reach adolescents regarding their health care is

effective, confidential, and preferred by adolescents.¹⁶ Text messaging for STI results offers a more private, and perhaps less embarrassing, method of communicating sensitive health information to adolescents. Texting results and reminders to seek treatment and follow-up care are also efficient for office staff.

Online resources exist for patients to anonymously notify partners that they were exposed to an STI and to seek treatment. Although these sites were developed for adult MSM, they are a potential resource for adolescents who are reticent to communicate with partners (www.inspot.org/). In the United Kingdom, where STI testing and treatment are cost-free, sexually active adolescents and young adults 16 to 24 years of age assessed the use of a smartphone-enabled STI self-testing device linked to clinical algorithms, which guide the user on self-collected urine or vaginal samples, online consultation, and electronic prescriptions; the results revealed a positive perception of this device to enable confidentiality from peers and family and avoid embarrassing face-to-face visits with providers.³⁴

Protected Confidential Care, Insurance Coverage, and Health Care Costs

All states have laws to protect the rights of adolescents who seek sexual and reproductive health care services without caregiver consent. Insurance companies are lagging behind in protecting confidentiality because the explanation of benefits sent to the family may indicate what types of services were provided to the adolescent patient. When guaranteeing confidential care to adolescents, it is important that they are aware of this possibility. Fortunately, Medicaid and federal Child Health Insurance Program recipients do not receive explanation-of-benefit documents. If necessary, an alternative plan for payment, without

using insurance, should be made, possibly with referral to a school-based health clinic (SBHC) or a public health STI or Family Planning Clinic offering sliding-scale fees for services.

FUTURE DIRECTIONS

Research

Sexual health research has been hampered by existing silos of HIV, STI, or unintended pregnancy prevention. Fewer interventions target all 3 potential adverse outcomes of risky sexual behaviors in adolescents. Future adolescent sexual behavior research needs to be comprehensive in scope and outcomes, set in real-world clinical settings, and cost-effective to be considered for scalability and broad implementation.

Parents remain an untapped resource in contributing to adolescent sexual health. Parents have powerful influence over their adolescents' sexual behaviors, yet they are a difficult population to reach because of work schedules and child care duties. Parental interventions have been found to be effective in improving parental communication about sexual health with their adolescents,³⁵ yet these interventions are costly and challenging to implement at a population level. Parents need intensive training and support to seek sexual health care for adolescents similar to what they receive for newborns and infants. Perhaps while the adolescent is with the pediatrician for their preventive health care visit, the caregiver could be tutored by staff or a computer program in sexual health communication with their children.

Providing Clinical Care

To increase STI screening, clinical care needs to reach adolescents where they are rather than expecting them to seek care themselves. SBHCs are a step in the right direction and have significant potential for their

scope of practice and population-level health care delivery. Nationally, SBHCs need to be empowered to provide comprehensive care and funded to offer free and confidential services to adolescents. We need to enable pediatricians to partner with SBHCs to ensure adequate care delivery to mutual patients and identify primary care offices within walking distance to schools.

Lessons From Europe

We need to learn from our European counterparts and offer comprehensive and free sexual health care to adolescents and young adults. Age of first sex and frequency of sexual activity is similar between US and European adolescents; however, adolescents in Europe report higher condom usage rates and contraception use and have much lower rates of STIs and unintended pregnancy.³⁶ Europeans have a higher acceptance of adolescent sexuality and, in turn, have provided them with open access to sexual health prevention services.^{37,38} In the United States, we should strive to achieve the same standard to provide comprehensive sexual health education to all adolescents, provide free sexual health care services to all adolescents, teach and urge adolescents to use condoms and contraception, and encourage protection of their sexual health just as they do when brushing their teeth to protect their oral health.

SUMMARY

Adolescence is a time of accelerated growth and development, both physically and psychosocially. It is a period of experimentation, discovery, and developing autonomy yet with continued reliance on caregivers and other adults for support and guidance. Pediatricians are adults with credible authority who have a unique opportunity to guide adolescents toward optimal

health and provide them the resources to do so.

ABBREVIATIONS

AAFP: American Academy of Family Physicians
 AAP: American Academy of Pediatrics
 ACOG: American College of Obstetricians and Gynecologists
 CDC: Centers for Disease Control and Prevention
 MSM: males who have sex with males
 SBHC: school-based health clinic
 STI: sexually transmitted infection

REFERENCES

- Centers for Disease Control and Prevention. STDs in adolescents and young adults. 2015. Available at: <https://www.cdc.gov/std/stats17/adolescents.htm>. Accessed May 10, 2019
- Bright Futures AAP. Guidelines for health supervision of infants, children and adolescents. Human immunodeficiency virus and sexually transmitted infections. 2017. Available at: <https://www.aap.org/en-us/professional-resources/practice-transformation/managing-patients/Pages/Periodicity-Schedule.aspx>. Accessed May 10, 2019
- Workowski KA, Bolan GA; Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, 2015 [published correction appears in *MMWR Recomm Rep*. 2015;64(33):924]. *MMWR Recomm Rep*. 2015;64(RR-03):1–137
- US Preventive Task Force. Human immunodeficiency virus (HIV) screening. 2018. Available at: <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/human-immunodeficiency-virus-hiv-infection-screening>. Accessed May 10, 2019
- The American College of Obstetricians and Gynecologists (ACOG). Clinical guidance & publications. Committee opinion: well-woman visit. 2018. Available at: <https://www.acog.org/>

Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Gynecologic-Practice/Well-Woman-Visit. Accessed May 10, 2019

- Alexander SC, Fortenberry JD, Pollak KI, et al. Sexuality talk during adolescent health maintenance visits. *JAMA Pediatr*. 2014;168(2):163–169
- Huppert JS, Goodman E, Khoury J, Slap G. Sexually transmitted infection testing and screening in hospital-based primary care visits by women. *Obstet Gynecol*. 2005;105(2):390–396
- Salomon SG, Torrone E, Nakatsukasa-Ono W, Fine DN. Missed opportunities for chlamydia screening in title X family planning clinics. *Sex Transm Dis*. 2017;44(9):519–523
- Wiehe SE, Rosenman MB, Wang J, Katz BP, Fortenberry JD. Chlamydia screening among young women: individual- and provider-level differences in testing. *Pediatrics*. 2011;127(2). Available at: www.pediatrics.org/cgi/content/full/127/2/e336
- Henry-Reid LM, O'Connor KG, Klein JD, Cooper E, Flynn P, Futterman DC. Current pediatrician practices in identifying high-risk behaviors of adolescents. *Pediatrics*. 2010;125(4). Available at: www.pediatrics.org/cgi/content/full/125/4/e741
- Ellen JM, Lane MA, McCright J. Are adolescents being screened for sexually transmitted diseases? A study of low income African American adolescents in San Francisco. *Sex Transm Infect*. 2000;76(2):94–97
- Playforth KB, Coughlan A, Upadhyaya KK. The association between insurance status and acceptance of chlamydia screening by teenagers who present for preventive care visits. *J Pediatr Adolesc Gynecol*. 2016;29(1):62–64
- Cook RL, Wiesenfeld HC, Ashton MR, Krohn MA, Zamborsky T, Scholle SH. Barriers to screening sexually active adolescent women for chlamydia: a survey of primary care physicians. *J Adolesc Health*. 2001;28(3):204–210
- Hoopes AJ, Benson SK, Howard HB, Morrison DM, Ko LK, Shafiq T. Adolescent perspectives on patient-provider sexual health communication: a qualitative study. *J Prim Care Community Health*. 2017;8(4):332–337

15. Brown JD, Wissow LS. Discussion of sensitive health topics with youth during primary care visits: relationship to youth perceptions of care. *J Adolesc Health*. 2009;44(1):48–54
16. Coker TR, Sareen HG, Chung PJ, Kennedy DP, Weidmer BA, Schuster MA. Improving access to and utilization of adolescent preventive health care: the perspectives of adolescents and parents. *J Adolesc Health*. 2010;47(2):133–142
17. Cuffe KM, Newton-Levinson A, Gift TL, McFarlane M, Leichter JS. Sexually transmitted infection testing among adolescents and young adults in the united states. *J Adolesc Health*. 2016;58(5):512–519
18. Song X, Klein JD, Yan H, et al. Parent and adolescent attitudes towards preventive care and confidentiality. *J Adolesc Health*. 2019;64(2):235–241
19. Centers for Disease Control and Prevention. Recommendations for the laboratory-based detection of *Chlamydia trachomatis* and *Neisseria gonorrhoeae*—2014. *MMWR Recomm Rep*. 2014;63(RR-02):1–19
20. LeFevre ML; US Preventive Services Task Force. Screening for chlamydia and gonorrhea: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2014;161(12):902–910
21. Schachter J, Chernesky MA, Willis DE, et al. Vaginal swabs are the specimens of choice when screening for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*: results from a multicenter evaluation of the APTIMA assays for both infections. *Sex Transm Dis*. 2005;32(12):725–728
22. Masek BJ, Arora N, Quinn N, et al. Performance of three nucleic acid amplification tests for detection of *Chlamydia trachomatis* and *Neisseria gonorrhoeae* by use of self-collected vaginal swabs obtained via an Internet-based screening program. *J Clin Microbiol*. 2009;47(6):1663–1667
23. Shafer M-A, Moncada J, Boyer CB, Betsinger K, Flinn SD, Schachter J. Comparing first-void urine specimens, self-collected vaginal swabs, and endocervical specimens to detect *Chlamydia trachomatis* and *Neisseria gonorrhoeae* by a nucleic acid amplification test. *J Clin Microbiol*. 2003;41(9):4395–4399
24. Schachter J, McCormack WM, Chernesky MA, et al. Vaginal swabs are appropriate specimens for diagnosis of genital tract infection with *Chlamydia trachomatis*. *J Clin Microbiol*. 2003;41(8):3784–3789
25. Hsieh Y-H, Howell MR, Gaydos JC, McKee KT Jr, Quinn TC, Gaydos CA. Preference among female Army recruits for use of self-administrated vaginal swabs or urine to screen for *Chlamydia trachomatis* genital infections. *Sex Transm Dis*. 2003;30(10):769–773
26. Knox J, Tabrizi SN, Miller P, et al. Evaluation of self-collected samples in contrast to practitioner-collected samples for detection of *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, and *Trichomonas vaginalis* by polymerase chain reaction among women living in remote areas. *Sex Transm Dis*. 2002;29(11):647–654
27. NC Department of Health and Human Services. Self-collected vaginal swabs for gonorrhea and Chlamydia. Available at: <https://epi.dph.ncdhhs.gov/cd/lhds/manuals/std/labtesting/selfcollectedswabs.pdf>. Accessed April 1, 2011
28. CDC. Self-collected anal swab instructions. Available at: https://stacks.cdc.gov/view/cdc/42172/cdc_42172_DS3.pdf. Accessed March 30, 2020
29. CDC. Expedited partner therapy. Available at: www.cdc.gov/std/ept. Accessed August 27, 2019
30. CDC. 2015 sexually transmitted diseases treatment guidelines. Available at: <https://www.cdc.gov/std/tg2015/default.htm>. Accessed December 27, 2019
31. WHO. Making health services adolescent friendly: Developing national quality standards for adolescent friendly health services. Available at: https://www.who.int/maternal_child_adolescent/documents/adolescent_friendly_services/en/. Accessed August 3, 2012
32. Goyal MK, Shea JA, Hayes KL, et al. Development of a sexual health screening tool for adolescent emergency department patients. *Acad Emerg Med*. 2016;23(7):809–815
33. Olson AL, Gaffney CA, Hedberg VA, Gladstone GR. Use of inexpensive technology to enhance adolescent health screening and counseling. *Arch Pediatr Adolesc Med*. 2009;163(2):172–177
34. Aicken CR, Fuller SS, Sutcliffe LJ, et al. Young people's perceptions of smartphone-enabled self-testing and online care for sexually transmitted infections: qualitative interview study. *BMC Public Health*. 2016;16:974
35. Santa Maria D, Markham C, Bluethmann S, Mullen PD. Parent-based adolescent sexual health interventions and effect on communication outcomes: a systematic review and meta-analyses. *Perspect Sex Reprod Health*. 2015;47(1):37–50
36. Guttmacher Institute. Data center. Available at: <https://www.guttmacher.org/fact-sheet/adolescent-pregnancy-and-its-outcomes-across-countries>. Accessed August 1, 2015
37. Schalet AT. Beyond abstinence and risk: a new paradigm for adolescent sexual health. *Womens Health Issues*. 2011;21(3 suppl):S5–S7
38. Schalet A. Must we fear adolescent sexuality? *MedGenMed*. 2004;6(4):44

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