Male Adolescent Sexual and Reproductive Health Care
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Male adolescents’ sexual and reproductive health needs often go unmet in the primary care setting. This report discusses specific issues related to male adolescents’ sexual and reproductive health care in the context of primary care, including pubertal and sexual development, sexual behavior, consequences of sexual behavior, and methods of preventing sexually transmitted infections (including HIV) and pregnancy. Pediatricians are encouraged to address male adolescent sexual and reproductive health on a regular basis, including taking a sexual history, performing an appropriate examination, providing patient-centered and age-appropriate anticipatory guidance, and delivering appropriate vaccinations. Pediatricians should provide these services to male adolescent patients in a confidential and culturally appropriate manner, promote healthy sexual relationships and responsibility, and involve parents in age-appropriate discussions about sexual health with their sons. *Pediatrics* 2011;128:e1658–e1676

**INTRODUCTION**

During adolescence, a number of changes occur for boys, including the physical, psychological, and social changes associated with puberty, and the majority of male adolescents report the initiation of sexual behavior.1 Many of these events, including sexual initiation, are associated with preventable consequences that can lead to significant morbidity and mortality.2 During this same time period, the number of health visits typically declines, particularly among older male adolescents, and there is a shift from routine to more time-limited acute visits.3

For health care providers, including primary care providers and pediatricians, who care for male adolescents, issues of puberty and sexuality are areas that should be commonly addressed with the male patient and his family.4 Even after the release of the American Medical Association’s *Guidelines for Adolescent Preventive Services* (GAPS)5 and *Bright Futures*,6 which recommend preventive health services for adolescents, few improvements have been observed in the counseling of male teenagers regarding the prevention of sexually transmitted infections (STIs) or HIV infection.7,8 Furthermore, data from outpatient ambulatory medical records show that primary care providers are 3 times more likely to take sexual health histories from female than male patients and twice as likely to counsel female patients on the use of condoms.9,10 Thus, it is important for primary care providers to have an understanding of what sexual/reproductive health care means for the male adolescent.

Addressing male teenagers’ sexual/reproductive health includes but is not limited to preventing STIs and HIV. The 1994 Cairo United Nations

**KEY WORDS**

male sexual health, male reproductive health, male adolescents, male puberty

**ABBREVIATIONS**

STI—sexually transmitted infection
SMR—sexual maturity rating
AAP—American Academy of Pediatrics
NSFG—National Survey of Family Growth
CI—confidence interval
HPV—human papillomavirus
CDC—Centers for Disease Control and Prevention
USPSTF—US Preventive Services Task Force

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The guidance in this report does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.
International Conference on Population and Development and the World Health Organization defined sexual/reproductive health as “a state of physical, mental and social well-being and not merely the absence of disease, dysfunction or infirmity, in all matters relating to the reproductive system, its functions and its processes.” Sexual health also requires a positive and respectful approach to sexuality and sexual relationships. People should be able to have pleasurable and safe sexual experiences free of coercion, discrimination, or violence. Men, along with women, have the right to be informed and have access to safe, effective, affordable, and acceptable methods of family planning of their choice and the right of access to appropriate health care services.

For health care providers, goals for male adolescents’ sexual/reproductive health beyond the prevention of STIs, HIV infection, unwanted pregnancy, and reproductive health-related cancers should include promoting sexual health and adolescent development, healthy intimate relationships and responsible behavior, and responsible fatherhood as well as reducing problems related to sexual dysfunction and infertility. Health care providers require the knowledge, skills, and confidence to screen and examine male adolescents and discuss with them and provide appropriate education about the scope of sexual/reproductive health care for male adolescents.

The goals of this report are to:
1. describe key components of male adolescents’ sexual/reproductive health;
2. explain how interactions with male adolescents and their families regarding sexual/reproductive health requires an individualized patient-centered approach; and
3. offer health care providers specific advice on how to deliver sexual/reproductive health care to male adolescents using each encounter with a young man as an opportunity.

I. CORE MALE ADOLESCENT SEXUAL/REPRODUCTIVE HEALTH KNOWLEDGE AREAS

A. Puberty

With pubertal changes and the development of reproductive capacity come questions and concerns. Puberty for male adolescents follows a predictable sequence, but clinicians need to be aware that its timing is variable because of a variety of factors, including heredity and race/ethnicity. For boys, the first visible sign of puberty and the hallmark of the second sexual maturity rating (SMR) stage (SMR2) is testicular enlargement, followed by penile growth (the hallmark of SMR3). During SMR4, a male’s testicular volume has reached approximately 9 to 10 cm³ and his peak height growth typically occurs.

Results from a recent national survey suggest that the median age of boys’ pubertal initiation is trending earlier in the United States, especially among non-Hispanic white boys. One study used estimates from a sample of non-Hispanic white, non-Hispanic black, and Mexican American males 8 to 19 years of age. Two independent analyses of the same data indicate that the median age of SMR2 for genital development was 10.0 years for non-Hispanic white boys, 9.2 to 9.5 years for non-Hispanic black boys, and 10.3 to 10.4 years for Mexican American boys, whereas the median age of SMR2 for pubic hair development was 12.0, 11.2, and 12.3 years, respectively. These data suggest that a significant portion of boys are entering puberty earlier than 9.5 years, which was the previous lowest age of normal entry into puberty for boys. Future studies with comparable measures are needed to confirm these secular trends.

B. Alterations in Growth Associated With Puberty

Health conditions related to male growth and development are not uncommon, can be quite distressing, and might not be identified until adolescence. The frequencies of more common disorders are 1 in 500 to 700 for Klinefelter syndrome; 1 in 1000 to 4000 for fragile X syndrome; 1 in 5000 to 10 000 for Marfan syndrome; and 1 in 8000 to 10 000 for Kallman syndrome. Other non–STI-related male genital issues that occur during adolescence include gynecomastia (40%-65% of male teenagers), testicular torsion (8.6 per 100 000 males 10–19 years of age), varicocele (10% of males), and testicular cancer (3.1 in 100 000 males 15–19 years of age). Early and delayed pubertal timing, including short stature, can result in negative consequences for the developing male. Consequences can include higher mean levels of aggression and delinquency. Earlier-maturing boys might have more frequent involvement in risk-taking behaviors, and later-maturing boys might have lower levels of confidence and self-efficacy and increased experiences of teasing, bullying, mental health issues, and substance abuse. Even a common issue such as acne, which affects 95% of male adolescents, can be related to self-reported embarrassment, lower self-esteem, depression, and anxiety. Given the frequency of these growth and developmental concerns, the typical practicing health care provider will certainly see male patients with 1 or more of these disorders.

C. Sexuality

Sexuality, as defined by the World Health Organization in 2002, is a cen-
ental aspect of the human life course and encompasses sex, gender identities and roles, sexual orientation, intimacy, and reproduction. Although sexuality can be experienced and expressed in thoughts, fantasies, desires, beliefs, values, behaviors, roles, and relationships, not all sexuality dimensions are experienced or expressed. One’s sexuality is also influenced by a variety of factors including biological, psychological, familial, societal, political, cultural, and religious factors. Before adolescence even begins, boys might be curious and ask questions about sex, body parts, differences between boys and girls, and where babies come from. However, not all parents talk about sex with their children. In the United States, many more mothers than fathers talk about sex with their sons, but mothers are less comfortable talking about sex with their sons than with their daughters. Fathers have also been shown to have more difficulty communicating about sexuality-related topics with their adolescents.

A recent study of California teenagers and their parents found that adolescents who reported that their parents had more frequent sexual-related communication also reported feeling closer to their parents, being more comfortable talking with their parents in general, and having more open conversations about sex with their parents. Health care providers are in a position to advise male patients and their parents about the value and importance of repeatedly talking about sex and related topics. Involving parents and sons in sexual health discussions can help reinforce family values and create opportunities for sons to ask clarifying questions instead of relying on misinformation provided by their peers. Male adolescents should be encouraged to talk with their health care provider about general health and, in particular, sex, relationships, and prevention of STIs/HIV and pregnancy. Male adolescents cite their mothers, doctors, and nurses as their principle resources for general health care concerns and cite doctors and other health care providers as 1 of their top 4 sources of sexual health information inclusive of parents, health classes, and television. Schools, media, and the Internet can also play important roles in the provision of sexual health information. For example, male teenagers who received instruction on AIDS prevention and sex education at school were more likely to have fewer sexual partners, engage in fewer sex acts, and use condoms more consistently than those who did not receive such information. However, adolescents should understand the potential negative influence of media and the Internet, because negative sexual health messages from these sources can lead to risky sexual behaviors.

**D. Sexual Development**

During adolescence, teenagers begin the process of developing a sexual self-concept, which involves the combination of physical sexual maturation, age-appropriate sexual behaviors, and formation of a positive sexual identity and sense of well-being. In early adolescence, boys might become preoccupied with body changes, become interested in sexual anatomy and sex, compare changes in their body with others, and explore touching and mutual masturbation. Along with the experience of spontaneous erections, ejaculation related to masturbation, and the onset of nocturnal ejaculatory events during sleep (ie, “wet dreams”), there are many reasons why preadolescent and older boys might have questions and anxieties about their emerging sexuality. Later, male adolescents begin to test their ability to attract others through dating and sexual behavior. It is not uncommon for a male to have anxieties and questions about genital size and function, especially when comparing himself to others and after initiating sexual behavior.

Some male adolescents might be exploring their sexual attraction to others, and others might already recognize that they are heterosexual, homosexual, bisexual, or transgender. Studies have found that gay male youth who have a supportive environment during the disclosure process can have a more positive psychological adjustment. As discussed in the American Academy of Pediatrics (AAP) statement on sexual orientation and adolescents, boys who are questioning and gay and do not have supportive environments are at increased risk of social isolation, school failure, family conflict, substance abuse, depression, suicide, and stigmatization. Most sexual-minority youth are quite resilient and work through adolescent development issues. Being gay or bisexual or questioning their orientation is not in itself a problem but is a risk factor for exploring other associated risks. Questioning, bisexual, and gay male youth who fear being “found out” may choose not to openly discuss their concerns with potentially helpful adults such as their health care provider. Because sexual identities might be “fluid” or subject to change during adolescence, providers may find it more beneficial to inquire about sexual attractions and actual behaviors of their adolescent patients rather than asking about sexual identity (ie, how a person identifies his or her own sexuality). The health care provider might ask a series of questions such as, “A question or even a concern that a teen might have is, am I attracted to both guys and girls, just guys, or just girls…has that been a question for you? If so, have you been
able to answer that yet?” “Have you ever had sex with women, men, or both?” “Have you ever engaged in vaginal, oral, or anal sex?”

E. Masturbation and Spermarche

On average, the age of first male masturbation occurs between 12 and 14 years of age; most boys learn about masturbation through self-discovery. Masturbation among males is common and ranges from 36% reporting masturbating 3 to 4 times per month to 10% reporting masturbating every other day or daily.52 There is no evidence that masturbation is harmful in general or to one’s sexual development or later adult sexual adjustment.53,54 However, myths related to negative consequences of masturbation persist and can result in inappropriate anxiety and/or guilt.

Before puberty, boys might masturbate to orgasm; however, no ejaculation will occur until pubertal changes commence.55 Sperm in the ejaculate, or spermarche, typically appears during SMR3, approximately 12 to 18 months after the testes begin to enlarge. Although mature sperm production begins after the first ejaculation, a young man should be considered fertile from the time of his first ejaculation.

Health care providers can reassure male adolescents that self-masturbation is a normal behavior and can be a positive expression of sexuality and a way to delay having sex and its associated risks. Health care providers can also assist male adolescents with information and resources about normal sexual physiology and function that might not otherwise be available at home or school.

F. Sexual Behavior and Its Consequences

Sexual behavior is a normal part of development. According to the Youth Risk Behavior Surveillance, more than half (59.6%) of school-aged male teenagers report that they have had sex by the 12th grade.2 Data from the 2002 National Survey of Family Growth (NSFG) indicate that among 15- to 19-year-old male adolescents who reported never having had vaginal sex, nearly one-quarter reported engaging in oral sex or mutual masturbation behaviors.1,56 More recent data from the NSFG indicate that approximately one-eighth of 15- to 19-year-old males report having oral sex or other sexual contact but not vaginal sex.57 Oral sex, in particular, is part of the repertoire of sexual behaviors and might predict involvement in other sexual behaviors.58-60 Thus, at a minimum, three-quarters of US male youth are reporting involvement in varying types of sexual behavior. Male adolescents also report an earlier age of sexual debut2 and more sexual partners than female adolescents,1,2,61 which are factors known to be associated with STI-acquisition risk.52,65 Sexual experience increases as teenagers get older; 59.6% of 12th-grade boys have report having had sexual intercourse, compared with 33.6% of 9th-grade boys.2 A substantial number of young men also report engaging in higher-risk sexual behaviors. Data from the 2009 Youth Risk Behavior Surveillance indicate that among male high school students, 25.9% reported using alcohol or drugs before last sex, 16.2% reported 4 or more lifetime partners, and 8.4% reported initiating sex at 13 years or younger.2 Data from the 2002 NSFG also showed that among 15- to 19-year-old males, 28.8% reported no condom use at last vaginal sex, 11.1% reported engaging in anal sex with a female partner, and 5.6% reported having sex with a prostitute or an HIV-infected person or often/always being high during sex.7

Patterns of male adolescent sexual behaviors also vary according to race/ethnicity.2 Higher proportions of non-Hispanic black high school boys (72.1%) report being sexually experienced compared with Hispanic (52.8%) or non-Hispanic white (39.6%) high school boys. Higher proportions of non-Hispanic black boys (24.9%) initiate sex at 13 years of age or younger compared with Hispanic (9.8%) and non-Hispanic white (4.4%) boys.

National US data on same-sex sexual attraction and behavior is limited. From the 1995 National Longitudinal Survey on Adolescent Health, the mean report of same-sex attraction or relationship among male adolescents was 8.4% (95% confidence interval [CI]: 7.5–9.3).49 In the 2006–2008 NSFG, 1.8% of 18- to 19-year-olds and 2.3% of 20- to 24-year-olds reported equally to both or mostly/only same-sex attraction.57 In the 2002 NSFG, 4.5% of male teenagers 15 to 19 years of age and 5.5% of young adult men 20 to 24 years of age reported a same-sex partner.61 In the 2006–2008 NSFG, 2.5% of male teenagers 15 to 19 years of age and 5.6% of young adult men 20 to 24 years of age reported a same-sex partner.57 Discordance between sexual attraction/orientation and behavior is also possible, because one’s sexual attraction and identity do not always predict sexual behavior.57,64,65

G. Unwanted Sex

Although males are more likely than females to agree with the statement, “sex is something that just happens,”66 the majority (82%) of males 12 to 19 years of age reported feeling pressured by friends to have sex.67 Among sexually experienced males 15 to 19 years of age, more than half (55%) wished that they had waited longer before having sex for the first time.68 and more than one-third (38%) of men 18 to 24 years of age reported that they really did not want sex to happen the first time that it did or had mixed feelings about it.56 Approximately 1 in 12
men (7.6%), particularly those whose first sexual intercourse was at younger than 15 years and non-Hispanic black men, reported that they had actually been coerced to have sex by a female (5.8%) or male (2%) Long-term consequences of sexual abuse of males include HIV risk behaviors, psychiatric disorders, substance abuse, and thoughts of suicide. Many male adolescents and young adults are unaware of state laws on statutory rape and resultant consequences. Although these punitive measures attempt to force people to change their sexual/reproductive health behavior, there are few data to support that such laws are effective deterrents to, for example, adolescent pregnancy. A recently prepared report by the Lewin Group contains a guide to state laws on statutory rape and reporting requirements. It is recommended that health care providers be aware of local statutory rape laws and be able to counsel teenagers about potential legal consequences of early sexuality, especially if a patient’s sexual partner(s) is younger than the patient. As discussed in the AAP statement on media education, pediatri- cians also need to become educated about the public health risks of media such as “sexting.” Resources for pa- tients and families that explain more about potential legal consequences of early sexuality, especially if a patient’s sexual partner(s) is younger than the patient. As discussed in the AAP statement on media education, pediatri- cians also need to become educated about the public health risks of media such as “sexting.” Resources for pa- tients and families that explain more about the public health risks of media such as “sexting.”

H. Dating Violence

Violence in adolescent relationships can include bullying, threatening, sexual harassment, dating violence, and/or coercion. Within the context of intimate relationships among romantic and sexual partners, such violence can be verbal, emotional, physical, or sexual. Male adolescents can be perpetrators, victims, or both. For example, 9.9% of high school students nationwide reported having been hit, slapped, or physically hurt intentionally by their boyfriend or girlfriend in the past year. The prevalence of experiencing dating violence was higher among male (11.0%) than female (8.8%) 9th- and 12th-grade students. Despite the high prevalence, many adolescents who are victims or perpetrators of violence do not seek help. Health care providers have an opportunity to promote healthy relationships, improve communication, and improve the detection of unhealthy relationships through screening for intimate partner violence (1 example of a mnemonic screening tool for violent behavior is FISTS [fighting, injuries, sex, threats, and self-defense]) and subsequent referral when appropriate.

I. Sexual Function and Dysfunction

Healthy sexual function has an important role in adolescents’ and young adults’ well-being and development. Few studies, however, have examined sexual health and/or problems with sexual dysfunction among adolescents. Common causes of sexual dysfunction among young adult men include anxiety about performance, premature ejaculation, worries about attractiveness during sex, decreased pleasure associated with condom use, and organic performance-related issues attributable to comorbid medical conditions (eg, diabetes, cardiac disease, neurologic deficits) or adverse effects from medication (eg, selective serotonin-reuptake inhibitors or alcohol). Health care providers have an opportunity to screen for problems with sexual performance (eg, “Some men may be worried because they ejaculate too soon or late or have difficulty getting or losing an erection. Have you ever experienced any of these problems?”) and offer reassurance or appropriately assess for an underlying medical condition.

J. STIs/HIV, Pregnancy, and Adolescent Fatherhood

Involvement in sexual behaviors places young men and their partners at risk of negative sexual/reproductive health outcomes that are preventable, such as STIs, HIV infection, unintended pregnancy, and reproductive health-related cancers such as anal cancer attributable to human papillomavirus (HPV).

Although adolescents and young adults 15 to 24 years of age represent only one-quarter of the sexually active US population, this population is estimated to account for half of the 18.9 million new STI cases and approximately 30% of all new HIV infections that occur each year. Among STIs, chlamydia, HPV infection, and trichomonia- sis account for 88% of all infections. Among all populations, rates of chla- mydia and gonorrhea are highest among people 15 to 24 years of age. The chlamydia prevalence rate for males 14 to 19 years of age reported from the recent National Health and Nutrition Examination Survey (1999–2002) was found to be 2.3% (95% CI: 1.5–3.5). This rate is not too dissimi- lar from the chlamydia rate of 3.67% (95% CI: 2.93–4.58) reported among young adult men 18 to 26 years of age in the National Longitudinal Study on Adolescent Health. The Add Health study also reported prevalence rates among 18- to 26-year-olds for gonorrhea (0.44% [95% CI: 0.26–0.77]) and trichomoniais (1.7% [95% CI: 1.3– 2.2%]). It is common for males with chlamydia and gonorrhea infections to be asymptomatic. Males who are not circumcised are also more likely to have gonorrhea (adjusted odds ratio: 4.0 [95% CI: 1.9–8.4]) and syphilis (adjusted odds ratio: 1.6 [95% CI: 1.2–2.2]) infections than circumcised males. Racial disparities have been observed for STIs other than HIV. Non-Hispanic black male adolescents have higher
rates of chlamydia, gonorrhea, and trichomoniasis compared with those of other race/ethnicity groups. In 2006, an estimated one-quarter of the 1.1 million people living with HIV infection in the United States were not aware of their HIV status. Young people 13 to 24 years of age represent an estimated 10% of undiagnosed cases each year. HIV prevalence among young men who have sex with men is estimated at 7.2% (5.6% for those 15–19 years of age, 8.6% for those 20–22 years of age). Rates are higher for non-Hispanic black, mixed/other race, and Hispanic young men. Young men at higher risk of HIV infection include men who have sex with men; have unprotected sex (especially with multiple partners); are past or present injection-drug users; exchange sex for money or drugs; are past or present sex partners of HIV-infected or bisexual persons or injection-drug users; are being treated for an STI; have a history of blood transfusion between 1978 and 1985; and request an HIV test, because nondisclosure might be indicative of high-risk behavior. Male circumcision among mostly African samples has been associated with a lower risk of HIV acquisition to the male himself and possible benefits to the female by decreasing transmission. The Centers for Disease Control and Prevention (CDC) is currently considering guidelines for the role of male circumcision in the prevention of HIV transmission in the United States. After a reduction in teen births and pregnancies from 1991 to 2005, more recent trends in behavioral risks for pregnancy (eg, declines in contraceptive use) have stalled or are reversing among certain groups, particularly non-Hispanic black and Hispanic teenagers. National data indicate that approximately 750 000 pregnancies occur each year among women younger than 20 years; the majority of teen pregnancies (82%) are unplanned or mistimed. These data translate to approximately 1 in 20 female teenagers becoming pregnant each year. Most of these pregnancies end in a live birth (57%), 27% end in induced abortion, and 16% end in fetal loss. The majority of teen pregnancies are fathered by males who are within 2 years of age or older of their partners. Among sexually experienced male adolescents, 1 in 8 (13%) reported that they have impregnated a partner, and 4% are fathers. Because of lacking or inaccurate documentation of paternal age on birth certificates, especially among younger and unmarried mothers, the rates of fatherhood among male adolescents might be even higher.

The consequences of teen pregnancy and STIs, including HIV infection/AIDS, are many and costly. Males diagnosed with an STI can have complications such as epididymitis and infertility and, if left untreated, can place female partners at risk for morbidity and mortality, such as acute and recurrent pelvic inflammatory disease and resultant tubal scarring, infertility, ectopic pregnancy, and HIV infection/AIDS. Although it can be challenging to disentangle the link between teen pregnancy and poverty, personal costs of teen pregnancy often include truncated schooling, increased unemployment, welfare dependency, lower lifetime earnings, single parenthood, depression, and poor infant outcomes. Each year, costs related to adolescent pregnancy and its complications are estimated to be $9 billion and costs related to STIs/HIV infection and their complications are estimated to be $17 billion.

### TABLE 1 Contraceptive Effectiveness: Rates of Unintended Pregnancies per 100 Women

<table>
<thead>
<tr>
<th>Method</th>
<th>First-Year Pregnancy Rate, %</th>
<th>Key</th>
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<tbody>
<tr>
<td></td>
<td>Consistent and Correct Use</td>
<td>As Commonly Used</td>
</tr>
<tr>
<td>Male methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vasectomy</td>
<td>0.10</td>
<td>0.15</td>
</tr>
<tr>
<td>Male condom</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>No method</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>Common female hormonal methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Progestin-only injectable</td>
<td>0.3</td>
<td>3</td>
</tr>
<tr>
<td>Combined oral pills, patch, ring</td>
<td>0.3</td>
<td>8</td>
</tr>
</tbody>
</table>

*Rates are largely from the United States.*


### K. Preventing STIs/HIV Infection and Pregnancy

The male adolescent and his partner, family, school, and health care provider all have important roles in preventing the negative consequences of sexual behavior. Table 1 summarizes the effectiveness of available male contraceptive options. Condoms are the most commonly used contraception method and are highly effective if used consistently and correctly. Over the past 3 decades, the report of condom use by male adolescents at first and most recent sex has increased, particularly among Hispanic and non-Hispanic black males. Seven in 10 male adolescents (71%) report condom use the first and most recent time they had sex. The majority of young men also report using condoms to prevent both pregnancy and STIs/HIV infection. However, during the past 3 decades, there has been little change in male
adolescents’ consistency of condom use (ie, use with every sexual encounter in the past year); less than half (48%) of sexually active male report consistent use. \(^1\) Barriers to condom use include being embarrassed when buying them, reduced physical sensation, incorrect use and lack of availability, planning, discussion, or negotiation with one’s partner. \(^1,123–128\) Reduced likelihood of condom use at most recent sex and inconsistency in condom use have been observed among young men who did not receive formal sex education at school or the community. \(^129\) Low condom use during adolescence, combined with the report of multiple partners, has also been shown to be associated with elevated STI rates when subjects become young adult men. \(^130\)

Approximately 10% of male adolescents report using withdrawal as their contraception method of choice. \(^1\) Although withdrawal does not protect against STIs/HIV infection and, thus, is not an appropriate form of STI/HIV prevention, effectiveness data (Table 1) show that it can substantially reduce the risk of pregnancy for people who report difficulties using contraception (eg, people with latex allergy or during unplanned sex acts). \(^131\) Withdrawal is better than doing nothing, but it must be emphasized that withdrawal is not equivalent to using other barrier methods (eg, condoms), hormonal methods, or dual contraception. Polyurethane condoms are also available for people who are allergic to latex.

Only one-quarter (24%) of male adolescents report the use of dual contraception methods (eg, combined condom use with a hormonal method). \(^1\) This may be explained by a lack of awareness of the partner’s contraception methods or familiarity with how female hormonal methods work, including emergency contraception. \(^132–134\) For example, situations in which a male was less likely to use a condom included if the male’s partner used a method of contraception, if the male was older at most recent sex, if the male’s partner was older at first sexual encounter, and during a casual first sexual encounter. \(^129\) Increased odds of ever or always using any contraceptive method is observed among teenagers who wait longer between the start of a relationship and first sex, discuss contraception before first sex, or use dual contraception methods. \(^135\) Two groups of teenagers, males and non-Hispanic white teenagers, are less likely to regularly talk about contraception and STIs with their partners before first sex than are females and teenagers from other racial groups. \(^136\) Health care providers have an opportunity to talk with males about all types of contraception and provide consistent messages about counseling for risk reduction (Table 2). Some teenagers might choose to take virginity pledges and abstain from sex until marriage. However, such pledges have not been found to have long-term effectiveness in preventing STIs and other adverse outcomes and might actually place pledge-takers at greater risk of STIs and unintended pregnancy. One prospective study found that adolescents who signed abstinence pledges experienced similar STI rates as did adolescents who did not sign pledges. \(^137\) Although pledge-takers delayed initiation of sex for a longer period of time, when pledge-takers initiated sex, they were less likely to use condoms and seek reproductive health care compared with their peers who did not sign pledges.

L. Male Adolescents’ Sexual/Reproductive Health Care Use

Male adolescents’ use of sexual/reproductive health care services remains low for a variety of reasons. For many, the onset of sexual behavior during adolescence serves as a rite of passage into manhood but does not trigger thinking about preventive behaviors related to the consequences of sexual behavior. Young men might also hold more traditional masculine beliefs that preclude them from seeking care despite having symptoms. \(^138,139\) In addition, the components of young men’s sexual/reproductive health care have been poorly defined and have historically received little attention. Unlike females, who have historically received bundled sexual/reproductive health care as part of gynecologic examinations, birth control visits, and prenatal care, \(^140\) this is not typically true for young men. Barriers to care can also play a role in male adolescents’ care-seeking in general and sexual/reproductive health care in particular. These barriers include fear; stigma; shame; denial; lack of social support; lack of confidential services; lack of health insurance options especially as they get older; and not knowing where to go for care. \(^141–146\) Given the asymptomatic nature of many STIs, including HIV infection, strategies are needed to raise young men’s awareness about sexual/reproductive health services, STI and HIV testing options, and related resources. Promoting sexual/reproductive health for young men can lead to sexual responsibility, healthy intimate relationships, and responsible fatherhood. Health care providers, and pediatricians in particular, are in the best position to deliver high-quality sexual/reproductive health care services to male adolescents and should view even follow-up, acute care, and immunization visits as opportunities to address these health issues. Health care providers can also use “clinical hooks,” such as sports physicals or acne follow-up, to keep male adolescents engaged in care and to deliver sexual/reproductive health care services.
# TABLE 2  Anticipatory Guidance Topics

<table>
<thead>
<tr>
<th>Anticipatory Guidance Topics and Questions</th>
<th>Example Message</th>
<th>Resources</th>
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<tbody>
<tr>
<td>Counseling on sexual risk reduction including barriers to condom use</td>
<td>Avoiding sex is the safest way to prevent pregnancy and STIs/HIV. If you choose to have sex, take responsibility and use a condom every time. If you do not have a condom, choose not to have sex.</td>
<td><a href="http://www.ahwg.net">www.ahwg.net</a> (see sexual health toolkit—provider, pages C13–C15)</td>
</tr>
<tr>
<td>2 separate sessions, 1 wk apart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session 1: assess for personal risk, barriers to risk reduction, and identification of a small risk-reduction step within 1 wk (eg, consistent condom use)</td>
<td>Choosing not to have sex at any point will not diminish one's status or manhood.</td>
<td><a href="http://www.sexetc.org/topic/guys_health">www.sexetc.org/topic/guys_health</a></td>
</tr>
<tr>
<td>Session 2: review previous week's behavioral-change successes and barriers, provide support for changes made, identify barriers and facilitators to change, and develop a long-term plan for risk reduction</td>
<td></td>
<td><a href="http://www.goaskalice.columbia.edu/Cat7.html">www.goaskalice.columbia.edu/Cat7.html</a></td>
</tr>
<tr>
<td>Help me understand why condoms are difficult for you to use. Do you vary your condom use depending on who your partner is? How can you reintroduce condom use in a relationship without creating issues about trust?</td>
<td></td>
<td><a href="http://www.iwannaknow.org">www.iwannaknow.org</a></td>
</tr>
<tr>
<td>What would you do if your partner does not want you to use a condom?</td>
<td>“I really like you but am not comfortable having sex without using a condom.”</td>
<td><a href="http://www.ahwg.net">www.ahwg.net</a> (see sexual health toolkit—provider, pages C56–C57; youth page C50)</td>
</tr>
<tr>
<td>Do you know how to make condom use more pleasurable?</td>
<td>Place a drop of lubrication in the inside tip of the condom. Also, condoms come in various shapes and sizes, and 1 condom type may not fit all.</td>
<td><a href="http://www.not-2-late.com">www.not-2-late.com</a>; 1-888-NOT-2LATE; <a href="http://bedsider.org/where_to_get_it">http://bedsider.org/where_to_get_it</a></td>
</tr>
<tr>
<td>What would you do if a condom breaks or slips off?</td>
<td>“Do you know about emergency contraception (eg, Plan B)? This is something we can get and have you take within the next 3 to 5 days to help prevent you from getting pregnant if you are not on birth control.”</td>
<td></td>
</tr>
<tr>
<td>What do you know about the consequences of sexual behavior?</td>
<td>You can have an STI and not even know it. Not all STIs have symptoms, and not all STIs are curable. Getting pregnant as a teenager comes with many legal and economic responsibilities. Having sex can have legal implications depending on who you have sex with and how old you and your partner are.</td>
<td><a href="http://www.youngmenshealthsite.org/std-general.html">www.youngmenshealthsite.org/std-general.html</a>; <a href="http://www.babycenter.com/">www.babycenter.com/</a> babyCostCalculator.htm; <a href="http://www.sexlaws.org">www.sexlaws.org</a></td>
</tr>
<tr>
<td>Demonstrate or provide resources (eg, videos, handouts) for correct condom use; distribute condoms</td>
<td>Using a condom can help reduce your risk of getting an STI and/or getting someone pregnant.</td>
<td><a href="http://www.cdc.gov/condomeffectiveness/brief.html">www.cdc.gov/condomeffectiveness/brief.html</a>; <a href="http://www.stdcentral.org/">www.stdcentral.org/</a> SitC/about</td>
</tr>
<tr>
<td>Have you ever been taught, using a condom model, how to correctly put on a condom?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How comfortable are you with putting on a condom?</td>
<td>Check that the condom has not expired and has been properly stored. When opening the package, be careful not to rip the condom. Once open, place the correct side of the condom over an erect penis. Hold onto the reservoir tip at the top, remove any excess air and slowly roll the condom all the way down over the erect penis to the penis base. After ejaculation, hold onto the condom rim at the base of the penis, making sure the condom does not slip off or leak. After removing the condom, dispose of it in the trash.</td>
<td></td>
</tr>
<tr>
<td>Communication with partner about sex</td>
<td>I encourage you to talk with your partner about contraception and getting tested together before you start engaging in a new sexual relationship.</td>
<td><a href="http://www.ahwg.net">www.ahwg.net</a> (see sexual health toolkit—provider pages C45–C65)</td>
</tr>
<tr>
<td>Do you talk with your partner about sex, preventing STIs/HIV, getting tested for STIs/HIV before having sex for the first time, getting tested together, preventing pregnancy, whether she is on birth control?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you know about the different types of female birth control methods?</td>
<td></td>
<td><a href="http://www.youngwomenshealth.org/contraception.html">www.youngwomenshealth.org/contraception.html</a></td>
</tr>
</tbody>
</table>
TABLE 2 Continued

<table>
<thead>
<tr>
<th>Anticipatory Guidance Topics and Questions</th>
<th>Example Message</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help teenaged fathers understand their role in fathering</td>
<td>Help me understand your relationship with your child(ren) (eg, emotional, physical, and financial support and barriers/facilitators to involvement)?</td>
<td>We know that fathers who are involved in their children’s lives can improve the health of their children and the health of the fathers themselves.</td>
</tr>
<tr>
<td>Assess for experience of stress</td>
<td>Identify local community resources to promote parenting role (parenting classes, educational support, job training, etc)</td>
<td><a href="http://www.fatherhood.org">www.fatherhood.org</a></td>
</tr>
</tbody>
</table>

II. ROLE OF THE HEALTH CARE PROVIDER

A. Provide Individualized Sexual/Reproductive Health Care to Male Adolescents

The provision of sexual/reproductive health care to young men in the clinical setting should be individualized on the basis of the patient’s developmental and psychosocial needs by using patient-centered approaches. Health care providers need to be comfortable taking a young man’s sexual/reproductive history to elicit the type of information needed to determine the appropriate anticipatory guidance, counseling, and treatment. Trust and relationship-building are also critical elements of the male adolescent’s visit that help him to feel comfortable regardless of a physician’s gender and/or background. Interviewing the young man one-on-one, separate from accompanying parents or guardians, will also improve the quality of information received and ensure confidentiality of the information shared. As with young women, health care providers need to be cognizant of minor consent laws in the states in which they practice and educate patients about specific state laws as appropriate.  

Myths about adolescent male sexuality still pervade American society. Health care providers should avoid making assumptions or allowing stereotypes about male adolescent sexuality influence interactions with their young male patients. Health care providers need to understand the specific needs of gay, bisexual, or questioning male adolescents and provide support and/or referral resources as appropriate. Sexual initiation during adolescence should be viewed as part of sexual development. Contrary to the image of male promiscuity, the majority of male adolescents have no more than one sex partner during a 1-year period. Most male adolescents also believe that they should be responsible for pregnancy prevention and report condom use as a means of preventing both STIs and pregnancy. Rather than holding young men responsible for the negative sexual/reproductive health outcomes seen among young women (pregnancy, STIs/HIV, and relationship violence), health care providers can address the other half of the partner equation that has historically been left out. Health care providers should share clear and consistent messages with all male adolescents, their parents, and schools about sexual health, comprehensive sex education, and regular care-seeking.

B. Deliver High-Quality Sexual/Reproductive Health Care to Male Adolescents

A number of national organizations make recommendations about clinical services that health care providers should deliver, including the AAP’s Bright Futures, the CDC, and the US Preventive Services Task Force (USPSTF). Sexual/reproductive health services that have been shown to be most effective for health care providers to provide include taking sexual health histories, assessing sexual risk, and providing behavioral counseling regarding STIs. Regarding laboratory screening for HIV infection, the USPSTF recommends HIV testing on the basis of risk factors for the individual and/or clinic setting. The CDC and Bright Futures recommend HIV testing for all persons 13 years of age and older and subsequent testing for all persons at high risk at least annually. Regarding laboratory screening for STIs, although the USPSTF has stated that there is insufficient evidence to screen sexually active young men for chlamydia and gonorrhea, the CDC recommends chlamydia screening among sexually active young men in high-prevalence settings (eg, STI, Job Corps, or jail clinics) and rescreening of persons infected with chlamydia 3 months later, and Bright Futures recommends screening sexually active adolescents for chlamydia and gonorrhea. The USPSTF and Bright Futures also recommend testing for syphilis on the basis of individual risk factors. Bright Futures also recommends an annual genital examination for SMR and observations for signs of STIs (ie, warts, vesicles) and testicles for hydrocele, hernias, varicocele, or masses. Refer to the AAP’s recommended childhood and adolescent immunization schedule. The CDC Advi...
A number of verbal and written tools are available that can assist health care providers to take a sexual health assessment and other components of the adolescent’s psychosocial history, including the HEAADSSS (home, education and employment, eating, activities, drugs, sexuality, suicide and depression, and safety) assessment and Bright Futures toolkits (http://brightfutures.aap.org/tool_and_resource_kit.html).4,167,168

D. Perform a Physical Examination

Despite the lack of evidence-based guidelines supporting routine testicular screening and teaching of testicular self-examination for detection of testicular cancer, a genital
examination, including examination of the testicles, represents an important part of a male adolescent’s complete physical examination during annual preventive health visits and, specifically, as part of a visit related to a genital complaint. The content of the pediatric/adolescent physical examination required to report preventive health care codes (Current Procedural Terminology [CPT] codes 99382–99384; 99392–99394) depends on age and developmental level and would be expected to include a male genital examination. There are many reasons to perform a genital examination, including SMR for hair and genital progress in pubertal development; screening for visual signs of STIs such as herpes, warts, and asymptomatic urethral discharge; identification of signs for genetic diseases such as firm testes (Klinefelter syndrome) or ambiguous genitalia (congenital adrenal hyperplasia); evidence of structural anomalies including varicocele, which can affect fertility, or uncorrected hypospadias, which can result in significant embarrassment, problems with sexual function, and/or abnormal urine flow. Other issues might be related to an uncircumcised penis (eg, phimosis and hygiene); hair or skin findings for treatable conditions (eg, folliculitis and tinea cruris); previously unrecognized absent testes attributable to cryptorchidism; evidence of testicular atrophy secondary to central or exog-
enous causes (eg, steroids or marijuana use); and normal findings that might require reassurance (eg, pearly penile papules).

Ultimately, one of the goals of the genital examination is to help the young man gain a better understanding of his own body and reproductive parts. For example, young men might not be aware of their genital anatomy, the importance of using genital protection as part of sports participation, or general issues related to their hygiene. Guidance can be given by briefly reviewing the main components of the physical examination and, as the examination progresses, by commenting on normal anatomy, what to expect next, and pertinent findings. Examination in gowns will help prevent missing important physical examination findings, such as gynecomastia or truncal acne. Avoiding lengthy discussions while the patient is undressed also allows for greater patient comfort.

Despite the lack of recommendations that support testicular cancer screening, the USPSTF has noted that "clinicians should be aware that patients who present with symptoms of testicular cancer are frequently diagnosed as having epididymitis, testicular trauma, hydrocele or other benign disorders." The American Cancer Society has stated that it "does not have a recommendation on regular testicular self-examinations for all men." Risk factors for testicular cancer among men include being white; being between 13 and 39 years of age; having a history of cryptorchidism, testicular atrophy/dysgenesis, testicular trauma, HIV infection, and Klinefelter syndrome; or having a family history of testicular cancer. An external anal inspection, a digital rectal examination, and screen- ing for hernia as part of the male adolescent physical examination should be performed on the basis of specific concerns or complaints such as a bulging mass or pain (hernia examination), hemorrhoid or rectal bleeding (digital rectal examination), or risk factors that would warrant an external anal inspection for HPV lesions in a young man who engages in receptive anal intercourse.

Health care providers might be confronted with male adolescents who refuse a genital examination because of concerns about homophobia, lack of experience with such examinations, fear of getting an erection, or even because of previous abuse. Understanding the specific concern can help the health care provider educate the patient about the importance of this examination, determine the priority of such an examination for a particular patient, and negotiate how and when to complete the required components of the examination. Routinely examining the genitals from childhood through adolescence can help the male patient understand the routine nature of this examination component. The use of a chaperone might also be relevant and should be considered during all genital examinations for patient and/or provider comfort regardless of whether the provider and patient are the same gender.

E. Perform Laboratory Screening

Sexually active male adolescents 13 years of age and older should be offered an HIV test. HIV testing should occur at least once by 16 to 18 years of age or sooner once an adolescent is known to be sexually active or otherwise at risk. Youth at high risk should be tested annually for HIV infection. Adolescents tested for other STIs should be tested for HIV at the same visit. Youth seen in urgent care facilities and emergency departments should be routinely tested for HIV. In addition, routine HIV screening of young persons in high-risk or high-prevalence settings, such as juvenile detention centers and jails, STI clinics, and teen clinics, has been shown to increase the yield for HIV screening. HIV testing options include serologic tests that provide results within 1 to 2 weeks and newer noninvasive oral rapid tests that provide results within 20 minutes. Sexually active male adolescents are considered to be among the high-risk groups for STIs and, in general, should be screened even if they are asymptomatic for chlamydia using noninvasive urine tests. Other screenings available as urine tests include those for gonorrhea and trichomonas. Routine screening of asymptomatic males should be based on the prevalence rates within the communities. Among sexually active male adolescents with painful urination (dysuria) and/or urethral discharge, urethritis attributable to an STI will be the most common cause of infection, as opposed to urinary tract infection, which affects less than 0.01% of male adolescents with normal urogenital anatomy. Noninvasive tests are the preferred method (eg, urine-based nucleic acid amplification tests [NAATs] to screen for chlamydia and gonorrhea). These tests have high sensitivities and specificities (>90%) as well as high patient acceptability. Refer to the current CDC’s sexually transmitted diseases treatment guidelines for best testing strategies if NAATs are unavailable.

For male patients who report sexual behavior with another man, the CDC’s sexually transmitted diseases treatment guidelines recommend HIV serologic testing, if HIV-negative or not tested in the previous year; syphilis serologic testing; a test for urethral infection with chlamydia and gonorrhea among men who have had insertive sex during the preceding year; a test for rectal infection with chlamydia and gonorrhea among men who have had receptive anal sex during the preceding year; and a test for pharyngeal in-
fection for gonorrhea among men who have had receptive oral sex during the preceding year. No current guidelines detail screening recommendations for chlamydia of the pharynx or for anal screening of the rectum using anal Papanicolaou tests or HPV typing. Anal Papanicolaou tests and/or HPV typing are currently under review as possible screening tools for anal carcinoma. Nucleic acid amplification tests are not currently approved by the Food and Drug Administration for pharyngeal or rectal specimens but might be available for use in some laboratories. Both chlamydia and gonorrhea can infect the rectum, and gonorrhea can also infect the pharynx. However, there is little evidence that chlamydia can cause pharyngeal infection.

Health care providers should be able to diagnose STIs that occur most commonly in male adolescents and young adults, including chlamydia, gonorrhea, HPV, trichomoniasis, herpes, ascending infections (ie, epididymitis), and syphilis. The CDC’s sexually transmitted diseases treatment guidelines (www.cdc.gov/std/treatment) and the AAP’s Red Book (http://aapredbook.aappublications.org) are updated on a regular basis and provide the most up-to-date screening, testing, and treatment recommendations. Health care providers should also encourage STI treatment of their partners through provision of expedited partner therapy, if allowed by state law (www.cdc.gov/std/upt); bringing the partner in for testing and treatment; or referral to local public health facilities (www.hivtest.org).

Health care providers are encouraged to communicate to their patients and families that the delivery of sexual/reproductive health services, including STI/HIV testing, is a standard and routine part of adolescent clinical services. State mandates that require an explanation of benefits to be sent to parents of adolescent patients might conflict with patients’ rights to confidential care and minor consent. Adolescents who are seeking confidential testing for STIs might require referral to settings that provide confidential STI testing, such as local public health clinics or Planned Parenthood centers. Informed and proactive health care providers can ensure that their patient’s confidentiality is maintained.

**F. Provide Anticipatory Guidance and Counseling**

Health care providers should tailor anticipatory guidance and counseling on the basis of specific risk factors and/or information obtained during an individual male patient’s visit and his developmental stage. Health care providers should continue to be up-to-date on coding and local reimbursement practices that allow for the time it takes to counsel on preventive health care matters to be included within a problem-focused visit. Table 2 lists suggested sexual/reproductive health anticipatory guidance topics and messages for male adolescent patients. The USPSTF recommends moderate- to high-intensity behavioral counseling in the clinic setting to prevent STIs for all sexually active adolescents. One example of such a counseling approach would be 2 separate 20-minute clinical sessions 1 week apart. During the first clinical session, patients are assessed for personal risk, barriers to risk reduction, and identifying a small risk-reduction step within the next week. During the second clinical session, the previous week’s behavioral change successes and barriers are reviewed, support for changes made is provided, barriers and facilitators to change are identified, and a long-term plan for risk reduction is developed. A study of this method found that participants in intervention clinics who were receiving structured behavioral counseling reported significantly higher condom-use rates and fewer new STIs than participants at control sites. Males and females benefited equally from counseling interventions, and brief interventions were more effective among adolescents than older participants.

**G. Administer Vaccinations**

Reproductive health-related vaccines, including hepatitis A and B and HPV vaccines, should be administered to male adolescents as recommended by the AAP and the CDC’s Advisory Committee on Immunization Practices along with other routine immunizations for male adolescents.

**III. GUIDANCE FOR HEALTH CARE PROVIDERS**

1. Know the core sexual/reproductive health knowledge areas for male adolescents and understand the affect that sexual health has on the male adolescent’s quality of life.
2. Encourage parents to talk about pubertal development and have age-appropriate discussions about sexual health with their sons on repeated occasions.
3. Guide male adolescents to build healthy, responsible relationships.
4. Recognize that some male adolescents might be dealing with issues of sexuality that can affect their psychosocial and physical health, provide appropriate support for families, and identify local resources for referral when appropriate.
5. Regardless of reason for the visit and clinical setting, routinely provide quality male sexual/reproductive health services to all male adolescents.
6. Deliver core sexual/reproductive health services to male adoles-
from handouts to posters to make male adolescents feel welcome and comfortable. Educational materials such as handouts, pamphlets, references, and videos should also be made available to reinforce office-based educational efforts.

10. Continue to be up-to-date on coding and local reimbursement practices that allow for preventive health care counseling to be included within problem-focused visits.

REFERENCES

7. Provide sexual/reproductive health issues.


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### Male Adolescent Sexual and Reproductive Health Care
Arik V. Marcell, Charles Wibbelsman, Warren M. Seigel and the Committee on Adolescence

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