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Examining the Development and Sexual Behavior of Adolescent Males

Mary A. Ott, MD

Abstract

A careful examination of young men's sexuality by health professionals in pediatrics, primary care and reproductive health is foundational to adolescent male sexual health and healthy development. Through a review of existing literature, this article provides background and a developmental framework for sexual health services for adolescent boys. The article first defines and provides an overview of adolescent boys' sexual health, and then discusses developmentally focused research on the following topics: (1) early romantic relationships and the evolution of power and influence within these relationships; (2) developmental "readiness" for sex and curiosity; (3) boys' need for closeness and intimacy; (4) adopting codes of masculinity; (5) boys' communicating about sex; and (6) contextual influences from peers, families, and providers. This article concludes by examining the implications of these data for sexual health promotion efforts for adolescent males, including HPV vaccination.

INTRODUCTION

The objective of this article is to provide background and a developmental framework of adolescent males' sexual health, in an effort to support professionals providing clinical care to adolescents. The US Food and Drug Administration recently approved, and the Advisory Committee on Immunization Practices (ACIP) recommended as an option, vaccination of males 9 to 26 years of age with the quadrivalent human papillomavirus (HPV) vaccine. In contrast to the release of HPV vaccines for females, the discussion of male HPV vaccination has focused on medical indications—such as risk, benefit, and cost-effectiveness—with remarkably few references to adolescent boys' sexuality or sexual behavior. Yet, vaccination can provide an important point of contact with health care providers and an opportunity for anticipatory guidance [1], particularly in the area of sexual health.

This lack of attention to adolescent male sexual health is not surprising, and may stem from cultural views of male adolescence. For example, entering the term "adolescent male" into the Google Images search engine yields the following results: (1) an adolescent male lion; (2) a young man shaving; and (3) a penis of a male adolescent with urethral discharge. These images capture common perceptions of adolescent male sexuality—animalistic, adult, and a focus on negative consequences. Sexuality, however, is an intrinsic part of human nature

Author Correspondence: Mary A. Ott, MD, Indiana University School of Medicine, 410 West 10th Street, HS 1001, Indianapolis, IN 46202, Author Correspondence: maott@iupui.edu.

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and achieving sexual health has been identified as a key developmental task for all adolescents [2], boys included.

This lack of attention may also be due to the relatively limited amount of research on the topic [3], as well as the necessarily interdisciplinary nature of that research, which sits at the intersection of medicine, nursing, psychology, social work, sociology, and anthropology. This article reviews existing health and developmental literature on adolescent male sexual health, and then applies these research findings to the clinical care of adolescent boys. It initially defines and provides an overview of young men's sexual health and then discusses developmentally focused research on the following topics: (1) early relationships and the evolution of power and influence within relationships; (2) developmental "readiness" for sex and curiosity; (3) the need for closeness and intimacy; (4) adopting codes of masculinity; (5) communicating about sex; and (6) contextual influences from peers, families, and providers. The article concludes by examining the implications of these data for sexual health promotion efforts, including HPV vaccination.

DEFINING SEXUAL HEALTH

Sexual health is a broad term that captures not just sexual behavior and health outcomes (see next section), but also relationships and sexuality, including the capacity to "appreciate one's own body," to "express love and intimacy in appropriate ways," and to "enjoy and express one's sexuality throughout life" [4]. A complete list can be found in Table 1, adapted from the Sexuality Information and Education Council of the United States (SIECUS). The development of healthy, or "positive" relationships, sexuality, and sexual health are normative developmental tasks of adolescence[2] .

General adolescent development occurs within a broad family and social context. As described in a social ecological model, family and social environment influence an individual adolescent's development in a bidirectional manner over time [5]. This social ecological perspective has been specifically applied to adolescent sexual development. It includes not just an individual's sexuality and the dyadic interactions within romantic couples, but also broader social relationships (e.g., peers, families), as well as the sociocultural and sociopolitical institutions controlling education, access to information, and access to health care [6]. For young men's sexual health, these broader contextual influences span both cultural beliefs and codes of conduct related to masculinity and gender, as well as early romantic relationships and their social contexts, including peers, families, providers, and communities. These contextual influences can either support or undermine a young man's sexual development.

Sexual health promotion includes policies, programs, and clinical services that support development and optimize sexual health. Although sexual health promotion frequently focuses on the individual, sexual health promotion for adolescents must be situated in the above broader developmental and social context. Health professionals caring for adolescent boys have three challenges in sexual health promotion: (1) supporting the individual adolescent's positive sexual development (Table 1); (2) helping families, schools, and communities support this positive sexual development; and (3) preventing, screening for, and treating the negative consequences of sexuality, including sexually transmitted infections (STIs), adolescent fatherhood, and interpersonal violence. These challenges will require both a shift from a risk-based model to a more developmental model of adolescent sexuality and a broadening of scope to address the multiple contextual influences on adolescent boys' sexual health. We first address risk, then shift our focus to development.

BRIEF OVERVIEW OF SEXUAL BEHAVIORS AND OUTCOMES

During adolescence, sexual behavior becomes normative. Among young men in high school, reports of vaginal-penile intercourse increase from 38.1% of 9th grade boys to 62.8% of 12th grade boys [7]. These estimates are consistent with the 2002 National Survey of Family Growth (NSFG), which found that 49% of males 15 to 19 years of age reported vaginal-penile intercourse [8]. Other sexual behaviors were also common, as 55% of these 15 to 19 year olds reported oral intercourse, and 11% reported anal intercourse [8]. Among high-risk populations of young men, such as those involved with the juvenile justice system or attending STI clinics, the proportion who are sexually active is higher and the age of sexual onset is lower [9–11]. While not all sexual behavior in adolescent males is problematic, a young age of onset represents an increased risk for sexual coercion, STIs, and early fatherhood [12].

Boys are frequently viewed primarily as perpetrators of interpersonal violence; however, they are also frequently victims of interpersonal violence. Among 9th to 12th grade adolescents, 4.5% of boys reported that they were forced to have intercourse, (compared to 11.3% of girls); in other forms of dating violence, this trend reversed itself, with 11% of boys reporting that their girlfriend or boyfriend hit, slapped, or physically hurt them on purpose in the previous 12 months, compared to 9% of girls [7].

Adolescent pregnancy prevention focuses on girls; however, males (frequently adolescent boys) are clearly causal participants in pregnancies, and fatherhood has an impact on their lives as well as on the lives of girls. Among sexually experienced males 15 to 19 years of age, 13% report that they have caused a pregnancy and 4% report having a child [13]. A recent review of adolescent fatherhood highlights the developmental implications of early fatherhood. Contrary to common belief, most adolescent fathers would like to remain involved with their child; however, these young men face multiple stressors, including the need to provide financially for their child, having limited parenting skills and a limited knowledge of child development, and, frequently, having limited emotional support and resources [14].

Adolescent and young adult men bear a disproportionate burden of STIs. In a nationally representative sample of males 18 to 22 years of age, 3.7% were infected with Chlamydia, 1.7% with Trichomonas, and 0.4% with gonorrhea [15,16]. Among high-risk populations such as those in the juvenile justice system, STI clinic attendees, and homeless adolescents, the prevalence of Chlamydia can be 2 to 3 times as high [17–19]. In 2007, the most recent year for which statistics are available, the Centers for Disease Control and Prevention (CDC) reported an increase in the prevalence of Chlamydia and gonorrhea in males 15 to 19 years of age: Chlamydia rates increased 14% to 615 per 100,000, and gonorrhea increased 4% to 286 per 100,000 [20]. The CDC also documented a continuous increase in new HIV cases among individuals 15 to 19 years of age (both male and female) across 34 states, from 1081 in 2004 to 1703 in 2007 [21]. Relevant to use of the recently approved quadrivalent HPV vaccine for males, data indicate that HPV infections are common, with HPV infection rates between 29% and 65% in different young adult (18 to 25 years of age) male populations [22–26].

Assessing a young man’s risk of acquiring an STI is difficult because membership in high-risk groups is marked by instability. Longitudinal data show that young men may often move into and out of high-risk groups as they move from adolescence into young adulthood. In a prospective birth cohort, 26% of males 18 to 26 years of age were considered to be members of a core group at high risk for STIs (≥5 heterosexual partners) in at least 1 of the 3 assessments (18, 21, and 26 years); however, only 0.9% were members of core groups at

all 3 assessments [27]. Similar movement was observed in the National Survey of Adolescent Males (NSAM), in which young men were grouped into 1 of 5 sexual risk groups in each of 3 waves, based on having unknown partners, “riskier” partners, or concurrent partners. Across the 3 waves, participants moved in and out of high-risk groups. More than 20% of young men who had not had sex at Wave 1 were in a high-risk group 2 years later in Wave 2. Approximately 40% of young men in higher sexual risk groups in Waves 1 and 2 moved to lower-risk groups 7 years later in Wave 3 [28]. Thus, strategies that target only “high-risk boys” for prevention opportunities will miss helping all adolescents who could be at risk. It is for this reason that we need universal prevention strategies (e.g., age-based) instead of risk-based strategies for adolescent vaccination.

KEY ASPECTS OF ADOLESCENT MALE SEXUAL DEVELOPMENT

Early Romantic Relationships, Power, and Influence

Across adolescence, boys progress from same-gender peer groups, move to mixed-gender peer groups, and then to dyadic friendships and romantic relationships [29]. In the National Longitudinal Survey of Adolescent Health (Add Health), the proportion of boys reporting a romantic relationship over the past 18 months increased from 26% for 12-year-olds to 69% for 18-year-olds [30].

Boys’ relationships change qualitatively as well as quantitatively across adolescence. Collins has identified five dimensions of relationships that evolve across adolescence: romantic involvement (in a relationship); partner identity (characteristics of people they date); relationship content (what partners do together); relationship quality (positive, supportive, or beneficial experiences of relationships); and cognitive and emotional processes in the relationship [31]. While a growing body of literature exists on romantic involvement, partner identity and relationship content, less is understood about relationship quality or cognitive and emotional processes related to relationships. Younger adolescents practice at “going together,” or dating. Our work and that of others describe early relationships as short-lived, usually arranged through intermediaries, characterized as having limited physical interaction and emotional investment, and occurring in school, on the phone, or in groups [29,32,33]. Across adolescence, relationships lengthen, with increased time spent together, increased closeness, increased likelihood of sexual behaviors (vaginal, oral, or anal sex), and increased emotional investment [30,34–36]. These changes suggest that what a younger adolescent male means by his “relationship” is markedly different from what an older adolescent male means by a “relationship.”

Relationship power is an important aspect of relationship quality. Research with older adolescents and young adults supports a predominant belief that “girls want love; boys want sex,” which places the power in the relationship in the boy’s court [37]. However, data on early and middle adolescents paint a different picture. From the perspective of relationship power, a school-based study of 957 adolescents in the 7th to 11th grades with recent dating experience found that boys had less relationship power than girls. Specifically, the study describes: (1) adolescent girls were more confident than boys in navigating relationships; (2) adolescent boys were perceived by both girls and boys to have less relationship power; and (3) adolescent boys were more likely to report that their dating partner attempted to or actually influenced them [38]. Boys expressed levels of love and emotional attachment similar to girls in this study.

Differences in the ages of partners were frequently cited as one source of the power differential in adolescent relationships; however, Add Health data show that while adolescent girls reported romantic partners 1 to 3 years older, adolescent boys reported romantic partners that were the same, or close to the same, age. In Wave I of Add Health,

the mean difference in age between 13- and 18-year-old boys and their partners was less than 2 months. [30].

Relationship oriented motivations tap into relationship quality, and are commonly expressed in studies of early to middle adolescent boys. For example, among 10th grade boys, getting to know one's partner was the most commonly endorsed reason for dating, and relational motives (e.g., because I liked or loved the person) were the most common motivations for sex [39].

Similarly, Add Health findings about how relationships unfold provide additional insight into young men's relationship content and quality. These findings contrast with conventional expectations that boys' relationships emphasize sexual behaviors and girls' relationships emphasize social and romantic behavior. In Add Health, males and females reported a similar unfolding of social, romantic, and sexual events within romantic relationships. Both reported, in sequential order, of first spending time with their partner in a group, then holding hands, thinking of themselves as a couple, and telling others they were a couple. Subsequently, participants reported meeting their partner's parents, spending time alone, kissing, and seeing less of friends. Later events included declaring love, touching under clothes, talking about birth control or STIs, touching genitals, and engaging in sexual intercourse [40]. Some racial and ethnic variation existed in the sequence of events.

"Readiness" for Sex and Curiosity

Readiness, curiosity, and anticipation of sex are characteristics closely tied to adolescent development. It has become clear that categorizations of adolescents in a binary way (e.g., as sexually experienced or not) fail to capture the range of adolescent development and decision-making. A better description is one that views the transition to sex as a developmental process in which an individual is abstinent, goes through a period of becoming "ready," and transitions to a first sexual experience (see, for example, Ott, 2006 [41]). A multiethnic group of 10th graders chose the answer "I was ready" as an important reason for intercourse [39]. This process of determining "Am I ready?" for a sexual relationship can be complex, involving social, emotional, and physical assessments such as whether the adolescent feels he or she can handle a sexual relationship [41].

Related to "readiness" for sex are the developmental needs for curiosity and exploration related to sex. In our qualitative work, a younger group of adolescents (of both genders) describes an emerging curiosity about sex [42]; similarly, in the previously mentioned study of 10th grade boys, curiosity—or "to find out what it feels like"—was one of the top 2 reasons for intercourse [39].

Anticipation also plays a role in sexual decision making. Sexually inexperienced males 15 to 19 years of age in NSAM were characterized as "delayers" or "anticipators" based on their expectations about initiating sex. Delayers did not expect to initiate sex in the next year; anticipators did. In this longitudinal analysis, anticipators were more likely to have had sex in the next year (53% vs 13%) [43]. A variety of contextual variables were associated with being an anticipator or a delayer; these included subsequent sexual behavior, maternal education, age of mother at her first birth, parenting practices, and church attendance [43]. The preparation for, and contextual associations with, sexual experiences reported in this and previous studies suggest that for many adolescent boys sex requires more than opportunity. It requires curiosity, interest, preparation, and planning, facilitated by relationships and social contexts.

The Need for Closeness and Intimacy

Another aspect of adolescent boys' romantic relationships at odds with common perceptions of masculinity is the need for closeness and intimacy. For example, a study of positive motivations for sex in a multiethnic sample of ninth graders found that male participants ranked intimacy above sexual pleasure and social status as an important relationship goal [44]. In this study, sexually experienced participants expected that sex was just as likely to lead to intimacy as to sexual pleasure [44]. A qualitative study that interviewed ninth grade boys about relationships further developed our understanding about intimacy. The authors observed a complex interaction between these young men's desire for intimacy and emotional connection, and the pressure they felt to conform to traditional masculine norms [45]. Young men's desire for intimacy carries into young adulthood. In a study of reasons for sex among college-aged young adults, males and females differed in physical reasons for sex (e.g. pleasure), goal attainment reasons for sex (e.g. popularity) and insecurity-related reasons for sex (e.g. keep partner), but both genders similarly ascribed their rationale to emotional reasons for sex, such as love and connection [46].

Adopting Codes of Masculinity

Masculinity is comprised of a culturally defined set of beliefs that men should, or should not, behave in certain ways. Examples include beliefs that men should be independent and self-reliant, be physically tough, not show emotion, be dominant and sure of themselves, and be ready for sex [47,48,49]. Various research activities with young men have described the enactment of masculinity within relationships. Focus groups with older adolescent males have highlighted the masculine belief that "sex is part of a male's role in a relationship" [50]. Individual interviews with African American high school students have described a "gamesmanship" of sex, which features competition and subterfuge [51]. Demonstration of masculinity appears particularly important in peer-group settings, as seen in a conversational analysis of boys' interactions with each other during focus groups [52] and in in-depth interviews with adolescent boys [53]. In our work, we also observed that group processes in focus groups reinforced ideas about masculinity and homophobia: For example, whereas individual interview participants seldom made overt statements about gaming girls, focus group participants expressed sentiments such as, "Like, when we used to be at the mall, I used to get the girl number. So, you know, I can prove to my dudes that … I got game, too" (Ott MA, unpublished observations).

Among early to middle adolescent males, these beliefs about masculinity appear with the previously described relationship-oriented motivations. Interviews with high school freshmen have demonstrated a tension between the enactment of masculinity beliefs and relationship desires. For example, a need to maintain emotional distance and a desire for sex compete with an underlying desire for closeness and intimacy [45]. Among ninth grade boys, both intimacy and sexual pleasure were endorsed as goals for relationships as well as expectations that sex would meet these goals [44]. The studies examining high school boys' motivations for dating and sex referenced above [39] support these observations. The 10th graders in this study had only limited endorsement of masculine ideology [39].

Endorsement of conventional beliefs about masculinity has been associated with both poor sexual health outcomes and lower levels of engagement with health services among older adolescent and young adult males. In NSAM, adolescent males 15 to 19 years of age with stronger endorsement of traditional beliefs about masculinity reported more sexual partners, less intimate relationships with those partners at last intercourse, less consistent condom use, and less belief in male responsibility to prevent pregnancy [54]. Controlling for potential confounders, baseline masculinity beliefs in this cohort also were associated with less use of

primary care [55]. These findings point to the importance of the social and cultural aspects of sexuality, such as masculine beliefs, in young men's sexual health.

Communication about Sex

Young men's communication about sex with female partners has been associated with improved protective sexual health behaviors. In a 1995 NSAM survey, 69% of males 15 to 19 years of age reported that they had discussed contraception with a partner, 44% had discussed sexually transmitted diseases (STDs) with a partner, and 22% reported that their partner ever refused sex without a condom. All 3 types of communication were associated with increased use of dual contraceptive methods [56]. Other studies of young men have shown similar associations between adolescent-partner communication and condom use, and have additionally demonstrated that adolescent-partner communication is related to contextual factors such as adolescent-parent communication and parenting styles [57].

While the positive associations between sexual behavior and measures of communication about sexual protective behaviors are encouraging, little is known about the actual content of these communications. This is due in part to limitations in measurement. Complex concepts such as communication about sexual topics are often measured with just a single item (e.g., whether they have discussed STDs or birth control with their most recent partner [57]).

Broader Contexts: Peers, Family, Media, and Health Care Providers

Peers—Romantic and sexual behaviors arise from, and occur in, a broader peer context [29,58]. For boys, key aspects of this peer context are its limited ability to teach intimacy within friendships, and peers' ability to support (or undermine) romantic relationships. Adolescent boys' friendships, including communication within those friendships, differ from those of adolescent girls. In a qualitative study with middle adolescent boys, participants experienced high levels of intimacy only with very close friends. This intimacy included sharing secrets, sharing money, and protecting one another physically and emotionally [59]. Boys without close friends described a sense of loss and a desire for the intimacy of friendship. Trust was a key issue, with most participants describing distrust of all but their closest friends. A quantitative study examined changes in the quality of boys' friendships (e.g., intimacy, affection, reliable alliance) over 4 years. Compared with girls, adolescent boys started high school with a much lower quality of close friendships, but the quality then increased steeply during the high school years [60]. These gender differences in close relationships are supported by data from other populations and have implications for both content and type of communication with peers about sex. Another school-based study found that, compared with girls, adolescent boys had lower self-efficacy to communicate with peers about sex [61]. Together, these data suggested that boys have very limited opportunities to "practice" the skills needed for romantic relationships, such as intimacy, closeness, and trust.

Families—Family structure and parenting style are also important influences on young men's sexual health. These associations have been shown in both small studies and nationally representative samples. For example, data from NSAM demonstrated the association between family structure (e.g., single parent, low income) and sexual experience, coital frequency, and fathering a child [62]. Data from Add Health link parent connectedness and perceived parental disapproval with timing of sexual debut as adolescents [63]. Among Minnesota high school students, both the feeling that parents cared and high parental expectations were associated with a lower likelihood of sexual experience [64]. Among gay and bisexual youth recruited from low-risk groups, family connectedness and support were highly and negatively correlated with HIV status [65].

Multiple studies have demonstrated that young men are less likely than young women to report receiving information about sexual topics from their parents (e.g. the decision to have sexual intercourse, contraception, condoms, pregnancy) [66]. Although the proportion of young men receiving information about sex is lower than young women, it is still sizeable – among 9th through12th grade students, 48% of males versus 56% of females said that they learned about birth control, contraception or pregnancy prevention from their parents [66]. This suggests that parents remain an important source of information. Our work with young men shows that, when adolescent boys receive information from their families, it is often from a male family member, and focuses on using condoms and preventing pregnancy [67].

Media—Sexual media is commonly used by adolescent boys. A middle school study found that 53% of adolescent boys in middle school reported exposure to sexually explicit (pornographic magazines, internet porn, X-rated movies) media [68]. The relationship between media exposure, attitudes, and sexual behaviors is complex. Multiple studies have shown associations between consumption of different types of sexual media, gender stereotypes, and increased frequency or earlier onset of sexual behaviors [68–70]. However, these studies also demonstrate complex interactions with gender, income, and type of media. For example, for boys, sexually explicit media was longitudinally associated with permissive sexual norms, but not gender roles; the opposite was true for girls [68] . For young men, sexual behavior has been associated with sexually explicit media, and to a high proportion of sexual programming in the young man's media diet [68,69].

Providers—Health care providers can also be important resources for sexual health for adolescents. In a study of adolescents' perceptions of their health care experience, young men who reported that their providers discussed sensitive topics also reported the following perceptions: (1) their provider understood their problems, (2) their provider eased their worries, (3) the adolescent made treatment decisions, (4) the adolescent took control over their treatment, and (5) the adolescent took responsibility for their treatment [71]. The adolescent vaccine platform will provide additional points of contact between adolescents and health care providers [72]. Research suggests that, even with multi-dose vaccine regimens such as that for HPV, the majority of parents want at least the first dose to be part of a comprehensive adolescent health assessment, and many would like all 3 doses to be part of comprehensive health visits [73].

IMPLICATIONS FOR BOYS' CLINICAL CARE AND PUBLIC HEALTH PRACTICE

These data paint a complex and evolving developmental portrait of adolescent boys' romantic and sexual relationships. Research gaps remain in key areas, including a better understanding of the emotional aspects of young men's sexuality, or tracing the evolution of power within relationships from early adolescence through young adulthood. This research will require a longitudinal study design and the use of mixed methodologies across a range of disciplines.

Despite these research gaps, a developmental framework is emerging. For younger boys, this developmental story includes curiosity and anticipation. In contrast to conventional wisdom, younger adolescent males desire intimacy, do not strongly ascribe to traditional masculine beliefs, and hold less relationship power than young women. Peers and families can either support or undermine a young man's healthy sexual development. Health care providers may have more influence than they presume.

Taken together, these findings support a broader approach to the promotion of sexual health, moving beyond STI screening and condom use, and, instead, placing young men's sexual

health within wider social and developmental contexts. Based on these findings are five clinical, counseling, and intervention recommendations:

1. Boys' early relationships are so much at odds with conventional wisdom that clinicians will need to first assess their own assumptions about boys, boys' relationships, and masculinity.
2. Boys' early sexual experiences are generally situated within romantic relationships, and peer, family, and social contexts. Boys' risks for STIs and early fatherhood are linked not just to the sexual behaviors themselves, but also to what, when, how, and with whom these behaviors are enacted. A sexual history should include contextual elements, such as relationship characteristics (both romantic and sexual), family experiences, and the values of the adolescent, his family, and his peers.
3. Younger boys describe curiosity about, "readiness" for, and anticipation of sex. This "curiosity" stage presents an opportunity to counsel an interested and receptive audience about healthy relationships and safer sexual behaviors. As such, it should be supported. Anticipation predicts subsequent behavior, so for clinicians, inquiring about anticipation may allow STI prevention and safer sex counseling to be better tailored to an adolescent's likely behavioral trajectory. Adolescents describe challenges in determining if they are "ready" for sex; individual counseling may need to advance beyond simple messages about abstinence and condom use, to helping adolescents assess whether, in fact, their relationship is ready and they themselves are ready.
4. Most of our STI prevention programs and sexual risk reduction messages are geared directly to the adolescent. Given the research demonstrating the importance of families in young men's sexual health, STI prevention efforts will need to expand their myopic focus on individuals to include families. This expansion in scope also fits nicely with a visit for an 11 to 12 year old boy to get his adolescent vaccines—the parents are present and, more often than not, they are interested in supporting their adolescent's healthy development.
5. Primary care should include both primary and secondary sexual health promotion efforts. Table 2 provides a list of Web-based resources for sexual health promotion. From a primary care perspective, this starts with careful sexual histories, office-based risk-reduction counseling (described above), and attention to the relationship contexts of young men's sexual health. Primary sexual health care also includes screening sexually active adolescents for STIs such as gonorrhea, Chlamydia, Trichomonas, and HIV [74], plus vaccination for sexually transmissible infections such as hepatitis A, hepatitis B, and HPV [75].

References

1. Broder KR, Cohn AC, Schwartz B, et al. Adolescent immunizations and other clinical preventive services: a needle and a hook. Pediatrics 2008;121:S25–34. [PubMed: 18174318]
2. Welsh, DP.; Rostosky, SS.; Kawaguchi, MC. A normative perspective of adolescent girls' developing sexuality. In: Travis, CB.; White, JW., editors. Sexuality, Society, and Feminism. Washington, DC: American Psychological Association; 2000. p. 111-140.
3. Smith LH, Guthrie BJ, Oakley DJ. Studying adolescent male sexuality: where are we. J Youth Adolesc 2005;34:361–377.
4. National Guidelines Task Force. Guidelines for Comprehensive Sexuality Education: Kindergarten through 12th Grade. 3rd ed. Sexuality Information and Education Council of the United States; 2004. Available at: http://www.siecus.org/_data/global/images/guidelines.pdf
5. Bronfenbrenner U, Ceci SJ. Nature-nurture reconceptualized in developmental perspective: a bioecological model. Psychol Rev 1994;101:568–86. [PubMed: 7984707]

6. Tolman DL, Striepe MI, Harmon T. Gender matters: constructing a model of adolescent sexual health. J Sex Res 2003;40:4–12. [PubMed: 12806527]
7. Eaton DK, Kann L, Kinchen S, et al. Youth risk behavior surveillance—United States, 2007. MMWR Surveill Summ 2008;57:1–131. [PubMed: 18528314]
8. Mosher WD, Chandra A, Jones J. Sexual behavior and selected health measures: men and women 15–44 years of age, United States, 2002. Adv Data September 2005;15:1–55.
9. Romero EG, Teplin LA, McClelland GM, Abram KM, Welty LJ, Washburn JJ. A longitudinal study of the prevalence, development, and persistence of HIV/sexually transmitted infection risk behaviors in delinquent youth: implications for health care in the community. Pediatrics 2007;119:e1126–41. [PubMed: 17473083]
10. Armour S, Haynie DL. Adolescent sexual debut and later delinquency. J Youth Adolescence 2007;36:141–52.
11. Capaldi DM, Stoolmiller M, Clark S, Owen LD. Heterosexual risk behaviors in at-risk young men from early adolescence to young adulthood: prevalence, prediction, and association with STD contraction. Dev Psychol 2002;38:394–406. [PubMed: 12005382]
12. Albert, B.; Brown, S.; Flanigan, C., editors. 14 and Younger: The Sexual Behavior of Young Adolescents. Washington, DC: National Campaign to Prevent Teen Pregnancy; 2003.
13. Suellentrop, K.; Flanigan, C. Science Says: Pregnancy Among Sexually Experienced Teens, 2002. Washington, DC: National Campaign to Prevent Teen Pregnancy; 2006.
14. Hollman D, Alderman E, Adam HM. Fatherhood in adolescence. Pediatr Rev 2008;29:364–66. [PubMed: 18829774]
15. Miller WC, Swygard H, Hobbs MM, et al. The prevalence of trichomoniasis in young adults in the United States. Sex Transm Dis 2005;32:593–8. [PubMed: 16205299]
16. Miller WC, Ford CA, Morris M, et al. Prevalence of chlamydial and gonococcal infections among young adults in the United States. JAMA 2004;291:2229–36. [PubMed: 15138245]
17. Blake DR, Lemay CA, Gaydos CA, Quinn TC. Performance of urine leukocyte esterase in asymptomatic male youth: another look with nucleic acid amplification testing as the gold standard for chlamydia detection. J Adolesc Health 2005;36:337–41. [PubMed: 15780789]
18. Poulin C, Alary M, Bernier F, Carbonneau D, Boily MC, Joly JR. Prevalence of Chlamydia trachomatis and Neisseria gonorrhoeae among at-risk women, young sex workers, and street youth attending community organizations in Quebec City, Canada. Sex Transm Dis 2001;28:437–43. [PubMed: 11473214]
19. Johnson CC, Jones EH, Goldberg M, Asbel LE, Salmon ME, Waller CL. Screening for Chlamydia trachomatis and Neisseria gonorrhoeae among adolescents in family court, Philadelphia, Pennsylvania. Sex Transm Dis 2008;35:S24–7. [PubMed: 18607316]
20. Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2007. Atlanta, GA: US Department of Health and Human Services; 2008.
21. Centers for Disease Control and Prevention. HIV/Aids Surveillance Report: Cases of HIV Infection and AIDS in the United States and Dependent Areas, 2007. Atlanta, GA: US Department of Health and Human Services; 2009. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.
22. Giuliano AR, Lazcano-Ponce E, Villa LL, et al. The human papillomavirus infection in men study: human papillomavirus prevalence and type distribution among men residing in Brazil, Mexico, and the United States. Cancer Epidemiol Biomarkers Prev 2008;17:2036–43. [PubMed: 18708396]
23. Baldwin SB, Wallace DR, Papenfuss MR, Abrahamsen M, Vaught LC, Giuliano AR. Condom use and other factors affecting penile human papillomavirus detection in men attending a sexually transmitted disease clinic. Sex Transm Dis 2004;31:601–7. [PubMed: 15388997]
24. Weaver BA, Feng Q, Holmes KK, et al. Evaluation of genital sites and sampling techniques for detection of human papillomavirus DNA in men. J Infect Dis 2004;189:677–85. [PubMed: 14767822]
25. Svare EI, Kjaer SK, Worm AM, Osterlind A, Meijer CJLM, van den Brule AJC. Risk factors for genital HPV DNA in men resemble those found in women: a study of male attendees at a Danish STD Clinic. Sex Transm Infect 2002;78:215–8. [PubMed: 12238658]

26. Kataoka A, Claesson U, Hansson BG, Eriksson M, Lindh E. Human papillomavirus infection of the male diagnosed by Southern-blot hybridization and polymerase chain reaction: comparison between urethra samples and penile biopsy samples. J Med Virol 1991;33:159–64. [PubMed: 1652616]
27. Humblet O, Paul C, Dickson N. Core group evolution over time: high-risk sexual behavior in a birth cohort between sexual debut and age 26. Sex Transm Dis 2003;30:818–24. [PubMed: 14603088]
28. Dariotis JK, Sonenstein FL, Gates GJ, et al. Changes in sexual risk behavior as young men transition to adulthood. Perspect Sex Reprod Health 2008;40:218–25. [PubMed: 19067935]
29. Collins, WA.; Sroufe, LA. Capacity for intimate relationships: a developmental construction. In: Furman, W.; Brown, BB.; Feiring, C., editors. The Development of Romantic Relationships in Adolescence. New York, NY: Cambridge University Press; 1999. p. 123-147.
30. Carver, K.; Joyner, K.; Udry, JR. National estimates of adolescent romantic relationships. In: Florsheim, P., editor. Adolescent Romantic Relations and Sexual Behavior: Theory, Research, and Practical Implications. Mahwah, NJ: Lawrence Erlbaum Associates; 2003. p. 185-211.
31. Collins WA, Welsh DP, Furman W. Adolescent romantic relationships. Annu Rev Psychol 2009;60:631–652. [PubMed: 19035830]
32. Ott, MA.; McBride, KR.; Bell, DL., et al. International Society for Sexually Transmitted Disease Research. London: 2009. Adolescent boys' communication with partners about sex.
33. Eder, D.; Evans, CC.; Parker, S. School Talk: Gender and Adolescent Culture. New Brunswick, NJ: Rutgers University Press; 1995.
34. Furman, W.; Wehner, EA. Romantic views: toward a theory of adolescent romantic relationships. In: Montemayor, R.; Adams, GR., editors. Personal Relationships During Adolescence. Thousand Oaks, CA: Sage Publications; 1994. p. 168-95.
35. Galotti KM, Kozberg SF, Appleman D. Younger and older adolescents' thinking about commitments. J Exp Child Psychol 1990;50:324–39. [PubMed: 2262760]
36. Adams RE, Laursen B, Wilder D. Characteristics of closeness in adolescent romantic relationships. J Adolesc 2001;24:353–63. [PubMed: 11476611]
37. Allen L. Girls want sex, boys want love: resisting dominant discourses of (hetero) sexuality. Sexualities 2003;6:215–36.
38. Giordano PC, Longmore MA, Manning WD. Gender and the meanings of adolescent romantic relationships: a focus on boys. Am Sociol Rev 2006;71:260–87.
39. Smiler AP. "I wanted to get to know her better": adolescent boys' dating motives, masculinity ideology, and sexual behavior. J Adolesc 2008;31:17–32. [PubMed: 17537500]
40. O'Sullivan LF, Cheng MM, Harris KM, Brooks-Gunn J. I wanna hold your hand: the progression of social, romantic and sexual events in adolescent relationships. Perspect Sex Reprod Health 2007;39:100–7. [PubMed: 17565623]
41. Ott MA, Pfeiffer EJ, Fortenberry JD. Perceptions of sexual abstinence among high-risk early and middle adolescents. J Adolesc Health 2006;39:192–8. [PubMed: 16857530]
42. Ott MA, Pfeiffer EJ. "That's nasty" to curiosity: early adolescent cognitions about sexual abstinence. J Adolesc Health 2009;44:575–81. [PubMed: 19465322]
43. Forste R, Haas DW. The transition of adolescent males to first sexual intercourse: anticipated or delayed? Perspect Sex Reprod Health 2002;34:184–90. [PubMed: 12214908]
44. Ott MA, Millstein SG, Halpern-Felsher BL. Greater expectations: adolescents' positive motivations for sex differ by gender and sexual experience. Perspect Sex Reprod Health 2006;38:84–9. [PubMed: 16772189]
45. Tolman, DL.; Spencer, RE.; Harmon, T.; Rosen-Reynoso, M.; Striepe, M. Getting close, staying cool: early adolescent boys' experiences with romantic relationships. In: Way, N.; Chu, JY., editors. Adolescent Boys: Exploring Diverse Cultures of Boyhood. New York, NY: New York University Press; 2004. p. 236-55.
46. Meston CM, Buss DM. Why humans have sex. Arch Sex Behav 2007;36:477–507. [PubMed: 17610060]
47. Smiler AP. Thirty years after the discovery of gender: psychological concepts and measures of masculinity. Sex Roles 2004;50:15–26.

48. Chu JY, Porche MV, Tolman DL. The Adolescent Masculinity Ideology in Relationships Scale: development and validation of a new measure for boys. Men and Masculinities 2005;8:93–115.
49. Thompson EH Jr, Pleck JH, Ferrera DL. Men and masculinities: scales for masculinity ideology and masculinity-related constructs. Sex Roles 1992;27:573–607. [PubMed: 12322226]
50. Marcell AV, Raine T, Eyre SL. Where does reproductive health fit into the lives of adolescent males? Perspect Sex Reprod Health 2003;35:180–6. [PubMed: 12941651]
51. Eyre SL, Hoffman V, Millstein SG. The gamesmanship of sex: a model based on African American adolescent accounts. Med Anthropol Q 1998;12:467–89. [PubMed: 9884994]
52. Korobov N, Bamberg M. Positioning a 'mature' self in interactive practices: how adolescent males negotiate 'physical attraction' in group talk. Br J Dev Psychol 2004;22:471–92.
53. Cohan M. Adolescent heterosexual males talk about the role of male peer groups in their sexual decision-making. Sexuality & Culture 2009;13:152–77.
54. Pleck JH, Sonenstein FL, Ku LC. Masculinity ideology: its impact on adolescent males' heterosexual relationships. J Soc Issues 1993;49:11–29. [PubMed: 17165216]
55. Marcell AV, Ford CA, Pleck JH, Sonenstein FL. Masculine beliefs, parental communication, and male adolescents' health care use. Pediatrics 2007;119:e966–75. [PubMed: 17403834]
56. Lindberg LD, Ku L, Sonenstein FL. Adolescent males' combined use of condoms with partners' use of female contraceptive methods. Matern Child Health J 1998;2:201–9. [PubMed: 10728277]
57. Whitaker DJ, Miller KS, May DC, Levin ML. Teenage partners' communication about sexual risk and condom use: the importance of parent-teenager discussions. Fam Plann Perspect 1999;31:117–21. [PubMed: 10379427]
58. Shulman S, Scharf M. Adolescent romantic behaviors and perceptions: age-and gender-related differences, and links with family and peer relationships. J Res Adol 2000;10:99–118.
59. Way, N. Intimacy, desire, and betrayal in the friendships of adolescent boys. In: Way, N.; Chu, JY., editors. Adolescent Boys: Exploring Diverse Cultures of Boyhood. New York, NY: New York University Press; 2004.
60. Way N, Greene ML. Trajectories of perceived friendship quality during adolescence: the patterns and contextual predictors. J Res Adol 2006;16:293–320.
61. Halpern-Felsher BL, Kropp RY, Boyer CB, Tschann JM, Ellen JM. Adolescents' self-efficacy to communicate about sex: its role in condom attitudes, commitment, and use. Adolescence 2004;39:443–56. [PubMed: 15673222]
62. Ku L, Sonenstein FL, Pleck JH. Factors influencing first intercourse for teenage men. Public Health Reports 1993;108:680–94. [PubMed: 8265752]
63. Resnick MD, Bearman PS, Blum RW, et al. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. JAMA 1997;278:823–32. [PubMed: 9293990]
64. Lammers C, Ireland M, Resnick M, Blum R. Influences on adolescents' decision to postpone onset of sexual intercourse: a survival analysis of virginity among youths aged 13 to 18 years. J Adolesc Health 2000;26:42–8. [PubMed: 10638717]
65. Garofalo R, Mustanski B, Donenberg G. Parents know and parents matter; is it time to develop family-based HIV prevention programs for young men who have sex with men? J Adolesc Health 2008;43:201–4. [PubMed: 18639797]
66. Sutton, MJ.; Brown, JD.; Wilson, KM., et al. Shaking the tree of knowledge for forbidden fruit: where adolescents learn about sexuality and contraception. In: Brown, JD.; Steele, JR.; Walsh-Childers, K., editors. Sexual Teens, Sexual Media: Investigating Media's Influence on Adolescent Sexuality. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.; 2002. p. 26-55.
67. Rosenberger JG, McBride KR, Bell DL, Fortenberry JD, Ott MA. How do adolescent boys learn about condoms? A Qualitative Study [abstract]. J Adol Health 2009;44:S25.
68. Brown JD, L'Engle KL. X-rated: sexual attitudes and behaviors associated with U.S. early adolescents" exposure to sexually explicit media. Communication Res 2009;36:129–51.
69. Ward LM. Understanding the role of entertainment media in the sexual socialization of American youth: a review of empirical research. Developmental Rev 2003;23:347–88.
70. L'Engle KL, Brown JD, Kenneavy K. The mass media are an important context for adolescents' sexual behavior. J Adolesc Health 2006;38:186–92. [PubMed: 16488814]

71. 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;44:48–54. [PubMed: 19101458]

72. Middleman AB, Rosenthal SL, Rickert VI, Neinstein L, Fishbein DB, D'Angelo L. Society for Adolescent Medicine. Adolescent immunizations: a position paper of the Society for Adolescent Medicine. J Adolesc Health 2006;38:321–7. [PubMed: 16521332]

73. Dempsey AF, Singer D, Clark SJ, Davis MM. Parents' views on 3 shot-related visits: implications for use of adolescent vaccines like human papillomavirus vaccine. Acad Pediatr 2009;9:348–52. [PubMed: 19487172]

74. Centers for Disease Control and Prevention. Sexually Transmitted Disease Treatment Guidelines. Atlanta, GA: Department of Health and Human Services; 2006.

75. Centers for Disease Control and Prevention. ACIP recommendations. [Accessed 19 January 2010. Last updated 1 September 2009]. Available at: http://www.cdc.gov/vaccines/pubs/ACIP-list.htm

Table 1

Life Behaviors of a Sexually Healthy Adult [2]

A sexually healthy adult will:
• Appreciate own body.
• Seek further information about reproduction as needed.
• Affirm that human development includes sexual development, which may or may not include reproduction or sexual experience.
• Interact with all genders in respectful and appropriate ways.
• Affirm own sexual orientation and respect the sexual orientations of others.
• Affirm own gender identities and respect the gender identities of others.
• Express love and intimacy in appropriate ways.
• Develop and maintain meaningful relationships.
• Avoid exploitative or manipulative relationships.
• Make informed choices about family options and relationships.
• Exhibit skills that enhance personal relationships.
• Identify and live according to own values.
• Take responsibility for own behavior.
• Practice effective decision making.
• Develop critical-thinking skills.
• Communicate effectively with family, peers, and romantic partners.
• Enjoy and express sexuality throughout life.
• Express sexuality in ways that are congruent with values.
• Enjoy sexual feelings without necessarily acting on them.

Adapted from the Sexuality Education and Information Council of the United States. National Guidelines Task Force. Guidelines for Comprehensive Sexuality Education – Kindergarten through 12th Grade. 3rd ed. New York: Sexuality Information and Education Council of the United States; 2004. http://www.siecus.org/_data/global/images/guidelines.pdf.

Table 2

Web-Based Resources on Young Men's Sexual Health

Data and statistics	Guttmacher Institute http://www.guttmacher.org The National Campaign to Prevent Teen and Unplanned Pregnancy http://www.thenationalcampaign.org Centers for Disease Control and Prevention (CDC): STD Surveillance Data http://www.cdc.gov/std/stats CDC National Survey of Family Growth http://www.cdc.gov/nchs/NSFG.htm CDC: Youth Risk Behavior Surveillance System (YRBSS) http://www.cdc.gov/HealthyYouth/yrbs/index.htm The National Longitudinal Study of Adolescent Health http://www.cpc.unc.edu/projects/addhealth Urban Institute: 1995 National Survey of Adolescent Males http://www.urban.org/publications/900460.html
Prevention programs	CDC: Diffusion of Effective Behavioral Interventions (DEBI) http://www.effectiveinterventions.org Advocates for Youth http://www.advocatesforyouth.org The National Campaign to Prevent Teen and Unplanned Pregnancy http://www.thenationalcampaign.org Healthy Teen Network http://www.healthyteennetwork.org
Clinical resources for young men's sexual health	CDC: STD Treatment Guidelines http://www.cdc.gov/std/treatment Sexuality Information and Education Council of the United States (SIECUS) http://www.siecus.org CDC: Prevention Research Centers http://www.cdc.gov/prc
Web resources for young men	Young Men's Health Site (Children's Hospital Boston) http://www.youngmenshealthsite.org Sex, Etc. (Rutgers University) http://www.sexetc.org Amplify Advocates for Youth http://www.amplifyyourvoice.org/ Stay Teen (National Campaign to Prevent Teen and Unplanned Pregnancy) http://www.stayteen.org Go Ask Alice (Columbia University) http://www.goaskalice.com MTV It's Your Sex Life www.itsyoursexlife.com I Wanna Know (American Social health Association) www.iwannaknow.org Teen Health (Nemours Foundation) www.teenhealth.org National Teen Dating Abuse Helpline www.loveisrespect.org

	Teenwire (Planned Parenthood) http://www.teenwire.com