

The Proactive Sexual Health History

MARGARET R.H. NUSBAUM, D.O., M.P.H., University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
CAROL D. HAMILTON, ED.D., P.A.-C., Emory University, Atlanta, Georgia

Family physicians must proactively address the sexual health of their patients. Effective sexual health care should address wellness considerations in addition to infections, contraception, and sexual dysfunction. However, physicians consistently underestimate the prevalence of sexual concerns in their patients. By allocating time to discuss sexual health during office visits, high-risk sexual behaviors that can cause sexually transmitted diseases, unintended pregnancies, and unhealthy sexual decisions may be reduced. Developing a routine way to elicit the patient's sexual history that avoids judgmental attitudes and asks the patient for permission to discuss sexual function will make it easier to gather the necessary information. Successful integration of sexual health care into family practice can decrease morbidity and mortality, and enhance well-being and longevity in the patient. (Am Fam Physician 2002;66:1705-12. Copyright© 2002 American Academy of Family Physicians.)

Sexual health encompasses the absence of sexually transmitted diseases (STDs) and reproductive disorders, control of fertility, avoidance of unwanted pregnancies, and “sexual expression without exploitation, oppression, or abuse.”¹ Thus, sexual health is integral to overall health and well-being. Sexual health needs often are overlooked and underserved, as evidenced by the pervasive morbidity and mortality and by the many psychosocial problems associated with sexual behavior.²⁻⁴

The most crucial deficit in sexual health care is a proactive and preventive approach in the primary care setting. While STDs generally are managed appropriately, overall sexual health usually is not discussed until or unless a problem arises. Only 35 percent of primary care physicians report that they often (75 percent of the time) or always take a sexual history.⁵ Physicians are often reluctant to address sexual health issues for the following reasons: (1) embarrassment, (2) feeling ill-prepared, (3) belief that the sexual history is not relevant to the chief complaint, and (4) time constraints.⁶⁻⁸

A crucial deficit in sexual health care is a proactive and preventive approach in the primary care setting.

Physicians consistently underestimate the prevalence of sexual concerns in their patients, which contributes to their miscalculation of the importance of sexual health care.^{9,10} Patients report that physician discomfort and anticipated nonempathetic response to sexual problems are the primary barriers to discussing sexual health.¹¹

Improving Sexual Health Care

Barriers to sexual health care can be removed by (1) providing progressive medical education that teaches sexual health care as integral (rather than peripheral) to health care in general and (2) convincing primary care physicians to proactively and routinely address sexual health. Studies show that training in human sexuality and routinely taking sexual histories can increase physician comfort with addressing sexual health.¹² Faculty modeling of interviewing techniques and managing sexual health issues is important for learning skills and avoiding judgmental attitudes.

Increasing the frequency of sexual health inquiries will substantially improve sexual health care through earlier identification of sexual problems and intervention. Routine assessment of sexual health also provides opportunities for preventive care, such as immunization against hepatitis B and coun-

seling on sexual risk-taking. In one study,¹³ when physicians increased their sexual history-taking, the rate of sexual problems reported by patients increased sixfold. Increased identification of sexual problems will compel physicians to develop competence in dealing with them. *Sexual Medicine in Primary Care*,¹⁴ a book that provides detailed guidelines on interviewing techniques and management of sexual health issues, is an excellent resource for self-study.

Sexual Health History: Reasons to Ask

“In high-quality health-care provision, sexual health should be integrated with all aspects of patient ... care and should hold equal status with physical, spiritual, social, and emotional care.”¹⁵ Thus, it should be as natural to ask about sexual orientation as it is to ask about bowel habits. Additional reasons to make time for the sexual health inquiry include the following¹⁴:

Morbidity and Mortality. Morbidity and mortality caused by human immunodeficiency virus (HIV) and other STDs are significant. In the United States, more than 400,000

persons have died of complications related to acquired immunodeficiency syndrome, and another 1 million persons are infected with HIV.¹⁶ Chlamydia, with its risk of infertility and neonatal complications, is contracted by more than 3 million persons annually. An estimated 45 million persons have genital herpes simplex virus infection. Human papillomavirus (HPV), with its risk of subsequent lower genital tract preinvasive and invasive disease, now affects 20 million persons in the United States.¹⁷⁻²⁰ Early recognition and treatment of these conditions can dramatically improve outcomes.

Prevalence of Sexual Dysfunction. Sexual dysfunction, difficulties, and concerns are common. The estimated prevalence of sexual dysfunction in the general population is as high as 52 percent in men and 63 percent in women.²¹⁻²³ Sexual concerns have been reported in 75 percent of couples seeking marital therapy²⁴ and are nearly universal in women seeking routine gynecologic care.²⁵

Sexual Dysfunction as an Indicator of Organic or Psychiatric Disease. Sexual dysfunction may be symptomatic of organic or psychiatric disease. Eliciting a sexual history helps in the early diagnosis of disorders such as diabetes and depression.

Sexual Dysfunction as a Side Effect of Medication. Sexual dysfunction may be a side effect of medication (e.g., antidepressants) or surgical treatment (e.g., transurethral resection). The physician can answer questions or adjust medications to improve adherence to prescribed protocols.

Association of Sexual History with Current Health Problems. Sexual history may explain current health problems. For example, depression or anxiety may be related to a history of sexual abuse.

Lifelong Sexual Function. Because sexual function is potentially lifelong, an elderly widow may be as concerned about her sexuality as an adolescent.

Association of Sexual Health with Happiness. Sexual health is associated with happiness,

The Authors

MARGARET R.H. NUSBAUM, D.O., M.P.H., is associate professor and codirector of the family practice residency program at the University of North Carolina at Chapel Hill School of Medicine. Dr. Nusbaum received her medical degree from Ohio University College of Osteopathic Medicine, Athens, and completed a residency in family practice at Dwight D. Eisenhower Army Medical Center, Fort Gordon, Ga., and a residency in preventive medicine at the University of Washington School of Medicine, Seattle. Dr. Nusbaum completed a fellowship in faculty development at Madigan Army Medical Center, Tacoma, Wash., and received her master of public health degree from the University of Washington.

CAROL D. HAMILTON, ED.D., P.A.-C., is assistant professor and educational specialist in the Department of Family and Preventive Medicine at Emory University School of Medicine, Atlanta, and a physician assistant at the Emory Outpatient Family Practice South Dekalb Clinic in Atlanta. She is also assistant professor in the School of Allied Health, Physician Assistant Program, at the Medical College of Georgia School of Medicine, Augusta. Dr. Hamilton earned a physician assistant degree from the Medical College of Georgia, her master in education from Augusta College, Augusta, Ga., and her doctorate of education in supervision and curriculum from the University of Georgia, Athens.

Address correspondence to Margaret R.H. Nusbaum, D.O., M.P.H., University of North Carolina at Chapel Hill, CB#7595 William Aycock Building, Chapel Hill, NC 27599-7595 (e-mail: mnusbaum@med.unc.edu). Reprints are not available from the authors.

longevity, and well-being. Studies have shown that frequency and enjoyment of sexual intercourse are significant predictors of longevity.²⁶

Association of Sexual Health and Overall Health. Sexual health is an integral part of a person's general health.

Responsibility and Risk Management Issues. Failing to take a sexual history may violate the axiom of "above all, do no harm" and represent a risk-management issue as well. For example, a woman with repeated episodes of cervicitis who is never asked about her sexual behavior, or advised that having multiple sex partners is associated with increased risk of HPV infection and cervical cancer, has not received optimal health care.

Opportunity for Primary Prevention. Consideration of the patient's sexuality represents an opportunity for primary prevention through immunization, patient education, and/or contraception. Results of studies^{7,27} show that a significant proportion of the population, from college students to the elderly, has risk behaviors associated with STDs. Many patients are unaware of the potential risk associated with sexual activity. Imparting information and counseling aimed at reducing high-risk sexual behaviors may reduce STDs, unintended pregnancies, and unhealthy sexual decisions. Many patients simply want information, explanations, or reassurance, which can be readily provided by the physician. This type of patient education has an extraordinarily favorable benefit-to-cost ratio and creates a high level of patient satisfaction.

General Approach to Taking a Sexual History

Questions about sexual health should be asked in a matter-of-fact, yet sensitive manner. If the physician is uncomfortable or believes the patient may feel uncomfortable discussing the sexual history, an explanation may be helpful. For example, the physician might say, "Sexual health is important to overall health; therefore, I always ask patients about it. If it's

Imparting information aimed at reducing high-risk sexual behaviors may reduce sexually transmitted diseases, unintended pregnancies, and unhealthy sexual decisions.

okay with you, I'll ask you a few questions about sexual matters now." Assurances of confidentiality may help, especially with adolescent patients or patients with more than one sexual partner.

Physicians should avoid using terms that make assumptions about sexual behavior or orientation. Ask about a patient's sexual orientation and use the term "partner" rather than "boyfriend," "girlfriend," "husband," or "wife." Ask patients how many partners they have rather than whether or not they are married and/or monogamous. Patients will generally say that they are married and monogamous, if that is the case, when asked about partners.

In discussing sexual behaviors, the physician must ensure that the patient understands the medical terminology used. One way to communicate clearly without forfeiting professionalism by using slang terms is to gently teach the patient the correct terminology and pronunciation by linking it with the terms used by the patient. If the patient says, "I take too long to come," the physician's response might be, "When did you first notice this problem with delayed ejaculation?"

Physicians should avoid moral or religious judgment of the patient's behavior, instead relating information from a point of view that includes emotional and psychologic health. One aspect of sensitivity is respecting the patient's reluctance to disclose all sexual and relationship details during the first discussion.

TRANSITION TO THE SEXUAL HEALTH HISTORY

Developing a routine way to elicit the patient's sexual history will make it easier to gather the needed data. For a brief, directed office visit, the sexual history can be linked to

The physician should ask the patient for permission to discuss sexual functioning, and the patient should then be given permission to discuss sexuality at that time or in the future.

the patient's medical history or current health problem. The physician may say, "Many people with diabetes notice a change in their sexual function. Have you noticed any change?" In the context of the complete medical history, the female patient's reproductive history can be expanded: "What was the first date of your last menstrual period? Pregnancy history? Contraceptive needs?" Discussion of contraception leads to inquiry about sexual activity, which leads to the complete sexual history. In men, inquiry about prostate symptoms, such as hesitancy or a weak urinary stream, can lead to questions about sexual activity and sexual concerns.

Screening for Sexual Health History

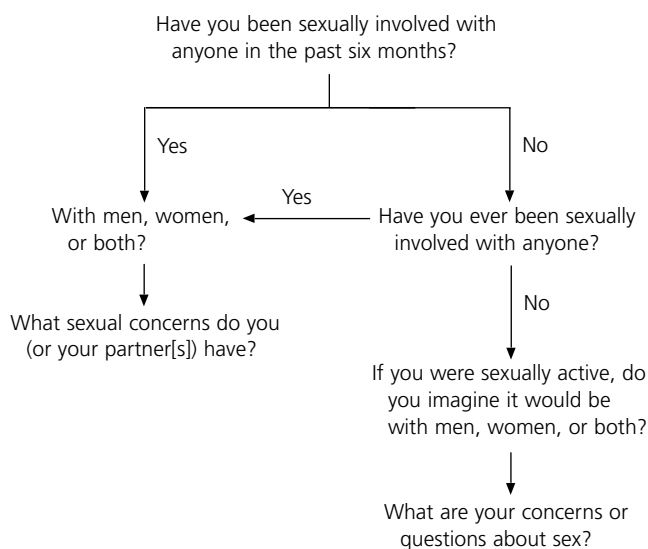


FIGURE 1. Algorithm for screening patients for sexual health history.

SEXUAL HEALTH SCREENING OR IN-DEPTH SEXUAL HEALTH HISTORY

There are two ways to approach the sexual health interview: the screening or abbreviated method and the in-depth approach. If the sexual history seems unrelated to the chief complaint, a few screening questions will suffice. The complete sexual history can be elicited at future visits. In emergency situations, the sexual health inquiry is appropriately deferred. *Figure 1* illustrates an example of an abbreviated sexual history. These simple questions will help guide the physician in determining the possible sexual health needs of the patient. Note that asking, "What sexual concerns do you have?" implies that many patients have sexual concerns and that it is common to discuss them with one's physician.

If the patient's sexual history may be directly related to the chief complaint, a more detailed sexual history (*Table 1*) is indicated. Examples of a more in-depth sexual history are available in textbooks.¹⁴

Whether the sexual health inquiry is brief or detailed, it provides an opportunity for preventive medicine. *Table 2* lists the questions that should be asked in some form.

Responding to Sexual Health Issues

The P.L.I.S.S.I.T. model,²⁸ outlined in *Table 3*, summarizes the key components in the approach to sexual concerns. "Permission" is the crucial first step. By asking permission to discuss sexual function, the physician shows respect and sensitivity toward the patient and alleviates concerns about offending the patient. The patient also is given permission to discuss sexuality either now or in the future. Finally, permission for patients to continue doing what they're doing sexually is provided in the form of reassurance that their sexual fantasies and behaviors are "okay" or "normal." However, it is important that permission not be given for activities that are potentially harmful to the individual or his or her partner(s).

"Limited Information" reflects the impor-

TABLE 1
Questions for a Detailed Sexual History

Are you currently sexually active? Have you ever been?	What method do you use for contraception?
Are your partners men, women, or both?	Are you trying to become pregnant (or father a child)?
How many partners have you had in the past month? Six months? Lifetime?	Do you participate in oral sex? Anal sex?
How satisfied with your (and/or your partner's) sexual functioning are you?	Do you or your partner(s) use any particular devices or substances to enhance your sexual pleasure?
Has there been any change in your (or your partner's) sexual desire or the frequency of sexual activity?	Do you ever have pain with intercourse?
Do you have, or have you ever had, any risk factors for HIV? (List blood transfusions, needlestick injuries, IV drug use, STDs, partners who may have placed you at risk.)	Women: Do you have any difficulty achieving orgasm?
Have you ever had any sexually related diseases?	Men: Do you have any difficulty obtaining and maintaining an erection? Difficulty with ejaculation?
Have you ever been tested for HIV? Would you like to be?	Do you have any questions or concerns about your sexual functioning?
What do you do to protect yourself from contracting HIV?	Is there anything about your (or your partner's) sexual activity (as individuals or as a couple) that you would like to change?

HIV = human immunodeficiency virus; IV = intravenous; STDs = sexually transmitted diseases.

tant role of the physician as a source of information and education about sexual response cycle, anatomy and physiology, myths of male and female relationships, life-cycle changes, and effects of illness. Limiting the information serves to focus the visit on the patient's chief complaint (usually something other than sexual function) and to learn if the patient wants more specific information. An example of limited information would be to say to a postmenopausal woman, "Many women find that intercourse is uncomfortable because they have vaginal dryness after menopause. A vaginal lubricant or body oil can make intercourse more comfortable. An estrogen vaginal cream often helps." If a patient experiences pain with intercourse, the physician might say, "Many people find that sexual positions other than the 'missionary position' are more comfortable" (i.e., limited information).

If the patient responds positively, the physician may follow up with a "Specific Sugges-

tion" such as, "Many people find that the spooning position, where one partner nestles behind the other, is comfortable and pleasurable." By using the third person, the physician avoids creating visual images of the patient and the partner together. Also, the physician

TABLE 2
Preventive Sexual Health Questions

How do you protect yourself from HIV and other STDs?
Have you ever been tested for HIV? Would you like to be?
Do you use anything to prevent pregnancy? Are you satisfied with that method?
Have you ever been immunized against hepatitis? Would you like to be?

HIV = human immunodeficiency virus; STDs = sexually transmitted diseases.

TABLE 3
P.L.I.S.S.I.T. Model for Approaching Sexual Health Problems

Permission: (1) For physician to discuss sex with the patient; (2) for patient to discuss sexual concerns now or in the future; and (3) to continue normal (i.e., not potentially harmful) sexual behaviors.

Limited Information: Clarify misinformation, dispel myths, and provide factual information in a limited manner.

Specific Suggestions: Provide specific suggestions directly related to the particular problem.

Intensive Treatment: Provide highly individualized therapy for more complex issues.

Information from Annon JS. The behavioral treatment of sexual problems. Honolulu: Enabling Systems, 1974-1975.

does not “prescribe” sexual practices for the patient, but provides information that the patient may choose to use or not. “Intensive Treatment” is relevant when dealing with more complex issues.

When a sexual issue is identified, a follow-up appointment should be scheduled to address the matter. If the patient is part of a couple, the couple should be interviewed together, if possible. Detailed suggestions on interviewing, assessing, and treating individual patients and couples with sexual dysfunction are outlined elsewhere.¹⁴ Table 4²⁹ suggests physician reference materials and patient resources.

Patients who have been sexually abused, have gender identity confusion, or whose sexual dysfunctions are unresponsive to treatment should always be referred to a mental

Education that corrects misconceptions about sexual functioning, contraception, and disease transmission is useful for patients of all ages.

TABLE 4
Resources for Physicians and Patients

Resources for physicians

Masters WH, Johnson VE. Human sexual inadequacy. London: Churchill, 1970.

Maurice WL, Bowman MA. Sexual medicine in primary care. St. Louis: Mosby, 1999.

Fogel CI, Lauver D, eds. Sexual health promotion. Philadelphia: Saunders, 1990.

Leiblum SR, Rosen RC. Principles and practice of sex therapy. 3d ed. New York: Guilford, 2000.

Resources for patients

Michael RT, Gagnon JH, Laumann EO, Kolata G. Sex in America: a definitive survey. Boston: Little, Brown, 1994.

Chernick BA, Chernick AB. In touch: the ladder to sexual satisfaction. London, Ont.: Sound Feelings, 1992.

Schnarch DM. Passionate marriage: love, sex, and intimacy in emotionally committed relationships. New York: Owl Book, 1997.

Gray J. Mars and Venus in the bedroom: a guide to lasting romance and passion. New York: HarperPerennial, 1997.

Adapted with permission from Nusbaum MR. Sexual health. AAFP home study self-assessment; monograph no. 267. Leawood, Kan.: American Academy of Family Physicians, 2001.

health professional specializing in sexual health. A thorough sexual health history is indicated before referral. The American Association of Sex Educators, Counselors and Therapists provides a list of certified specialists, which can be accessed at www.aasect.org.

Sexual Health History: An Opportunity to Practice Preventive Medicine

Office visits are a prime opportunity for preventive intervention. Patient education can correct misconceptions about sexual function, contraception, and disease transmission and may be extremely valuable in alleviating sexual anxiety and subsequent sexual dysfunction.

Adolescents need understanding, factual information, and guidance to help them choose abstinence, delay their sexual involvement, or use contraception and condoms responsibly.³⁰ Discussing decision-making and using role-playing to talk about sex are seldom used, but useful techniques. The majority of adolescents reported that they valued physician guidance about sexual health.³¹

Adults frequently exhibit risk-taking sexual behavior and can also benefit from education and intervention. In one study, patients who were HIV-positive increased their safer sex practices after receiving counseling, thereby decreasing their likelihood of infecting others.¹⁶ Information about associated risks should be presented in a nonjudgmental, adult-to-adult manner. Specific information (e.g., herpes simplex virus infection may be spread through oral sex) may be valuable to patients. Elderly patients can be reassured that it is normal for sexual desire and activity to persist and that they should not be ashamed. Elderly patients need to know that they too are at risk for STDs and HIV infection and should use appropriate protection.

Interventions that promote self-efficacy and use the stages-of-change theory show promise for positively influencing patients' sexual behaviors.³²⁻³⁵ One problem of risk-taking sexual behaviors is that patients may not realize (or admit to themselves) that they are at risk.³⁶ Thus, physicians must heighten patient awareness and prepare them to make healthy changes.

Dr. Nusbaum is a consultant for Bayer and is on the speaker's bureau for Pfizer.

REFERENCES

- Centers for Disease Control and Prevention. Update: mortality attributable to HIV infection among persons aged 24-44 years—United States, 1994. *MMWR Morb Mortal Wkly Rep* 1996;45:121-5.
- Grimes DA. Trends in unintended pregnancy. *Contracept Rep* 1998;9:10-2.
- Siegel RL, Glasser DB. Cost-effectiveness of sildenafil. *Ann Intern Med* 2001;134:250-1.
- Goldsmith M. Family planning and reproductive health issues. In: Curtis H, ed. *Promoting sexual health: proceedings of the Second International Workshop on Prevention of Sexual Transmission of HIV and other Sexually Transmitted Diseases*, Cambridge, 24-27 March 1991. London: British Medical Association Foundation for AIDS, 1992:121.
- McCance KL, Moser R Jr, Smith KR. A survey of physicians' knowledge and application of AIDS prevention capabilities. *Am J Prev Med* 1991;7:141-5.
- Bull SS, Rietmeijer C, Fortenberry JD, Stoner B, Malotte K, Vandevanter N, et al. Practice patterns for the elicitation of sexual history, education, and counseling among providers of STD services: results from the gonorrhea community action project (GCAP). *Sex Transm Dis* 1999;26:584-9.
- Moore LW, Amburgey LB. Older adults and HIV. *AORN J* 2000;71:873-6.
- Merrill JM, Laux LF, Thornby JI. Why doctors have difficulty with sex histories. *South Med J* 1990;83:613-7.
- Halvorsen JG, Metz ME. Sexual dysfunction, Part I: Classification, etiology, and pathogenesis. *J Am Board Fam Pract* 1992;5:51-61.
- Halvorsen JG, Metz ME. Sexual dysfunction, Part II: Diagnosis, management, and prognosis. *J Am Board Fam Pract* 1992;5:177-92.
- Marwick C. Survey says patients expect little physician help on sex. *JAMA* 1999;281:2173-4.
- Schechtel J, Coates T, Mayer K, Makadon H. HIV risk assessment: physician and patient communication. *J Gen Intern Med* 1997;12:722-3.
- Bachmann GA, Leiblum SR, Grill J. Brief sexual inquiry in gynecologic practice. *Obstet Gynecol* 1989;73(3 pt 1):425-7.
- Maurice WL, Bowman MA. *Sexual medicine in primary care*. St. Louis: Mosby, 1999:15.
- Wilson H, McAndrew S. *Sexual health: foundations for practice*. New York: BaillièreTindall, 2000:xi.
- Weinhardt LS, Carey MP, Johnson BT, Bickham NL. Effects of HIV counseling and testing on sexual risk behavior: a meta-analytic review of published research, 1985-1997. *Am J Public Health* 1999;89:1397-405.
- Centers for Disease Control and Prevention. Trends in sexual risk behaviors among high school students—United States, 1991-1997. *MMWR Morb Mortal Wkly Rep* 1998;47:749-52.
- Ho GY, Bierman R, Beardsley L, Chang CJ, Burk RD. Natural history of cervicovaginal papillomavirus infection in young women. *N Engl J Med* 1998;338:423-8.
- Saito J, Fukuda T, Hoshiaki H, Noda K. High-risk types of human papillomavirus associated with the progression of cervical dysplasia to carcinoma. *J Obstet Gynaecol Res* 1999;25:281-6.
- Marrazzo JM, Stine K, Koutsky LA. Genital human papillomavirus infection in women who have sex with women: a review. *Am J Obstet Gynecol* 2000;183:770-4.
- Rosen RC, Taylor JF, Leiblum SR, Bachmann GA.

- Prevalence of sexual dysfunction in women: results of a survey study of 329 women in an outpatient gynecological clinic. *J Sex Marital Ther* 1993;19:171-88.
22. Spector IP, Carey MP. Incidence and prevalence of the sexual dysfunctions: a critical review of the empirical literature. *Arch Sex Behav* 1990;19:389-408.
 23. Read S, King M, Watson J. Sexual dysfunction in primary medical care: prevalence, characteristics and detection by the general practitioner. *J Public Health Med* 1997;19:387-91.
 24. Moore JT, Goldstein Y. Sexual problems among family medicine patients. *J Fam Pract* 1980;10:243-7.
 25. Nusbaum MR, Gamble G, Skinner B, Heiman J. The high prevalence of sexual concerns among women seeking routine gynecological care. *J Fam Pract* 2000;49:229-32.
 26. Palmore EB. Predictors of the longevity difference: a 25-year follow-up. *Gerontologist* 1982;22:513-8.
 27. Haley N, Maheux B, Rivard M, Gervais A. Sexual health risk assessment and counseling in primary care: how involved are general practitioners and obstetrician-gynecologists? *Am J Public Health* 1999;89:899-902.
 28. Annon JS. *The behavioral treatment of sexual problems*. 1st ed. Honolulu: Enabling Systems, 1974-1975.
 29. Nusbaum MR. Sexual health. AAFP home study self-assessment; monograph no. 267. Leawood, Kan.: American Academy of Family Physicians, 2001.
 30. Felice ME, Feinstein RA, Fisher M, Kaplan DW, Olmedo LF, Rome ES, et al. American Academy of Pediatrics. Committee on Adolescence. Contraception in adolescents. *Pediatrics* 1999;104(5 Pt 1):1161-6.
 31. Boekeloo BO, Schamus LA, Cheng TL, Simmens SJ. Young adolescents' comfort with discussion about sexual problems with their physician. *Arch Pediatr Adolesc Med* 1996;150:1146-52.
 32. Lauby JL, Smith PJ, Stark M, Person B, Adams J. A community-level HIV prevention intervention for inner-city women: results of the women and infants demonstration projects. *Am J Public Health* 2000;90:216-22.
 33. Kalichman SC, Williams E, Nachimson D. Brief behavioral skills building intervention for female controlled methods of STD-HIV prevention: outcomes of a randomized clinical field trial. *Int J STD AIDS* 1999;10:174-81.
 34. Bandura A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev* 1977;84:191-215.
 35. Prochaska JO, DiClemente CC, Norcross JC. In search of how people change. Applications to addictive behaviors. *Am Psychol* 1992;47:1102-14.
 36. Hobfoll SE, Jackson AP, Lavin J, Britton PJ, Shepherd JB. Safer sex knowledge, behavior, and attitudes of inner-city women. *Health Psychol* 1993;12:481-8.