

CONTRACEPTIVE TECHNOLOGY

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A Monthly Newsletter for Health Professionals



Spotlight on chlamydia: Boost your screening rate in young women

Some 2 million cases go undiagnosed and untreated, national figures say

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If adolescents and young women are not being routinely screened for chlamydia at your facility, it is time to reverse the trend, says the American College of Obstetricians and Gynecologists (ACOG). Information released during the annual meeting of the national organization underscores the urgency of screening for the sexually transmitted infection (STI).

According to the Centers for Disease Control and Prevention's (CDC's) National Center for Health Statistics, chlamydia remains the most commonly reported STI in the United States. In 2005, there were just more than 976,000 reported chlamydial infections, but because many cases are not diagnosed or reported, the agency estimates there may be as many as 2.8 million new cases annually.¹ About 75% of chlamydial infections in women are asymptomatic; if symptoms do occur, they are often vague, causing women to delay seeking medical care and treatment. If chlamydia is not treated, up to 40% of women infected with chlamydia may develop pelvic inflammatory disease (PID), which can lead to ectopic pregnancy and infertility. When PID

EXECUTIVE SUMMARY

Chlamydia remains the most commonly reported sexually transmitted disease in the United States. In 2005, there were just more than 976,000 reported chlamydial infections, but because many cases are not diagnosed or reported, the agency estimates there may be as many as 2.8 million new cases annually.

- All women under 25 years of age should be screened for chlamydia on an annual basis.
- Only about 50% of indicated chlamydia screening is being performed, according to a study sponsored by the Centers for Disease Control and Prevention and the Agency for Healthcare Research and Quality.

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develops, it can be devastating; one in five women with PID becomes infertile.²

Why don't all clinicians screen for chlamydia? One reason may be that they don't consider their patients at risk for an STI, says **David Soper, MD**, professor of obstetrics and gynecology at the Medical University of South Carolina in Charleston.

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Editorial Questions

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To consider risk, one needs to evaluate age, which is a simple thing to do because all women younger than 25 years of age should be screened for chlamydia on an annual basis, he says. Such practice is spelled out in guidelines issued by ACOG, CDC, American Medical Association, American Academy of Pediatrics, American College of Preventive Medicine, and the U.S. Preventive Services Task Force. (**Contraceptive Technology Update reported on such guidelines in the article, "Group issues guidelines on chlamydia screening," in the August 2003 STD Quarterly supplement, p. 3.**)

Further support for chlamydia screening comes from managed care. Screening of sexually active women ages 15-25 has been one of the performance measures included in the National Committee for Quality Assurance's Health Plan Employer Data and Information Set since 2000. (**CTU reported on the addition in its article, "Women's health issues included in managed care report card," February 2000, p. 17.**)

Clinicians also need to consider sexual behavior when evaluating risk for STIs, says Soper. If clinicians don't ask the question about having a new sex partner, multiple partners, or having a past history of an STD, then they may mischaracterize a patient's risk, Soper observes. Clinicians also may believe that they "never see it" when it comes to chlamydia risk; however, this becomes a self-fulfilling prophecy because if clinicians don't do a chlamydia test, they won't see a positive test.

According to a 2006 study sponsored by the CDC and the Agency for Healthcare Research and Quality (AHRQ), only about 50% of indicated chlamydia screening is being performed, notes Soper.³ "This is low-hanging fruit in our fight against sexually transmitted infections," comments Soper.

Up the numbers

How can your clinic improve its services when it comes to chlamydia screening? Take a look at the recent efforts at the Cowell Student Health Center at the University of California, Davis. What prompted the facility to push for increased chlamydia testing?

"Our program has been looking for ways to enhance collaborations between health education and health promotion outreach services and our clinical care services," says **Michelle Famula, MD**, director at the student health center. "This was a proposal from our health education program staff

to help add a clinical element to a planned outreach campaign for Sexual Health Awareness Month.”

Medical personnel had been promoting annual chlamydia testing for sexually active women up to age 26 in accordance with the current CDC guidelines, as well as reminding staff to encourage this testing as a routine part of general primary care wellness, she explains. With the facility’s recent adoption of urine STI testing with GenProbe (GenProbe, San Diego) chlamydia/gonorrhea technology, patients could be tested without the psychological barrier of a genital sampling or the access barrier of a physical examination appointment time, says Famula.

By putting these elements together, it was proposed that the center encourage and promote patient requests to “add an STI test” to any medical visit and for providers to encourage scheduled patients to “add an STI test” for any care appointment for sexually active patients, reports Famula. During the center’s routine testing practice the prior year, STI testing required a provider visit (\$10) to obtain an order for the test (\$20).

“At the request of our health education student interns, who felt strongly that cost was a factor for some students, we reduced the cost of testing from \$20 to \$10 during the month of April,” she says. “Therefore, a student seen for a simple refill of allergy medication, which is a \$10 visit charge, could request STI testing without the addition of a physical exam or a need for a second appointment [an additional \$10 charge], with a 50% discount in the testing cost.”

For the tracking period observed, the center experienced a 16% increase in the number of chlamydia tests completed compared to the prior year, Famula states.

Screening highlighted with multiple outreaches

How did the facility get the word out to students about the screening? Polly Paulson, MPH, MA, a sexual health educator at the center, spearheaded efforts to increase chlamydia/gonorrhea testing during the April 2007 “Sexual Health Awareness Month” campaign. Outreach tools employed included:

- Ads at Facebook (www.facebook.com, a web-based social networking site) that linked to the appropriate Cowell Student Health Center web site page;
- stand-up table-top fliers at campus eateries;
- fliers posted around campus, as well as in

exam rooms;

- poster in campus kiosk;
- student newspaper ads;
- buttons worn by providers to encourage patients to request the test;
- laminated information cards for patients to read in exam rooms.

What other types of information are available to students to help them understand the importance of chlamydia screening? The center provides information on its web site, www.healthcenter.ucdavis.edu. (Click on “Online Health Resources,” “Health Topics,” and “Chlamydia.” Listing includes links to Chlamydia Questions and Answers and a CDC Fact Sheet.) The center also provides information through clinical staff at in-person visits and through advice nurses by phone, says Paulson. It also offers information through health education and promotion program staff and interns through outreach and education services.

Are there plans to re-establish the reduced testing rate? At this time, the center is exploring options for nonvisit test ordering through online secure provider-patient communications, Famula says. Another possibility is through advice nurse screening protocols using standardized advance practice procedures, which is a free service, coupled with the \$20 test price, she says.

“We also are exploring the possibility of reducing the direct cost of testing permanently, to \$10 or \$5, through subsidized charges offset by income from other service charges — funding resources permitting,” she notes.

Get value for the dollar

According to the 2006 CDC/ARHQ study, chlamydia is one of the five highest-ranking services being used by less than half of the people who need them. The other most cost-effective services include discussing daily aspirin use with at-risk adults; screening adults above age 50 for colorectal cancer; intervening with smokers to help them quit; and vaccinating older adults against bacterial pneumonia.³

Adding chlamydia testing is not a hardship, notes Andrew Kaunitz, MD, professor and assistant chair in the Obstetrics and Gynecology Department at the University of Florida College of Medicine — Jacksonville. For several years, his facility has used polymerase chain reaction (PCR)-based screening of at-risk patients. One swab is performed using the Leukorrhea Panel, which tests for chlamydia, gonorrhea, and trichomonas, from

Hamilton, NJ-based Medical Diagnostic Laboratory.

"We are not aware of any false-positives with this testing and have found this technology to be convenient and useful in our practice setting," he says.

Use urine screening to increase chlamydia detection, agrees **Anita Nelson, MD**, professor in the Obstetrics and Gynecology Department at the University of California in Los Angeles (UCLA) and medical director of the women's health care programs at Harbor — UCLA Medical Center in Torrance. Remember that patients do not need a pelvic exam to get hormonal contraception; chlamydia screening does not change this practice, says Nelson.

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Quick Start, Same Day: Jump-start pills, shot

When it comes to initiating oral contraceptives (OCs), new research indicates that immediate initiation before start of the next menses improves short-term continuation of pill use.¹ A second study looking at same-day initiation of depot medroxyprogesterone acetate (DMPA, Depo-Provera) suggests that it is a safe and efficient way of providing women needed effective contraception within seven days of the office visit.²

The Quick Start approach has gained favor since early research indicated that it improved pill continuation rates.^{3,4} (*Contraceptive Technology Update* reported on the research in its article, "Will 'Quick Start' give women jump on pill use?" January 2003, p. 4.) Prescribers once instructed on one of two approaches: the "first-day start," which initiates pill use on the first day of the woman's next period, or the "Sunday start," when pill use begins on the Sunday after the menstrual cycle begins. Now Quick Start is listed as the preferred method of pill initiation in *Contraceptive Technology*.⁵

EXECUTIVE SUMMARY

New research indicates that immediate initiation of oral contraceptives (OCs) before start of the next menses improves short-term continuation of pill use. A second study looking at same-day initiation of depot medroxyprogesterone acetate (DMPA, Depo-Provera) suggests that it is a safe and efficient way of providing women needed effective contraception within seven days of the office visit.

- Quick Start of OCs leads to better short-term continuation, most noticeable in teens and in those women who might be somewhat ambivalent at the time of starting pills.
- Nearly 80% of patients who wanted to start DMPA did not have to wait for their first shot with the Quick Start/Same Day start protocol.

Quick Start leads to better short-term continuation, most noticeable in teens and in those women who might be somewhat ambivalent at the time of starting, says **Carolyn Westhoff, MD, MSc**, professor of obstetrics and gynecology and professor of epidemiology and population and family health at Columbia University in New York City. Westhoff presented case studies and practical guidelines on Quick Start at the recent *Contraceptive Technology* conference.⁶

To perform the current study, Westhoff and fellow investigators recruited 1,716 women ages 25 and younger seeking to initiate pills at three publicly funded family planning clinics. Study participants were randomly assigned to conventional initiation of the pill or the Quick Start method. Women who took the first pill in the clinic were more likely to continue to the second pill pack (odds ratio 1.5, 95% confidence interval 1.0-2.1.); however, the Quick Start approach did not improve pill continuation rates at three and six months. Those assigned to Quick Start were slightly less likely to become pregnant within six months from the time they started the pill (hazard ratio 0.90, 95% confidence interval 0.64-1.25). More than 80% of the women rated the Quick Start approach as acceptable or preferable to waiting.

Protocols that require a woman to wait until the next menses to start hormonal contraceptives are an obstacle to contraceptive initiation, the researchers conclude. Directly observed, immediate initiation of the pill improves short-term continuation, they state. Quick Start is a more direct way of providing contraception, notes Westhoff. Saying, "Take your first pill right now" really elicits all the hidden

questions that a patient might otherwise forget to ask, she observes.

“If supplies for the first pack are available, then there is no need to counsel on when to start — just start right now,” says Westhoff. “That can save time for other important parts of the visit.”

How about DMPA?

Can the same principles of jump-starting contraception be used with the contraceptive injection DMPA?

The new research looked at a study population of 1,056 women who had a total of 3,185 DMPA injections. More than 81% of the initial injections were given in the Same Day format, outside the first five days of menses. At each reinjection, 14-27% of women were late and also benefited from rapid access to DMPA. Continuation rates were low in both groups but were not lower among those who used Same Day injections compared with On Time starters. Six pregnancies were diagnosed, all in the Same Day Start group.²

Nearly 80% of patients who wanted to start DMPA did not have to wait for their first shot with this Quick Start/Same Day start protocol, says **Anita Nelson, MD**, professor in the Obstetrics and Gynecology Department at the University of California in Los Angeles (UCLA) and medical director of the women’s health care programs at Harbor — UCLA Medical Center in Torrance.

There is a four-step process to administering DMPA in this manner, emphasizes Nelson, who served as lead author for the current study. The first step is for clinicians to obtain a thorough history of unprotected intercourse since the last menstrual period to determine the need for pregnancy testing, she states.

Patients then need to obtain emergency contraception if they have had unprotected intercourse in the last five days, she notes. Counseling must include that when giving DMPA in this manner, condoms must be used for the next seven days, says Nelson.

The fourth step is to counsel patients that they will need to repeat the pregnancy test two to three weeks after the injection if they have had any recent unprotected intercourse, says Nelson.

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Contraception for obese women — Check options

Obesity is gaining ground in the United States. Are you prepared to offer women effective options? **James Trussell, PhD**, professor of economics and public affairs and director of the Office of Population Research at Princeton (NJ) University, reviewed current research at the 2007 *Contraceptive Technology* conferences to help clinicians select appropriate options.¹

To discuss weight issues, clinicians need to understand the definitions for overweight and obesity. Both definitions are based on body mass index (BMI), which is determined by weight in kilograms divided by the square of height in meters. Among children and adolescents, overweight is defined as at or above the 95th percentile of the sex-specific BMI for age growth

EXECUTIVE SUMMARY

Clinicians must be prepared to offer overweight and obese women effective contraception options in light of the growing obesity problem in the United States.

- In 2003-04, 17.1% of children and adolescents 2-19 years of age were overweight, and 32.2% of adults were obese. Almost 5% of adults were extremely obese, according to national statistics.
- Research has eyed contraceptive failure in obese women who use oral contraceptives. Clinical trials of the contraceptive injection and implant determined no failures in obese women included in the trials. A nonhormonal method, such as the intrauterine device, may be a safe and effective choice for obese women.

charts, while among adults, overweight is a BMI reading between 25 and 29.9. Obesity is defined as a BMI over 30, with extreme obesity is defined as a BMI over 40.²

A 2006 analysis of U.S. weight trends illustrates the problem facing clinicians today. Researchers report that in 2003-04, 17.1% of children and adolescents 2-19 years of age were overweight, and 32.2% of adults were obese, using estimates based on measured values of weight and height from the National Health and Nutrition Examination Survey conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics. Almost 5% of adults were extremely obese, the researchers found.²

In white, non-Hispanic women, 24% of women ages 20-39 were classified as obese, compared to 36% of Mexican-American, and 50% of black, non-Hispanic women, Trussell notes. In the 40-59 age brackets, those numbers increased to 38%, 48%, and 58%, respectively.²

Hormonal options OK?

Research in recent years has focused on the impact of weight in the efficacy of oral contraceptives (OCs), with some of the findings suggesting higher failure rates in pill users who are heavy.^{3,4} **(Results from the two studies suggested that among 100 women taking OCs for a year, an additional two to four women will get pregnant due to being overweight or obese; see the following *Contraceptive Technology Update* articles: "Does increased weight impact OC efficacy?" April 2005, p. 45, and "Does weight play a role in effectiveness?" July 2002, p. 81.)**

Trussell says his conclusion is that it is likely that very heavy or obese women have a higher risk of OC failure, particularly on the lowest-dose formulations, and may well be a threshold effect. However, the absolute risk still is likely to be modest: A 60% increase in risk implies an increase from 7% to 11% in the first year of typical use of OCs in the United States, Trussell points out.

While much attention has been focused on OC failure in obese women, clinicians should look at the risk of deep vein thrombosis (DVT) in this population, says Trussell. Obesity is a risk factor for venous thromboembolism, and OCs further increase the effect of obesity on DVTs, he states.

In reviewing clinical trial research of the contraceptive injection depot medroxyprogesterone acetate-subcutaneous (DMPA-SC) and the contraceptive implant Implanon (Organon; Roseland,

NJ), researchers reported no pregnancies in women who used these methods, even those who were found to be obese, Trussell notes.^{5,6} In Implanon trials, women could be no heavier than 130% of ideal body weight, so we do not have much evidence about Implanon in obese women, Trussell notes.

Look at IUDs

Intrauterine contraception (IUDs) represents a "terrific" choice for obese women, says Trussell. Copper IUDs (ParaGard IUD, Duramed, a subsidiary of Barr Pharmaceuticals; Pomona, NY) are associated with a reduced risk for endometrial cancer.⁷ The levonorgestrel intrauterine system (Mirena IUS, Berlex Laboratories; Montville, NJ) reduces blood loss, reduces menorrhagia, and lessens dysfunctional uterine bleeding.⁸

Clinicians should weigh all factors when providing guidance on contraceptive methods for obese women, says **Anita Nelson, MD**, professor in the Obstetrics and Gynecology Department at the University of California in Los Angeles (UCLA) and medical director of the women's health care programs at Harbor-UCLA Medical Center in Torrance.

"I do very much appreciate the concerns for obese women and risk of thrombosis, but they also often have issues that could preclude use of other nonhormonal methods," says Nelson. "However, we cannot automatically assume that every obese woman over 35 is a candidate for or desires to use other effective contraceptives."

In helping women weigh their choices, Nelson advises that combined hormonal birth control methods provide many noncontraceptive benefits that are important to perimenopausal women. Therefore, the combination of age and obesity should only be considered at most a strong relative contraindication, not an absolute contraindication, she states.

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Recurrent bacterial vaginosis — What works?

The next patient in your exam room is a 23-year-old woman who is experiencing her third episode of symptomatic bacterial vaginosis (BV) in six months. Which of the following strategies would you recommend?

- Treat with a 10-day course of vaginal metronidazole, then suppressive metronidazole gel on a biweekly basis for six months.
 - Use condoms as much as possible.
 - Douche with acetic acid to improve vaginal pH.
 - Eat a lot of yogurt to replenish vaginal lactobacilli.
 - Treat her male partner with a week of oral metronidazole.
 - Refer her to a new health care provider.

EXECUTIVE SUMMARY

Bacterial vaginosis (BV) is the most prevalent cause of vaginal discharge or malodor, according to the Centers for Disease Control and Prevention; however, more than 50% of women with BV are asymptomatic. Clinical criteria for diagnosis include presence of a homogeneous, thin, white discharge that smoothly coats the vaginal walls; presence of clue cells on microscopic examination; pH of vaginal fluid above 4.5; and a fishy odor of vaginal discharge before or after addition of 10% potassium hydroxide.

- Tinidazole joins metronidazole and clindamycin as approved drugs for treatment of BV.
- For recurrent BV, using metronidazole vaginal gel in a longer treatment regimen may be effective, along with counseling on cessation of douching and use of condoms.

The first two answers are the most effective strategies, according to BV experts.

Addressing recurrent bacterial vaginosis is a challenge for many family planning providers, says **Jeanne Marrazzo, MD, MPH**, associate professor in the Division of Allergy and Infectious Diseases in the University of Washington Department of Medicine and the medical director of the Seattle STD/HIV Prevention Training Center, both in Seattle. Marrazzo presented information on recurrent BV at the recent *Contraceptive Technology* conference.¹

“Basically, the challenges are that some women simply don’t respond to the usual antibiotics, or more commonly, respond briefly then relapse,” observes Marrazzo. “We really don’t know what predicts relapse.”

New drug for BV

Bacterial vaginosis is the most prevalent cause of vaginal discharge or malodor, according to the Centers for Disease Control and Prevention (CDC); however, more than 50% of women with BV are asymptomatic.² Clinical criteria require three of the following symptoms:

- homogeneous, thin, white discharge that smoothly coats the vaginal walls;
- presence of clue cells on microscopic examination;
- pH of vaginal fluid above 4.5;
- a fishy odor of vaginal discharge before or after addition of 10% potassium hydroxide, known as the whiff test.²

Until now, clinicians have had two drugs to treat BV, metronidazole and clindamycin. Now you can add a new drug to the list: tinidazole (Tindamax, Mission Pharmacal, San Antonio). The Food and Drug Administration just approved the drug for treatment for BV; it already carries indications for trichomoniasis, the intestinal infections giardiasis and intestinal amebiasis, and amebic liver abscess. **(Read more about tinidazole; see the *Contraceptive Technology Update* article “Bacterial vaginosis is the focus of new research,” May 2005, p. 58, and “Trichomoniasis drug given FDA approval,” *STD Quarterly* supplement, August 2004, p. 3.)**

For treatment of BV, tinidazole is administered as 1 g (two tablets) once daily for five days or 2 g (four tablets) once daily for two days. Other regimens, which are included in the CDC’s 2006 Sexually Transmitted Diseases Treatment Guidelines include:

- metronidazole 500 mg orally twice a day for

seven days;

- or metronidazole gel, 0.75%, one full applicator (5 g) intravaginally, once a day for five days;
- or clindamycin cream, 2%, one full applicator (5 g) intravaginally at bedtime for seven days.²

Alternate treatments listed in the guidelines include:

- clindamycin 300 mg orally twice a day for seven days;
- or clindamycin ovules 100 mg intravaginally once at bedtime for three days.

What causes recurrence?

What are the factors that lead to recurrent BV? Research continues to focus on this subject, but sexual transmission and reinfection may play in a role in some women, says **Jack Sobel**, MD, chief of the Division of Infectious Diseases and professor of medicine at Wayne State University School of Medicine.

“Whether in fact it is due to failure to establish a lactobacillus-dominant flora or whether it is due to the fact that we do not eradicate the abnormal or the original offending agent with our therapy, I believe a major factor is that the treatment with clindamycin and with metronidazole is simply not potent enough to eradicate the agent,” he comments.

More metronidazole may be effective. Sobel and a research team have looked at suppressive antibacterial therapy using metronidazole vaginal gel in a longer treatment regimen. Results from research published in 2006 indicates that suppressive therapy with twice-weekly metronidazole gel achieves a significant reduction in the recurrence rate of bacterial vaginosis; however, secondary vaginal candidiasis is common.³ Sobel is now looking at a more complex regimen for recurrent BV, and he says other agents are being researched with promising results. Data have not yet been published, he says.

Give women the following information when counseling on recurrent BV, Marrazzo advises:

- Abstain from vaginal sex during treatment.
- Don't douche — with anything!
- Use of condoms during the first month following treatment probably will reduce risk of recurrence.
- Clean sex toys — or use condoms — between use on one sexual partner and another.
- Avoid vaginal insertion following anal insertion of fingers or penises.¹

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New research targets *Mycoplasma genitalium*

Results of a large national study of young men and women ages 18-27 suggest that *Mycoplasma genitalium*, a relatively new sexually transmitted infection, surpassed gonorrhea in prevalence.¹ What is known about this infection, and what are possible treatments?

M. genitalium infection has been difficult to determine. It was first cultured in the early 1980s from the urethral exudates of two men with nongonococcal urethritis (NGU).² *M. genitalium* is extremely difficult to grow in culture, so epidemiologic studies really can be done only using a nucleic acid amplification test, explains **Lisa Manhart**, PhD, MPH, assistant professor of epidemiology in the University of Washington School of Public Health and an investigator at the university's Center for AIDS and STD at Harborview Medical Center, both in Seattle. These tests are still “research-only” and so are not generally available to physicians and commercial

EXECUTIVE SUMMARY

Results of a large national study of young men and women ages 18-27 suggest that *Mycoplasma genitalium*, a relatively new sexually transmitted infection, surpassed gonorrhea in prevalence.

- *M. genitalium* is extremely difficult to grow in culture; it requires nucleic acid amplification tests that are not found outside research centers.
- The organism has been associated with several clinical syndromes, including nongonococcal urethritis (NGU), pelvic inflammatory disease, and cervicitis. Current guidelines recommend azithromycin or doxycycline for the treatment for NGU.

laboratories, she states. No approved commercial assays have been made available, although investigators have presented information on kits for research use.³

The organism has been associated with several clinical syndromes, including NGU, pelvic inflammatory disease, and cervicitis, says **Jennifer Ruth**, a spokeswoman for the Centers for Disease Control and Prevention (CDC). With the recommended treatment for those syndromes, *M. genitalium* should be effectively treated, she notes. Current guidelines recommend azithromycin or doxycycline for the treatment for NGU.⁴

Research digs deeper

Scientists in Seattle looked at *M. genitalium* among men with urethritis in 2001 in an effort to identify causes of this syndrome. At that time, approximately 20%-50% of cases of male NGU had no identified pathogen other than chlamydia, Manhart observes. Results of the 2001 research determined that 22% of cases of nongonococcal urethritis were associated with *M. genitalium*.⁵ Since that time, the Seattle-based group of investigators has looked at *M. genitalium* in women, finding associations with cervicitis and endometritis.^{6,7}

All of these studies were done in high-risk populations, such as sexually transmitted disease (STD) clinics or commercial sex workers, says Manhart. The current study was conducted in 1,714 women and 1,218 men between the ages of 18-27 who participated in Wave III of the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative study. The Add Health study allowed researchers to look at *M. genitalium* in the general population, says Manhart, the lead investigator.

"While a representative population-based study is the most appropriate to estimate the prevalence of any infection in the general population, they are very expensive and difficult to conduct," observes Manhart. "We were very fortunate to be able to collaborate with the Add Health study, which is an extremely well-designed and well-conducted population based study."

When examining the prevalence of STDs within the study population, researchers found that the prevalence of *M. genitalium* was 1%, compared with 0.4%, 4.2%, and 2.3% for gonococcal, chlamydial, and trichomonal infections, respectively. No *M. genitalium*-positive individuals reported symptoms of discharge.¹

What is the next step in research? Manhart's

research team is conducting a randomized treatment trial among men with urethritis to determine which of the two most commonly recommended antibiotics — azithromycin and doxycycline — works best against *M. genitalium* in urethritis. The study is being conducted among men attending an urban STD clinic.

"We also are studying high-risk women in Kenya to determine if *M. genitalium* infection is associated with an increased risk of HIV transmission, as are other sexually transmitted infections such as gonorrhea and herpes simplex virus," notes Manhart. "Other members of our research group are looking at adverse pregnancy outcomes, such as preterm delivery."

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Hormonal contraception and HIV risk: A review

Results from past research studies have investigated a possible relationship between hormonal contraceptive use and HIV acquisition, but understanding remained poor due to inconsistent results and shortfalls in study design.¹ A 2007 multinational prospective cohort study found no overall statistically significant association between the use of combined oral contraceptive (COC) pills or depot medroxyprogesterone acetate (DMPA) and HIV

acquisition.² (*Contraceptive Technology Update reported on the study; see the article, “Hormonal contraception use doesn’t up HIV risk,” March 2007, p. 29.*)

A total of 6,109 women participated in the study: 2,235 in Uganda, 2,296 in Zimbabwe, and 1,578 in Thailand. All were family planning clinic clients. At the time of enrollment, the women were using no hormonal contraception, or they had used COCs or DMPA for at least three months before the study began. Women who were not using hormonal contraception used such methods as condoms alone, diaphragms and spermicides, sterilization, withdrawal, or periodic abstinence, or they used no birth control method.

In the study, the women were offered their choice of oral contraceptives or DMPA, as well as condoms. Researchers counseled women on how to use their chosen methods, as well as how to reduce their risk of HIV infection. Women also were examined for sexually transmitted infections and offered treatment if needed. HIV tests were administered four to five times a year for 15 to 24 months.

By the study’s end, 213 African women had become infected with HIV, while only four Thai women were identified with the infection. Since there were too few Thai cases for a valid statistical interpretation, the researchers excluded them from the final analysis.

The researchers report that neither COCs [hazard ratio (HR), 0.99; 95% confidence interval (CI), 0.69-1.42] nor DMPA (HR, 1.25; 95% CI, 0.89-1.78) was associated with risk of HIV acquisition overall, including among participants with cervical or vaginal infections. While absolute risk of HIV acquisition was higher among participants who were seropositive for herpes simplex virus 2 (HSV-2) than in those seronegative at enrollment, among the HSV-2-seronegative participants, both combined pill users (HR, 2.85; 95% CI, 1.39-5.82) and DMPA users (HR, 3.97; 95% CI, 1.98-8.00) had an increased risk of HIV acquisition compared with the nonhormonal group.

The subgroup of women who were not infected with genital herpes at enrollment comprised about half the women in the study. Among this subgroup,

those women who used hormonal contraceptive methods had an increased HIV infection risk, as shown in the statistics above: Combined pill users had almost three times and DMPA users had four times the risk of acquiring HIV when compared to women not using hormonal contraceptives.

“Among women who are HSV-2-negative, DMPA and COC users may be at increased risk of HIV acquisition,” concluded the researchers in their analysis. “Additional research should confirm and interpret this finding.”

Neither the World Health Organization nor the International Planned Parenthood Federation, which reviewed the study results, plans at this time to change guidelines for hormonal contraceptive use.¹

Counsel on condoms

Researchers continue to look at linkages between combined pill use and increased sexually transmitted infection (STI) risk. Findings suggest that combined pills influence transcription of natural antimicrobials in the human endometrium, which may increase a woman’s vulnerability to upper-tract chlamydia or HIV infection.³

In the same vein, DMPA provides no protection against STIs, including HIV. Several observational studies have shown an association between DMPA use and acquisition of chlamydia.^{4,6} In two studies, DMPA use has been inconsistently associated with acquisition of gonorrhea.^{4,6} Studies in high-risk populations, including sex workers in Kenya and Thailand, have demonstrated an association between DMPA and HIV acquisition,^{7,8} while other research has not observed an association.⁹

What does this mean for family planning clinicians? Because hormonal contraception does not protect against HIV, women who use hormonal contraception and are at elevated risk of acquiring HIV also should use condoms consistently and correctly with each sexual act if they are not in a mutually monogamous relationship with an uninfected partner.¹ Advice from the current edition of *Contraceptive Technology* says it best: “To reduce risks for STIs, women should choose to be

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sexually active with one uninfected, monogamous partner or, at a minimum, use latex or polyurethane condoms with every act of vaginal or rectal intercourse and should consider condom use with oral-genital contact, too.”¹⁰

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CE/CME Instructions

Physicians and nurses participate in this continuing medical education/continuing education program by reading the articles, using the provided references for further research, and studying the questions at the end of the issue. Participants should select what they believe to be the correct answers and refer to the list of correct answers to test their knowledge. To clarify confusion surrounding any questions answered incorrectly, please consult the source material. After completing this activity with the **December** issue, you must complete the evaluation form provided and return it in the reply envelope provided in that issue to receive a certificate of completion. When your evaluation is received, a certificate will be mailed to you. ■

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Hatcher recipient of leadership award

Robert Hatcher, MD, MPH, professor of Obstetrics and gynecology at Atlanta's Emory University and chairman of the editorial board for *Contraceptive Technology Update*, is the 2007 recipient of the Kenneth J. Ryan, MD, Physician Leadership Award.

The award was presented by Physicians for Reproductive Choice and Health (PRCH) during the May Annual Clinical Meeting of the American College of Obstetricians and Gynecologists in San Diego. The award, named for one of PRCH's founding members, is given each year to a physician who exemplifies leadership in the field of reproductive health.

In making the award, PRCH honored Hatcher for his commitment to education. Hatcher has trained thousands of medical students, doctors, and other health care professionals to provide contraception to women throughout his tenure at Emory. His teaching extends beyond the university through his numerous textbooks, including *Contraceptive Technology*. In addition to reference books for medical professionals, Hatcher has written several books on relationships and sexuality for the general public. The web site www.managingcontraception.com, which was created by Hatcher, answers questions about birth control from consumers and medical professionals.

"Dr. Hatcher has a wealth of knowledge to pass on to other people, and he literally gives it away for free," says **Carrie Cwiak**, MD, MPH, a fellow Emory University obstetrician/gynecologist. "He wants to use his experience to help others. He'll say, 'I've done this before — let me pass this along to you.'" ■

CE/CME Questions

After reading *Contraceptive Technology Update*, the participant will be able to:

- **identify** clinical, legal, or scientific issues related to development and provisions of contraceptive technology or other reproductive services.
 - **describe** how those issues affect services and patient care.
 - **integrate** practical solutions to problems and information into daily practices, according to advice from nationally recognized family planning experts.
5. According to estimates, how many women with pelvic inflammatory disease becomes infertile?
- A. One in five
B. One in four
C. One in three
D. One in two
6. The immediate initiation of oral contraceptives before start of the next menses is called:
- A. Jump Start.
B. Quick Start.
C. Head Start.
D. First Start.
7. Obesity is defined as a body mass index of:
- A. more than 10.
B. more than 20.
C. more than 30.
D. more than 35.
8. To determine bacterial vaginosis, clinicians use potassium hydroxide to perform what test?
- A. Sonohysterography
B. Colposcopy
C. Microscopy
D. Whiff test

Answers: 5. A; 6. B; 7. C; 8. D.

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