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November 2013: Vol. 34, No. 11
Pages 121-132

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Financial Disclosure: Consulting Editor **Robert A. Hatcher**, MD, MPH, Author **Rebecca Bowers**, and Executive Editor **Joy Dickinson** report no consultant, stockholder, speaker's bureau, research, or other financial relationships with companies having ties to this field of study. **Sharon Schnare**, Nurse Reviewer, discloses that she is a retained consultant for Watson Laboratories and Dopomed; on the speakers' bureau for Meda Pharmaceuticals, Merck Sharpe & Dohme Corp., and Teva Women's Health; and on the speakers bureau and a retained consultant for Bayer HealthCare Pharmaceuticals. **Adam Sonfield**, guest columnist, has no relevant relationships to disclose.

Technology holds the key — Help young women pick prevention options

Use digital technology to reduce unintended pregnancy, STIs

In a 2013 national online survey of young women, more than half (58%) said they did not use contraception all the time.¹ (*Read more about the survey; see story on p. 124.*) Technology might help providers effectively reach teens and young adults with effective messages on birth control and prevention of sexually transmitted infections (STIs).

The Centers for Disease Control and Prevention (CDC) estimate that nearly 20 million new STIs occur every year in this country, with half among young people ages 15-24, notes **Rachel Kachur**, MPH, a health scientist in the CDC's Division of STD Prevention. The CDC recently published a white paper for practitioners and others who work with adolescents to provide insight into how digital technology can be used to improve the sexual health of this population.²

"With younger Americans at higher risk for infection, it is critical to reach them with information about STIs and how to protect themselves," says Kachur. "Digital technology is helping CDC and its public health partners, including healthcare providers, to do just that."

Whether it is the internet, mobile phones, or gaming, technology is

EXECUTIVE SUMMARY

Technology might help providers effectively reach teens and young adults with effective messages on birth control and prevention of sexually transmitted infections (STIs).

- Among youth ages 12-17, 93% are online, 75% have a mobile phone, and 97% play video games. Such digital technologies provide youth with anonymous avenues for seeking sexual health information. Social media tools can effectively deliver such messages.

- The Adolescent Pregnancy Prevention Campaign of North Carolina launched its BrdsNBz Text Message Warm Line in 2009 to provide confidential, factually accurate answers to sexual health questions via text message to young people ages 14-19 in North Carolina. It now works with other agencies across the United States in offering similar services.

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increasingly influencing the lives of youth and has changed the way they interact and access information, notes Kachur. Among youth ages 12-17,

93% are online, 75% have a mobile phone, and 97% play video games.^{3,4}

In addition to providing new ways for teens and young adults to communicate, these digital technologies also provide youth with anonymous ave-

nues for seeking health information in general and sexual health, in particular, observes Kachur. Social media tools can effectively get them the information they need, she states.

“CDC is using social media vehicles like Facebook, Twitter, YouTube and Flickr to provide our public health partners with resources they can use to help raise awareness about STIs,” states Kachur.

In addition to Twitter, the CDC offers several educational podcasts and webinars for providers. Go to <http://1.usa.gov/17PWEUv> to access them. Kachur also points to the recently released STD Tx Guide, a mobile application that helps healthcare providers identify and treat patients for STIs.

The mobile application is an easy-to-use reference that helps healthcare providers identify and treat patients for STIs. It combines information from the most current STD Treatment Guidelines as well as updates from the CDC’s *Morbidity and Mortality Weekly Report*. It features a streamlined interface so providers can access treatment and diagnostic information. The free app is available for Apple and Android devices. Go to <http://1.usa.gov/11YXyMw> and click on the appropriate download link for your device.

Providers who are interested in using social media in their practice or for their organization might want to take a look at the CDC’s social media guidelines, available at <http://1.usa.gov/VEFAu1>. The guidelines have been developed to provide critical information on lessons learned, best practices, clearance information, and security requirements. Use the agency’s Social Media Toolkit, available on that web page, for a free downloadable document, to develop blogs, video-sharing sites, mobile applications, and Rich Site Summary (RSS) feeds for your practice.

NC agency goes digital

The Durham, NC-based Adolescent Pregnancy Prevention Campaign of North Carolina has embraced digital technology to reach at-risk teens and young adults. It launched its BrdsNBz Text Message Warm Line in 2009 to provide confidential, factually accurate answers to sexual health questions via text message to young people ages 14-19 in North Carolina. A young person simply texts a question, and a trained health educator responds within 24 hours.

The agency, in partnership with Houston-based OneSeventeen Media, operates BrdsNBz text lines in North Carolina, Texas, Indiana, and New

Contraceptive Technology Update® (ISSN 0274-726X), including STI Quarterly™, is published monthly by AHC Media, LLC, One Atlanta Plaza, 950 East Paces Ferry Rd, Suite 2850, Atlanta, GA 30326. Telephone: (404) 262-7436. Periodicals Postage Paid at Atlanta, GA 30304 and at additional mailing offices.

POSTMASTER: Send address changes to Contraceptive Technology Update®, P.O. Box 550669, Atlanta, GA 30355.

Subscriber Information

Customer Service: (800) 688-2421 or fax (800) 284-3291. E-mail: customerservice@ahcmedia.com. Hours of operation: 8:30 a.m.-6 p.m. Monday-Thursday; 8:30 a.m.-4:30 p.m. Friday, EST. Subscription rates: U.S.A., one year (12 issues), \$449. Add \$17.95 for shipping & handling. Outside U.S., add \$30 per year, total prepaid in U.S. funds. Discounts are available for group subscriptions, multiple copies, site-licenses or electronic distribution. For pricing information, call Tria Kreutzer at 404-262-5482. Back issues, when available, are \$75 each. (GST registration number R128870672.) Photocopying: No part of this newsletter may be reproduced in any form or incorporated into any information retrieval system without the written permission of the copyright owner. For reprint permission, please contact AHC Media. Address: P.O. Box 550669, Atlanta, GA 30355. Telephone: (800) 688-2421. World Wide Web: <http://www.ahcmedia.com>.

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Editorial Questions

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Mexico, as well as two pilot parent text lines, says **Elizabeth Hundley Finley**, director of strategic communications for the agency. Some of the organizations that have launched BrdsNBz Text Lines include nonprofit agencies, hospitals, and state and local health departments, says Finley. More information on the program, as well as contact information, is available at <http://bit.ly/Kzgmpe>.

How much does it cost the agency and its contract partners to run BrdsNBz? BrdsNBz is implemented on a sliding scale based on the size of the target population and the type of organization that wants to buy a BrdsNBz license, says Finley. License fees are determined on a case-by-case basis, and the agency also factors in how much intensive help a site needs, she notes.

“For example, they may only need help developing protocols and implementing the technology, or they may also need a full-on marketing plan,” Finley states.

Check “The Playbook”

The North Carolina agency also has recently launched a comprehensive social marketing campaign, “The Playbook: Your Guide to Safer, Sexier Choices,” to connect sexually active 18-19 year-olds in Gaston County to clinical services. (*To take a look at the online site, go to <http://bit.ly/VyYEuG>.*)

“The Playbook” is the latest tactic of the agency’s Gaston Youth Connected initiative, a five-year project funded by the CDC. The initiative is primarily focused on improving clinical services, implementing prevention programs for middle- and high-school-aged youth, and rallying community support for teen pregnancy prevention. In 2011, Gaston County recorded a teen pregnancy rate among girls ages 15-19 of 48.8 per 1,000; the national rate was 31.3 births for every 1,000 adolescent females ages 15-19.^{5,6}

Why is “The Playbook” needed? Almost 75% of Gaston County’s teen pregnancies occur in teens ages 18-19, according to the agency. Additional research indicates 78% of these teens have been sexually active before, yet only a small proportion of them are using the county’s clinics to access family planning services. A secondary focus of the campaign is designed to increase knowledge about contraceptive use, especially use of long-acting reversible contraception (LARC), and elevate the intention to use contraceptives, says Finley.

Reception to the program has been “great,” says Finley. Online social marketing presents many evaluation challenges, since pre-and post-tests cannot be easily implemented as with more traditional interventions, notes Finley. Agency staffers are following such online analytics as website visits and social media engagement, however, and have seen a steady increase in use, says Finley.

To further track program use, the agency is conducting periodic in-clinic referral surveys. Its most recently completed clinic referral survey was held in May 2013, just three months after the launch of the program. More than 12% of clinic patients who completed the survey identified “The Playbook” as a referral source, says Finley. The leading referrers continue to be family, friends, and other healthcare providers, she states.

Adult reception of the program also has been positive, reports Finley. The agency held a mini-launch tour with community adults prior to the official launch of “The Playbook” site in an attempt to head off any potential controversy, says Finley. Program organizers were clear with adults that the site’s target audience is sexually active teens ages 18-19.

“We told them point blank, ‘You will not like it. It’s not designed for you to like it.’” states Finley. “Those measures seemed to have allayed any pushback in the community.”

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How can providers promote effective use?

Your last patient of the day is a 19-year old college student. She leaves your office with a prescription for a low-dose oral contraceptive (OC). What are the chances that she will continue to use her chosen method?

If the results of a new national online survey are any indication, there's a more than 50% chance there will be inconsistency in her use of the contraceptive.¹ The survey, a joint project of the Washington, DC-based National Campaign to Prevent Teen and Unplanned Pregnancy and *Cosmopolitan* magazine, was administered in March 2013 to more than 1,000 unmarried women, ages 18-29, none of whom have had children, all of whom have had sex, and none of whom are trying to get pregnant.

What did these young women say? Examine the following results:

- Even though more than eight in 10 say they would be upset if they got pregnant, nearly half (48%) say it is at least a little bit likely they will have unprotected sex in the next year. One in five says it is very likely.
- One in four (24%) have let a partner talk them out of using contraception.
- More than eight in 10 (82%) of those who have had a pregnancy scare say that experience made them more careful about using protection and more than half (54%) say it made them switch to a more reliable method of birth control.
- One in three (30%) have used emergency contraception.

Given all of these inconsistencies in contraceptive use, though, 78% of women surveyed say they are totally satisfied with their current method of con-

EXECUTIVE SUMMARY

In a 2013 national online survey of young women, more than half (58%) said they did not use contraception all the time. The survey polled more than 1,000 unmarried women, ages 18-29, none of whom have had children, all of whom have had sex, and none of whom are trying to get pregnant.

- More than three-quarters (77%) of women surveyed say effectiveness is the most important factor in choosing a contraceptive.
- With this in mind, providers should start counseling messages with the most effective long-acting reversible contraceptives: the intrauterine device and implant.

traception.¹ What can providers do to help women achieve successful, consistent use?

Women need to hear that “most of the time” isn't good enough when it comes to such methods as the Pill, condoms, and other user-dependent methods, says **Sarah Brown**, chief executive officer of the campaign.

“Healthcare providers have a real opportunity to educate young women, introduce them to new methods, and support them as they keep trying different types of birth control until they find the one that best suits them,” says Brown. “Doctors and nurse practitioners are already a trusted source for this information and are well-positioned to set the tone for open, informative conversations.”

Many young women might assume incorrectly that they are subfertile, or infertile, because they have had unprotected sex in the past and have not become pregnant, says Brown. Clinicians need to emphasize that risk of pregnancy is real, especially for women who do not choose a top-tier method.

Make effectiveness no. 1 priority

When talking with young women about contraception, routinely ask them if they want to get pregnant in the next year, says Brown.

“This is turning out to be the sentinel question — not the next five years, or this week, but the next year — and if they say no, then have a discussion that begins with the most effective method,” states Brown. “This is different from the old way where [providers] would say in essence, ‘let me tell you about all of your options, the pluses and minuses, and you make the decision.’”

Based on the survey results, 77% of women say effectiveness is the most important factor in choosing a contraceptive, says Brown. With this in mind, providers should start with the most effective long-acting reversible contraceptives (LARCs): the intrauterine device (IUD) and implant, she states. Using language such as “if for some reason, those you don't care for them or they are not right for you,” providers then can move to lower-tier methods. (*See resources on p. 125.*)

The effectiveness of LARC methods is the first message provided to women in the St. Louis Contraceptive CHOICE project, where 75% of 9,256 women who entered into the study chose to use a LARC method, says **Robert Hatcher, MD, MPH**, professor emeritus of gynecology and obstetrics at Emory University School of Medicine in Atlanta (*To read more the CHOICE project, see the Contraceptive Technology Update articles, “What*

avenues will raise LARC method awareness,” August 2013, p. 91,” “More women moving to LARC methods — Will your facility follow the trend?” April 2013, p. 37, and “The ‘Get It and Forget It’ methods are here: Remove obstacles to use,” April 2012, p. 37.)

Effectiveness is the most important message and the first message in the two clinics offered LARC methods in the capital city of Rwanda, Hatcher says. In a study conducted by Emory University’s **Susan Allen**, MD, MPH, and members of the Rwanda Zambia HIV Research Group, IUD and implant use rose from zero to 36-38% in the two-clinic study.²

Hatcher points to a third program that has emphasized contraceptive effectiveness. In the Northeast Health District of Georgia, a 10-county district surrounding Athens, GA, district health director **Claude Burnett**, MD, MPH, has presented failure rates in a fascinating method, says Hatcher. A brightly colored page of numbers presented to visitors to district clinics list the pregnancy rates from a range of contraceptives in an innovative manner. There are no decimal points. For example, the failure rate for the contraceptive implant is expressed as five per 10,000 typical women; for female sterilization, it is as 10 times as high, or 50 per 10,000 women. The failure rate for birth control pills is listed as 900 per 10,000 typical women. There has been a remarkable increase in implant and IUD use in this health district, says Hatcher. (*See Hatcher’s column on the importance of numbers on p. 130.*)

“In a presentation to the family planning staff at Emory University, Dr. **Susan Allen** made an important point: Patients can really absorb one or two messages per visit,” says Hatcher. “The first words out of the mouth of family planning programs should stress the effectiveness of the implants and IUDs now offered by a program.”

Talk about side effects

Talking about side effects is crucial to successful use of birth control. One in four (25%) women surveyed say that fear of long-term side effects is a key reason for their decision not to use a particular method, survey results show.¹ One in five (19%) say they are afraid of more immediate possible side effects, such as weight gain.

It is important that clinicians say contraception options are good and healthy choices. The word “healthy” seems to have a particular resonance with young women, says Brown. If a patient says “I’m worried about X,” providers should reply with such wording as “that risk is there for a certain number of women, but let me also tell you what that risk is if you get pregnant,” says Brown.

“That’s what we are managing against with contraception; it’s pregnancy.” states Brown. “We’re not managing against measles.”

Get up to speed

What can clinicians do to help young women successfully use contraception to protect themselves against unintended pregnancy? Get training for inserting intrauterine devices and implants, become educated on same-day insertion of these methods, and build a support system among staff to effectively manage any side effects that might stem from LARC use, says Brown.

Know that today’s intrauterine devices are different from those of 25 years ago, states Brown. Keep IUDs and implants in stock so women don’t have to return to the office for a separate insertion visit, she notes.

With the Affordable Care Act, insurance plans must cover all Food and Drug Administration-approved contraceptive methods with no out-of-pocket expenses. Women without insurance might qualify for Medicaid or Title X services, says Brown.

“Depending on the insurance status of the young woman, it’s very important that they understand that even the best methods now for them come with no copay,” states Brown.

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RESOURCES

- Download a free diagram, “**Effectiveness of Family Planning Methods**,” from the Centers for Disease Control and Prevention to help illustrate your counseling message. Go to <http://1.usa.gov/1e37WsX>.
- Use free material from the St. Louis-based Contraceptive CHOICE Project Resource Center to develop your own “**LARC First**” practice. Go to <http://bit.ly/1e3edEM>.
- Visit the **American College of Obstetricians and Gynecologists’ LARC web page**, <http://bit.ly/MpQ63R>, for a wide range of provider and patient resources. To sign up for free LARC e-newsletters, go to <http://bit.ly/15X4wyQ>.
- Direct your patients to **www.bedsider.org**, an online birth control support network for women ages 18-29 that is operated by the National Campaign to Prevent Teen and Unplanned Pregnancy. ■

How to boost use of HPV vaccine in boys

New data from the Centers for Disease Control and Prevention (CDC) show about one in five boys got at least one of the recommended three doses of human papillomavirus (HPV) vaccine last year.¹

The report is the first snapshot of male vaccine use following the Advisory Committee on Immunization Practices' (ACIP) recommendation for routine HPV vaccination in this population. (*Contraceptive Technology Update reported on the recommendation. See "Finally! HPV male shot routinely recommended," January 2012, p. 6.*) The data is based on telephone calls to families for about 19,000 boys and girls ages 13 to 17.

The Food and Drug Administration in December 2010 approved Gardasil, the Merck & Co. quadrivalent vaccine, for prevention of anal cancer and associated precancerous lesions (anal intraepithelial neoplasia grades 1, 2, and 3), related to HPV types 6, 11, 16, and 18 in males and females ages 9-26. (*See "New indication OK'd for HPV vaccine," STI Quarterly supplement, March 2011, p. 3.*) The vaccine also is approved for the prevention of genital warts caused by types 6 and 11 in males and females.

While the new data appears encouraging regarding HPV vaccination rates among males, what can providers do to further boost rates among this population?

HPV vaccination is important for cancer prevention in boys and girls, says **Robin Curtis, MD, MPH, FAAP**, a pediatrician with CDC's National Center for Immunization and Respiratory Diseases and lead author of the current research. Providers should recommend the HPV vaccine series in the same way that they recommend other vaccines, she states.

At ages 11 through 12, the Advisory Committee

EXECUTIVE SUMMARY

New data from the Centers for Disease Control and Prevention show about one in five boys got at least one of the recommended three doses of human papillomavirus (HPV) vaccine last year.

- The report is the first snapshot of male vaccine use following the Advisory Committee on Immunization Practices' recommendation for routine HPV vaccination in this population.
- At ages 11 through 12, the committee recommends that preteens receive one dose of tetanus, diphtheria, and acellular pertussis vaccine, one dose of meningococcal conjugate vaccine, and three doses of HPV vaccine.

on Immunization Practices recommends that preteens receive one dose of tetanus, diphtheria, and acellular pertussis (Tdap) vaccine, one dose of meningococcal conjugate vaccine, and three doses of HPV vaccine.²⁻⁴ ACIP recommendations call for administration of all age-appropriate vaccines during a single visit.⁵ For example, a clinician can say "Your child needs these shots today," and name all of the vaccines recommended for the child's age, explains Curtis. When a vaccine such as Tdap is given to boys and girls, providers also should be sure to administer recommended HPV and meningococcal vaccinations during those very same visits, she notes.

Room for improvement

There is room for improvement for increasing HPV vaccination rates in young males and females, say medical and health advocacy groups. Rates of HPV vaccine uptake for adolescent females during 2012 did not change from rates in 2011.⁶ (*To read the CTU article, see "Public health officials say boost HPV vaccination numbers," October 2013, p. 109.*)

The American Academy of Pediatrics is participating in a joint project with the CDC to educate pediatricians about the need for a strong recommendation to parents for on-time adolescent vaccinations. It also is implementing quality improvement activities to reduce missed opportunities; raise parental awareness of adolescent vaccines by creating educational material for pediatric offices; and improve practice tools, such as prompts in electronic medical records and implementing standing orders that patients can receive vaccinations without a physician's exam.⁷

Reaching young males can be tough. America's healthcare system does not adequately address the needs of adolescent and young adult males, notes **Dennis Barbour, JD**, co-founder of The Boys Initiative, a Washington, DC-based non-profit organization centered on issues surrounding adolescent and young adult males. On the whole, a young man's last visit to his pediatrician often marks his exit from primary and continuous care until he reaches middle age, says Barbour.

The Boys' Initiative is reaching out to and engaging a range of medical experts in all fields that have an interest in adolescent and young adult male health, says Barbour. It is working with such experts to develop a male health checklist for clinicians, as well as a health checklist for use by young men.

The HPV vaccine in males offers a good starting point for reaching young men. Widespread use of any medical service is dependent on reimbursement for it; that is why any education effort must be coupled with

efforts to ensure insurance coverage for the vaccine, Barbour notes. One vehicle for this coverage can be the Affordable Care Act (ACA), which mandates a package of preventive services for women, but not for men.

“The HPV vaccine would appear to be an excellent candidate for moving the ACA, and our healthcare system with it, toward improved health care for adolescent and young adult males,” says Barbour.

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STI infections in teens might boost HIV risk later

Results of a new study indicate individuals who contract sexually transmitted infections (STIs) during their teen years have a greater HIV risk into young adulthood.¹ Data from the study indicate the greater the number of STIs contracted during teen

years, the greater the risk of subsequent HIV.¹

To conduct the retrospective cohort study, researchers with the Philadelphia (PA) Department of Public Health analyzed data from 75,273 Philadelphia high school students born between 1985 and 1993 who participated in the Philadelphia High School STD Screening Program. Students in the program, which includes education about STIs and HIV and STI screening, were studied between 2003 and 2010. To conduct the study, researchers matched the cohort to existing STI and HIV surveillance data sets and death certificates to estimate the connection between existing STIs and potential HIV risk.

Compared with individuals reporting no STIs during adolescence, adolescents with STIs had an increased risk for subsequent HIV infection (incidence rate ratio [IRR] for adolescent girls=2.6; 95% confidence interval [CI]=1.5, 4.7; IRR for adolescent boys=2.3; 95% CI=1.7, 3.1). Risk increased with number of STIs. The risk of subsequent HIV infection was more than three times as high among those with multiple gonococcal infections during adolescence as among those with none, researchers report.

How important is it that providers address STI/HIV risks with teens, given the current trend in adolescent STI rates across the United States? Because of the very high disease rates among adolescents, STI screening of this group has long been recognized as a priority in the United States, says **Claire Newbern**, PhD MPH, epidemiology unit manager with the Philadelphia Department of Public Health.

“Our study provides further evidence of the long-term HIV risk that can be associated with bacterial STIs acquired during adolescence and underscores the need for such screening,” states Newbern, who served as lead author for the current analysis.

EXECUTIVE SUMMARY

Results of a new study indicate individuals who contract sexually transmitted infections (STIs) during their teen years have a greater HIV risk into young adulthood. Data from the study indicate the greater the number of STIs contracted during teen years, the greater the risk of subsequent HIV.

- To conduct the retrospective cohort study, researchers with the Philadelphia (PA) Department of Public Health analyzed data from 75,273 Philadelphia high school students born between 1985 and 1993 who participated in the Philadelphia High School STD Screening Program.
- Americans ages 15-24 make up just 27% of the sexually active population, but account for 50% of the 20 million new STIs in the United States each year.

Burden is high

STIs are common in the United States, with a disproportionate burden among young adolescents and adults, according to a 2013 Centers for Disease Control and Prevention (CDC) analysis of national data.² Americans ages 15-24 make up just 27% of the sexually active population, but account for 50% of the 20 million new STIs in the United States each year.³

With such high prevalence of STIs in young adults, it is important for clinicians to talk to their young patients about STI prevention and to conduct appropriate testing, says **Catherine Satterwhite**, PhD, MSPH, MPH. Satterwhite, a medical epidemiologist in the Division of STD Prevention at the CDC, served as lead author of the 2013 analysis. “Young people often face unique prevention challenges, including embarrassment and confidentiality concerns,” says Satterwhite. “Research shows that young patients may be afraid to initiate a conversation about STIs and will be looking to you, their healthcare provider, to begin the discussion.”

Create an environment that feels safe for your young patients to talk openly without judgment, Satterwhite suggests. Clinicians must communicate with young patients that they understand that teen and young adults’ health needs are different from the health needs of older adults.

Asking about your young patient’s sexual history is a good starting point for discussions and will help clinicians determine what tests and prevention counseling messages are necessary for the patient, Satterwhite observes. (*The CDC offers a free downloadable guide on how to take a sexual history. Go to <http://1.usa.gov/12qe7A2>.*)

When to screen?

To help adolescents and young adults stay sexually healthy, Satterwhite suggests clinicians look to the CDC’s screening recommendations for the following STIs:

- **HIV:** All adults and adolescents between the ages of 13 and 64 should be tested at least once for HIV, regardless of recognized risk factors, states Satterwhite. Adolescents and adults at increased risk for HIV infection, such as those who have unprotected sex with multiple partners or exchange sex for money or drugs, should be tested annually. Clinicians also should screen all pregnant women for HIV.
- **Chlamydia:** All sexually active women ages 25 years and younger should be tested for chlamydia every year, says Satterwhite.
- **Gonorrhea:** At-risk sexually active women should

be tested for gonorrhea each year. This includes women with new or multiple sex partners or women who live in communities with a high burden of disease, says Satterwhite.

All sexually active gay, bisexual, and other men who have sex with men should be tested at least once a year for syphilis, chlamydia, gonorrhea, and HIV, states Satterwhite. Those who have multiple or anonymous partners should be screened more frequently.

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Calcium supplements may not aid breast cancer

Calcium and vitamin D supplements are widely prescribed to women undergoing treatment for breast cancer to prevent and manage osteoporosis. Why? Many breast cancer therapies, such as oophorectomy, chemotherapy, and aromatase inhibitors, that reduce estrogen levels also increase bone resorption without a corresponding increase in bone formation. This situation leads to loss of bone mineral density (BMD).¹⁻³

Compared to healthy postmenopausal women who might lose about 1% of BMD per year, women with breast cancer might drop two to three times more, which increases the risk for fractures, including fractures at an early age.⁴⁻⁵

New research from scientists at Wake Forest Baptist Medical Center in Winston-Salem, NC, however, indicates that the recommended daily doses of calcium and vitamin D supplements might not prevent loss of bone mineral density in women undergoing breast cancer treatment.⁶ Future trials are needed to evaluate the safety and efficacy of calcium and vitamin D supplementation in women undergoing breast cancer therapy, researchers say.

Why are women undergoing therapy for breast can-

cer at increased risk for bone loss? The answer is simple, says **Gary Schwartz**, PhD, a cancer epidemiologist at Wake Forest Baptist and study coauthor. “Estrogen helps to build bone. This is why bone mineral density is lost following menopause, when a woman’s estrogen levels are lower,” observes Schwartz. “Because estrogen promotes the growth of many breast cancers, particularly those that are estrogen receptor positive, most therapies for breast cancer involve reducing estrogen levels or at least, inhibiting their effects.”

To conduct the study, Schwartz and co-author **Mridul Datta**, PhD, a postdoctoral fellow at Wake Forest Baptist, conducted a systematic review of calcium and/or vitamin D supplementation trials for maintaining bone mineral density in women with breast cancer using the “before-after” data from the calcium plus Vitamin D supplemented comparison group of trials that evaluated the effect of drugs such as bisphosphonates on BMD.

Results from 16 trials included in the current analysis indicate that the calcium plus Vitamin D doses tested (500-1,500 mg calcium; 200-1000 international units [IU] vitamin D) were inadequate to prevent bone mineral density loss in these women.⁶ Despite supplementation, women lost BMD in virtually every clinical trial reviewed, the analysis indicates.

Risk for heart health

Emerging controversial evidence suggests that calcium supplements might increase the risk of heart attack and stroke.⁷⁻⁸ Findings from a 2013 prospective longitudinal cohort study designed to investigate the association between long-term intake of dietary and supplemental calcium and death from all causes and cardiovascular disease indicate high intakes of calcium (intakes above 1,400 mg/day) in women are associated with higher death rates from all causes

EXECUTIVE SUMMARY

New research indicates that recommended daily doses of calcium and vitamin D supplements might not prevent loss of bone mineral density in women undergoing breast cancer treatment.

- Calcium and vitamin D supplements are widely prescribed to women undergoing treatment for breast cancer to prevent and manage osteoporosis. Many breast cancer therapies, such as oophorectomy, chemotherapy, and aromatase inhibitors, that reduce estrogen levels also increase bone resorption without a corresponding increase in bone formation. This leads to loss of bone mineral density.
- Emerging controversial evidence suggests that calcium supplements might increase the risk of heart attack and stroke.

and cardiovascular disease, but not from stroke.⁹ The study looked at a Swedish mammography cohort, a population-based cohort established in 1987-90, which followed 61,433 Swedish women who were born between 1914 and 1948 for a median of 19 years.⁹

What is the next step in research to evaluate the safety and efficacy of calcium and vitamin D supplementation in women undergoing breast cancer therapy?

“It is clear from our paper that low/moderate levels of calcium and vitamin D [cholecalciferol] supplements are ineffective in preventing loss of bone mineral density in women undergoing breast cancer treatment,” says Datta. “Low dose of vitamin D hormone [1,25-Dihydroxyvitamin D] shows promise and needs to be evaluated further in preventing bone loss in these women.”

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Numbers matter when it comes to contraception

By **Robert Hatcher, MD, MPH**
 Professor Emeritus of Gynecology and Obstetrics
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 Atlanta

It was my privilege to be on the Williams College Board of Trustees with a remarkable man, **Faye Vincent**. After graduating from Williams and from the law school at Yale, he became a successful lawyer and then president of Columbia Pictures, which at that time was owned by Coca Cola. So he was also a vice president of Coca Cola. Later on, he became commissioner of Major League Baseball.

On the board at Williams, he knew more about the numbers that were of importance to that school than any member of the board. He brought numbers into the discussion of many issues.

From Faye Vincent I learned this truth: “If you don’t understand the numbers, you don’t understand the enterprise.” For example, there was concern raised by some students that there were more square feet of space allocated to sports for men than women. **THIS WAS TRUE**. Vincent pointed out, first, that more sports for men required large fields. Second, he provided data showing that more intercollegiate sports were offered for women at Williams than at almost all other schools. Third, he demonstrated with numbers that there were more square feet of space allocated to women’s sports at Williams than at any college or university in the entire country! This response immediately resolved the issue as far as the board was concerned, and it allayed the concerns of the students who had raised the issue.

What’s in a number?

It is up to each individual to understand the numbers affecting our habits, career options, educational opportunities, health, happiness, and relationships. Then we must act upon those numbers that impact us personally.

Contraceptive Method	Pregnancies in first year of use In 10,000 typical women
Nexplanon implant	5
Mirena intrauterine device (IUD)	20
Female sterilization	50
Copper T IUD	80
Birth control pills	900
No contraceptive at all	8,500

Some important numbers must be simplified to a certain extent if they are to be at all helpful. Consider this approach inspired by **Claude Burnett, MD, MPH**, district health director of the Northeast Health District of Georgia, a 10-county district surrounding Athens, GA, when talking with patients about contraceptive effectiveness:

- If I were to tell you that the failure rate for women using a small contraceptive implant (Nexplanon) that is placed under the skin was 0.05%, you might say, “So what?” You might say that 0.05% is not a number that speaks to you except, perhaps, that it is very, very small.

- If I were to tell you next that the failure rate of female sterilization was 0.5%, it might catch your attention that this was also small, but it was 10 times **HIGHER** than the failure rate of that little implant.

- What might really stop you in your tracks, if you were trying to avoid an unwanted pregnancy, is the fact that the first-year failure rate while using pills is 9%.¹ (*See how those three numbers might be presented in an even more understandable manner in graphic, above.*)

You now can see why more and more women are choosing to use the long-acting reversible contraceptives (LARC methods), such as Nexplanon, the levonorgestrel IUD (Mirena), and the copper IUD (ParaGard). Numbers do matter!

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CNE/CME QUESTIONS

1. According to the Centers for Disease Control and Prevention, nearly 20 million new sexually transmitted infections occur every year in the United States, with [what percentage] among young people ages 15-24?
 - A. 20%
 - B. 30%
 - C. 40%
 - D. 50%
2. Which vaccine is approved by the Food and Drug Administration for protection against human papillomavirus in young males?
 - A. Gardasil
 - B. Cervarix
 - C. Tripedia
 - D. Hiberix
3. According to the Centers for Disease Control and Prevention, which sexually active women should be tested for chlamydia every year?
 - A. Women age 20 and younger
 - B. Women age 25 and younger
 - C. Women age 25 and older
 - D. Women age 30 and older
4. How many pregnancies are seen in the first year of typical use of the contraceptive implant in 10,000 women?
 - A. 3
 - B. 4
 - C. 5
 - D. 20

COMING IN FUTURE MONTHS

- | | |
|---|--|
| ■ Counsel on vaginal health post-menopause | ■ New therapy eyed for bacterial vaginosis |
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5. Once the completed evaluation is received, a credit letter will be e-mailed to you instantly.

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;
- provide practical information that is evidence-based to help clinicians deliver contraceptives sensitively and effectively.

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1. Publication Title Contraceptive Technology Update		2. Publication Number 0 2 7 4 - 7 2 6 X		3. Filing Date 10/1/13
4. Issue Frequency Monthly		5. Number of Issues Published Annually 12		6. Annual Subscription Price \$449.00
7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) 950 East Paces Ferry Road NE, Ste 2850, Atlanta Fulton County, GA 30326-1180				Contact Person Robin Salet Telephone 404-262-5489
8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 950 East Paces Ferry Road NE, Ste 2850, Atlanta, GA 30326-1180				
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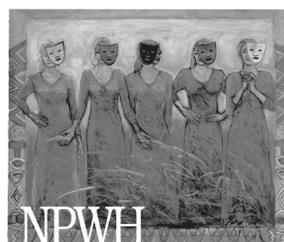
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