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INSIDE

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New Data on HPV Testing Vs. Pap

HPV testing detects precancers sooner and with better accuracy

In a large, randomized clinical trial that compared primary human papillomavirus (HPV) testing alone vs. Pap test for cervical screening, results suggest that primary HPV testing can pick up precancerous lesions sooner and with better accuracy than the Pap test. Women who tested negative for HPV were less likely than women screened by Pap tests to have cervical precancer after four years, data indicate.[1]

The Canadian study is the first clinical trial comparing the effectiveness of HPV testing vs. Pap testing. It was headed by scientists from the University of British Columbia, British Columbia Cancer, and the British Columbia Centre for Disease Control.

"Our results, by demonstrating the increased accuracy of HPV screening, show that the HPV test will detect pre-cancerous lesions sooner so they can be removed or destroyed before becoming cancerous," says lead author **Gina Ogilvie**, MD, FCFP, professor in the University of British Columbia School of Population and Public Health and senior research advisor at the British Columbia Women's Hospital & Health Centre.

When the Pap test was introduced some 50 years ago, it "dramatically" lowered the number of women who died from cervical cancer, Ogilvie noted in a press announcement accompanying the publication. The HPV test can move that number "much closer to zero," she stated.

Review the Results

From 2008 to 2016, researchers recruited 19,009 women ages 25 to 65 from the Vancouver metro area and greater Victoria. Participants included women who had not received a Pap test during the prior 12 months, were not pregnant, and were not HIV-positive or taking immunosuppressive therapy. Participants also did not have a history of CIN2+ (cervical intraepithelial neoplasia II+) in the past five years, and had no history of invasive cervical cancer or hysterectomy.

Women enrolled in the study were randomly assigned to one of two arms:

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the intervention group, which received HPV testing alone, and the control group, which received liquid-based cytology testing. Those who received HPV testing alone and had negative results were called back at 48 months to exit the study with HPV and liquid-based cytology testing. For those who had liquid-based cytology and received negative results, researchers asked that they return at 24 months to have repeat testing using liquid-based cytology. If those results were negative at the 24-month screen, investigators asked the women to return at 48 months to exit the study and receive HPV and liquid-based cytology testing. If a woman tested positive in either arm of the study, and was later found to have precancerous cells, she was referred for treatment. The HPV test used in the study looked for HPV types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, and 68.

When the study concluded four years later, researchers found fewer of the remaining women in the HPV test group had precancerous cells, since the HPV test had been identifying more women for closer examination. As a result, women who were screened for HPV at the start were almost 60% less likely to have a precancerous lesion four years later, compared to those tested with Pap tests.[1]

"This study showed that the HPV test is reliable enough to give peace of mind to women who have tested negative, and that those results are good for at least four years," said coauthor **Dirk van Niekerk**, MB, CHB, medical leader of British Columbia Cancer's Cervix Screening Program and University of British Columbia clinical assistant professor of pathology and laboratory medicine, in a statement. "That means HPV testing could be done less frequently than Pap tests are currently done, and with more women getting treatment at the earliest possible opportunity."

Check the Guidance

The U.S. Preventive Services Task Force (USPSTF) issued a draft guidance in 2017 stating that for women of average risk who are 30-65 years of age, testing for cervical cancer may be done using cervical cytology alone every three years or using HPV testing. Co-testing is not required any longer.[2] The Task Force recommends that women ages 21-29 undergo cervical cancer screening every three years with cervical cytology alone. The task force recommends cervical cancer screening for women ages 30-65 either using cervical cytology alone every three years or using HPV testing alone every five years. (Contraceptive Technology Update *reported on the guidance; see the December 2017 article, "Task Force Issues Cervical Cancer Screening Guidance: What Changes Can Clinicians Expect?" available at http://bit.ly/2ErPxud.*)

The American College of Obstetricians and Gynecologists (ACOG) affirms its clinical guidance, recommending co-testing with cytology and HPV testing every five years as the preferred screening method for women ages 30-65, and using cytology alone every three years as an acceptable screening method.[3] The USPSTF draft recommendations about routine screening for cervical cancer remain unchanged and are the same as the guidance from ACOG for women who are younger than 21 years of age, who are 21-29 years of age, or who are older than 65 years of age and have been screened adequately before. Both the Task Force and ACOG recommend against screening for cervical cancer

EXECUTIVE SUMMARY

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- The U.S. Preventive Services Task Force issued draft guidance in 2017 that states for women of average risk who are 30-65 years of age, testing for cervical cancer may be done using cervical cytology alone every three years or using HPV testing.

for women who are younger than 21 years of age.

In women 21 to 65 years of age, regular screening lowers the cervical cancer rate significantly and decreases the number of deaths from cervical cancer.[4] According to the USPSTF evidence search, the screening method that is most effective varies according to a woman's age. In women who are 21-29 years of age, HPV infections may resolve on their own. In this group, the Pap test is most effective.[5] HPV infections in women ages 30-65 are more likely to lead to cancer. In this group, the effective screening methods are either Pap tests or HPV tests, according to the evidence review.[2] Costs of a Pap test for women who do not have health insurance range from $25 to $40, with cost of HPV screening estimated at $45 to $60.

While refinements are being made in how cervical cancer screening is performed, clinicians should remember that most cervical cancers continue to be diagnosed in women who have not received adequate screening, or who have received inappropriate care after abnormal screening results, notes **Andrew Kaunitz**, MD, University of Florida term professor and associate chairman of the Department of Obstetrics and Gynecology at the University of Florida College of Medicine-Jacksonville. Efforts must continue to be made to reach those not currently being screened, he notes.

HPV vaccination also holds promise in driving down cervical cancer rates. In a recent report from the Centers for Disease Control and Prevention, data indicate HPV vaccination rates are rising among teenagers in the United States. In 2016, 60% of teens ages 13-17 received one or more doses of the HPV vaccine, an increase of four percentage points from 2015.[6] The vaccine protects against HPV, which can cause many types of cancer. ■

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Miscarriages May Be Tied to Zika Virus

Information from just-released data indicate that women could be experiencing pregnancy losses because of the Zika virus without realizing they have the infection. Results from a collaborative study indicate 26% of nonhuman primates that became infected with the Zika virus early in pregnancy experienced miscarriage or stillbirth, although the animals exhibited few signs of the infection.[1]

The paper is a pooled effort from scientists at six different primate research centers: the California National Primate Research Center at the University of California-Davis; Southwest National Primate Research Center at the Texas Biomedical Research Institute; Tulane National Primate Research Center at the Tulane University Health Sciences Center; Washington National Primate Research Center at the University of Washington-Seattle; Wisconsin National Primate Research Center at the University of Wisconsin-Madison; and Oregon National Primate Research Center at the Oregon Health & Science University. Researchers at Baylor College of Medicine, the Seattle Children's Research Institute, and the University of California-San Francisco also participated in the project. Each research team was working with experimentally infected pregnant monkeys to determine the effect on pregnancies and explore damage to different tissues. California, Oregon, Wisconsin, and Tulane University used rhesus macaques in tests, while Southwest National Primate Research Center used common marmosets, and the Washington National Primate Research Center tested pigtail macaques.

Researchers analyzed published and unpublished data from several studies of macaques that were pregnant and infected with Zika. The pooled data indicate that miscarriages or stillbirths occurred in 26% of the study population. Macaques that were infected with the Zika virus early in pregnancy experienced much higher fetal death rates than the macaques that were infected after gestation day 55, scientists report.[1]

Researchers note that few monkeys showed symptoms, and when they did, they typically involved rash and conjunctivitis. Data indicate that Zika strains that were identified in recent Asian and American outbreaks damaged tissues connecting mothers to their developing fetuses. Further examination determined a type of damage to the placenta, which impaired its function. Increased placental calcification was detected through ultrasound examination.[1]

"This is the first time we've been able to categorically demonstrate that Zika-related miscarriage and stillbirth happens in nonhuman primates that experience no symptoms," notes co-author **Daniel Streblow**, PhD, associate professor of molecular microbiology and immunology in the Oregon Health & Science University School of Medicine, OHSU's Vaccine and Gene Therapy Institute, and Oregon National Primate Research Center.

By pursuing such research, scientists may be able to better understand how the Zika virus damages the placenta and prevent pregnancy loss, said Streblow in a press statement.

"Our data in monkeys indicate that more research is needed so researchers can develop intervention strategies to protect pregnant women and their fetuses from Zika virus," says **Lark Coffey**, PhD, study co-author and arbovirologist at the University of California at Davis.

EXECUTIVE SUMMARY

Information from just-released data indicate that women could be experiencing pregnancy losses because of the Zika virus without realizing they have the infection. Results from a collaborative study indicate 26% of nonhuman primates that became infected with the Zika virus early in pregnancy experienced miscarriages or stillbirths, although the animals exhibited few signs of the infection.

- While many people who are infected with Zika may not present with symptoms, other people may exhibit fever, rash, headache, joint pain, red eyes, and muscle pain.
- An infected pregnant woman can transmit Zika virus to her fetus, causing birth defects such as microcephaly, brain abnormalities, nervous system damage, neural tube defects, and eye abnormalities. Zika also can be passed through sex from an infected person with Zika to his or her partners.

Focus on the Virus

Humans acquire the Zika virus from the bite of an infected *Aedes aegypti* mosquito or via sexual contact with a person who is infected. Although many people who are infected with Zika may not present with symptoms, other people may exhibit fever, rash, headache, joint

pain, red eyes, and muscle pain. A pregnant woman can transmit the Zika virus to her fetus, causing birth defects such as microcephaly, brain abnormalities, nervous system damage, neural tube defects, and eye abnormalities.

Previous research has measured miscarriages and stillbirths in women who were symptomatic. Results of a recent study that involved women known to have the Zika virus infection indicate that 5.8% had a miscarriage and 1.6% had stillbirth during their first trimester.[2] However, pregnancy studies in humans may be missing about half of the people who have Zika because they rely on infections that are symptomatic, says lead author **Dawn Dudley**, PhD, senior scientist in the University of Wisconsin-Madison department of pathology and laboratory medicine.

"Women get enrolled in studies because they have Zika symptoms, but we know that up to half of people who have Zika don't show any symptoms at all," said Dudley in a press statement. "So, the pregnancy studies are probably missing half of the people who have Zika."

Although the largest number of U.S. Zika cases have been reported in Florida, Texas, and New York, other states also have reported cases. Currently there are not any licensed treatments or vaccines available for Zika, but scientists have research options in various stages of development. Researchers at University of California San Diego School of Medicine, who are working along with other international scientists, have published findings suggesting that the antiviral drug sofosbuvir, which is used to treat hepatitis C infections, may be a possible treatment for adults, including pregnant women, who are infected with Zika.[3] ■

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Condoms Remain Most Common Contraceptive Method Used by Teens

New data from the Centers for Disease Control and Prevention (CDC) reflects a drop in the percentage of high school students who indicate that they have ever had sex.[1]

The report, compiled from the 2017 Youth Risk Behavior Surveillance System, a CDC survey designed to monitor health-risk behavior in youth and young adults, shows that the number of high school students indicating they had ever had sex fell from 47.8% in 2007 to 39.5% in 2017. A similar drop was seen in the number of students who reported four or more sexual partners, with numbers declining from 14.9% in 2007 to 9.7% in 2017.[1] The decreases in both categories were the lowest levels since the CDC survey began in 1991.

"The health of our youth reflects the nation's well-being," said **Robert Redfield**, MD, CDC Director, upon release of the new analysis. "In the past decade, there have been substantial improvements in the behaviors that put students most at risk for HIV and sexually transmitted diseases. However, we can't yet declare success when so many young people are getting HIV and STDs,

EXECUTIVE SUMMARY

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- A similar drop was seen in the number of students who reported four or more sexual partners, with numbers declining from 14.9% in 2007 to 9.7% in 2017. The decreases in both categories were the lowest levels since the CDC survey began in 1991.
- Of the nearly 30% of students nationwide who currently are sexually active, 53.8% said that they or their partner had used a condom during last sexual intercourse. While the percentage of teens who used condoms fell from 2007's 61.5% level, condoms remain the most-used contraceptive method by adolescents.

and experiencing disturbingly high rates of substance use, violence, and suicide."

Check Method Use

Adolescents represent a significant segment of family planning clinicians' patient population. According to a 2016 report from the Guttmacher Institute, about 1 million young women ages 15-19 sought publicly funded contraceptive services in 2014.[2]

Of the nearly 30% of students nationwide who currently are sexually active, 53.8% said that they or their partner had used a condom during last sexual intercourse. Although the percentage of teens who used condoms fell from 2007's 61.5% level, condoms remain the most-used contraceptive method by adolescents.[1] The 2017 figures show that using a condom during last sexual intercourse was more prevalent among students who were male (61.3%) than female (46.9%), and more prevalent among students who were white males (61.9%), black males (57.9%), and Hispanic males (62.4%) than among those who were white females (47.0%), black females (45.8%), and Hispanic females (47.1%).[1]

The 2017 survey also provides a snapshot of other types of contraceptive use. Of the 28.7% of students nationwide who currently are sexually active, 20.7% said that they or their partner had used oral contraceptive pills for protection before last sexual intercourse.[1] Less than 5% (4.1%) said that they or their partner had used an intrauterine device or implant for pregnancy prevention, while a similar percentage (4.7%) reported relying on the contraceptive shot or patch.[1]

Of students who identified themselves as currently sexually active, 13.8% indicated that neither they nor their partner had used any method of pregnancy prevention during last sexual intercourse.[1]

Adolescents are at risk for HIV as well; in 2016, people 13 to 24 years of age represented 21% of all newly diagnosed cases of HIV in the United States. More than 80% of the newly diagnosed cases were found in young gay and bisexual men, with young black/African American and Hispanic/Latino gay and bisexual men particularly affected.[3]

In the 2017 survey, 9.3% of students nationwide reported ever being tested for HIV, not including tests conducted when donating blood. The analysis shows that the prevalence of ever being tested for HIV was increased among female (10.5%) compared to male (8.1%) students, and was greater among Hispanic female (10.1%) than Hispanic male (7.7%) students. In addition, the prevalence was greater among students who were 12th-grade females (15.8%) than 12th-grade males (10.2%). The prevalence of ever being tested for HIV was increased among black (15.2%) compared to white (7.9%) and Hispanic (8.9%) students, and was greater among black female (16.6%) than white female (8.8%) and Hispanic female (10.1%) students. It was also greater among black male (13.7%) compared to white male (6.9%) and Hispanic male (7.7%) students.[1]

In looking at responses concerning the sex of sexual contacts, results indicate that students who had ever received testing for HIV included 13.2% of those students who had sexual contact only with opposite-sex partners, 20.2% of students who had sexual contact only with same-sex partners or with both sexes, and 3.6% of students who did not have any sexual contact.

Ask the Questions

Be ready to discuss intimate partner violence with adolescent patients. According to the latest survey, one in 10 female students and one in 28 male students indicated that they had been physically forced to have sex.[1]

A report from the CDC found that among people who were victims of contact sexual violence, physical violence, or stalking by an intimate partner, about 25% of females and 14% of males indicated that they first experienced violence of some type from that partner before the age of 18.[4]

"Today's youth are making better decisions about their health than just a decade ago," said **Jonathan Mermin**, MD, director of CDC's National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. "But, some experiences, such as physical and sexual violence, are outside their control and continue at painfully high levels. Their experiences today have powerful implications for their lives tomorrow." ■

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Help Women Consider Options for Postmenopausal Vaginal Dryness

Data from a large longitudinal study indicate that more than 33% of women ages 57-69 report symptoms of vaginal dryness.[1] About half of women don't talk to their providers about such conditions, and even less take advantage of proven therapies such as vaginal estrogen tablets, creams, and rings.

During menopause, reduced estrogen levels can result in thinning of the vaginal epithelium. Women may experience itching, vaginal dryness, urinary symptoms, and painful intercourse. Researchers for the current study analyzed data from more than 2,400 women who were enrolled in the Study of Women Across the Nation (SWAN) during a 17-year-period. At baseline, 19.4% of women ages 42-53 reported vaginal dryness; however, by the time they reached ages 57-69, 34% of them reported such symptoms.

Some women try lubricants as they begin to develop pain with sex, says **JoAnn Pinkerton**, MD, NCMP, executive director of the North American Menopause Society. However, if lubricants and vaginal moisturizers are not enough, other vaginal therapies are available, such as vaginal estrogen tablets, creams, a vaginal ring, and intravaginal dehydroandrosterone. In November 2016, the Food and Drug Administration approved Intrarosa (prasterone) to treat moderate to severe pain that some women experience during sexual intercourse as a result of menopause. The active ingredient prasterone is also known as dehydroepiandrosterone.

"It's shocking that less than 4% of women in the SWAN study were using these effective therapies by the end of the study period," observed Pinkerton in a press statement. "For women, please report symptoms, and for healthcare providers, please offer safe, effective therapies."

EXECUTIVE SUMMARY

Data from a large longitudinal study indicate that more than 33% of women ages 57-69 report symptoms of vaginal dryness. However, research shows that more than 50% of women don't report such conditions to their healthcare providers. Even fewer women take advantage of proven therapies such as vaginal estrogen tablets, creams, and rings.

- During menopause, reduced estrogen levels can result in thinning of the vaginal epithelium. Women may experience itching, vaginal dryness, urinary symptoms, and painful intercourse.
- To help healthcare providers and patients feel more comfortable discussing the physical changes that often can come with menopause, the North American Menopause Society and the International Society for the Study of Women's Sexual Health created the term "genitourinary syndrome of menopause."

Ask About Symptoms

In an earlier study, women 55 years of age and older from primary care offices and senior centers answered questions about common postmenopausal symptoms. According to the results, very common symptoms were itching, burning, stinging, pain, irritation, dryness, discharge, or odor. More than half of the respondents (51%) indicated they experienced one or more of the symptoms; 40% of those who experienced symptoms said they caused emotional problems, and 33% indicated the symptoms affected their lifestyle.[2]

It is no wonder women don't discuss postmenopausal vaginal issues with their healthcare providers, says **Susan Wysocki**, WHNP-BC, FAANP, president and chief executive officer of iWomansHealth in Washington, DC, which focuses on information on women's health issues for clinicians and consumers. First, women often take these issues as part of their normal lot in life, and second, they may not be in a sexual relationship at the moment, says Wysocki.

Clinicians should ask women in postmenopause if they have noted any vaginal changes, and complaints do not need to be related to current sexual activity, notes Wysocki. Providers should be aware of all measures to keep the vagina healthy well past menopause, and inform women about their choices, she states.

To help healthcare providers and patients feel more comfortable discussing the physical changes that often can come with menopause, the

North American Menopause Society and the International Society for the Study of Women's Sexual Health in 2014 created the term "genitourinary syndrome of menopause" (GSM). The term refers to "a collection of symptoms and signs associated with a decrease in estrogen and other sex steroids involving changes to the labia majora/minora, clitoris, vestibule/introitus, vagina, urethra and bladder." These include symptoms of the genital area, such as dryness, burning, and irritation; sexual symptoms, such as pain, discomfort, impaired function, or lack of lubrication; and urinary symptoms, such as urgency, dysuria, and recurring urinary tract infections.[3]

How About Cancer Survivors?

Women who are survivors of breast cancer may experience more symptoms of GSM, with symptoms appearing earlier because of cancer treatments. Many such women have avoided using hormone treatments because data are lacking about the safety of vaginal hormone therapies and alternatives in women who have breast cancer or who have a high risk for the disease.

The North American Menopause Society and the International Society for the Study of Women's Sexual Health have formed a consensus panel to determine clinical recommendations for those who work with this patient population.[4]

The guidance calls for providing individualized treatment for GSM that balances the risk of cancer recurring with the symptom severity and the effect they have on a woman's quality of life. The recommendations provide guidance for decision-making about therapies when data from clinical trials are not available.

"Until additional studies are undertaken in this area, we are hopeful these consensus recommendations will provide added confidence for clinicians to move forward with treatment options that will provide relief to women from GSM symptoms," said Pinkerton. ■

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Keep Heart Health in Mind During Annual Exams

With cardiovascular disease now the leading cause of death for women, the American Heart Association (AHA) and the American College of Obstetricians and Gynecologists (ACOG) have issued a joint advisory to help women lower their risk factors for heart disease and stroke.[1] According to the Centers for Disease Control and Prevention, heart disease killed 289,758 women in 2013, representing about one in every four female deaths.[2]

"OB/GYNs are primary care providers for many women, and the annual 'well woman' visit provides a powerful opportunity to counsel patients about achieving and maintaining a heart-healthy lifestyle, which is a cornerstone of maintaining heart health," noted **John Warner**, MD, president of the American Heart Association. Warner also serves as executive vice president for health system affairs at University of Texas Southwestern Medical Center in Dallas.

Although efforts have been made to improve heart disease awareness, research indicates that just 45% of women identified heart disease as the leading cause of death.[3] Such low awareness is a concern, since 90% of women possess at least one heart disease risk factor. If women's health providers can reach patients earlier with information such as how to instill AHA's Life's Simple seven health habits (stop smoking, eat a healthier diet, become active, lose excess weight, control blood pressure, control cholesterol, and lower blood sugar), they have the opportunity to become the "secret weapon" in fighting heart disease, states **Haywood Brown**, MD, ACOG immediate past president

EXECUTIVE SUMMARY

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- According to the Centers for Disease Control and Prevention, heart disease killed 289,758 women in 2013, representing about one in every four female deaths.
- By talking with women about heart-healthy habits such as never smoking or smoking cessation, healthy diet, increased activity, weight control, blood pressure management, cholesterol control, and blood sugar reduction, women's health providers can help women take steps to fight heart disease.

and F. Bayard Carter Professor in the department of obstetrics and gynecology at Duke University Medical Center in Durham, NC.

"As the leading healthcare providers for women, OB-GYNs provide care that goes far beyond reproductive health and are in a unique position to screen, counsel, and educate patients on heart health," said Brown in a press statement. By talking about the risks and actions women can take to reduce their risk, OB-GYNs can help women fight heart disease, he said.

Review the Risk Factors

Although hypertension, diabetes mellitus, hypercholesterolemia, and obesity are risk factors that affect men and women, some factors may have a different impact on women. After age 65, research indicates that women are more likely to have hypertension than men. Just 29% of elderly women have their blood pressure managed adequately, compared to 41% of men.[4] In addition, women have a greater cardiovascular risk from diabetes mellitus than men do: 19.1% vs. 10.1%, respectively.[5]

The highest population-adjusted cardiovascular risk for women is high cholesterol, at 47%.[1]

In the United States, two out of every three women are either obese or overweight, so clinicians must counsel patients on the effect added weight has on cardiovascular health. Additional weight increases the risk for hypertension, dyslipidemia, physical inactivity, and insulin resistance.[6] Although physical activity can lessen such risks, about 25% of U.S. women say they get no regular activity.[7]

Enhance Screening

The new advisory calls for enhanced cardiovascular disease and cardiovascular risk factor screening in women. By taking a full patient history, clinicians can identify important information about a patient's risk factors, leading to appropriate referrals.

Use questionnaires to address diet, physical activity, depression screening, and lifestyle choices. Review your chart templates to see that key areas are addressed, such as hereditary risk factors, smoking cessation, and mental health. By reviewing risks, patients are reminded of the importance of healthful lifestyle adherence.

Visit ACOG's Patient Education FAQs (https://bit.ly/2L8tOKA) for patient information on heart-healthy topics such as physical activity, weight control, smoking cessation, blood pressure management, and diabetes. ■

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TEEN TOPICS

Young Men Need Sexual and Reproductive Health Services

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A recent editorial in the *Journal of Adolescent Health* discusses young men and reproductive health services, and asks the question, "Are we there yet?"[1] When it comes to reaching young men with the sexual and reproductive healthcare they need, the answer may be no.

Adolescent and young adult men experience a variety of negative sexual and reproductive health (SRH) outcomes. For example, annually 21% of new HIV infections in the United States are diagnosed among youth ages 13-24, and 81% of these newly infected individuals are young gay and bisexual men.[2] In addition, rates of other sexually transmitted infections (STIs) are rising among young men. Between 2012 and 2016, rates of chlamydia increased by 6% among men ages 15-19 and by 17.8% among men ages 20-24. Rates of gonorrhea in this population increased 15.8% among men ages 15-19 and 36% among men ages 20-24. Young men ages 20-24 had the second highest rate of reported syphilis (37.9 cases per 100,000) compared with any other age group among men and women. The rate of reported syphilis infections among young men has increased steadily each year since 2006.[3]

Gaps in Services for Young Men

Despite these outcomes, many young men are not receiving the sexual and reproductive health services they need. A recent study reported in the *Journal of Adolescent Health* highlights significant gaps in SRH service provision to young men, especially in communities of color.[4] The authors surveyed 427 young men ages 15-24 presenting to urban primary care and STD clinics. Participants were questioned about which SRH services they received across four domains: sexual health screenings, lab testing related to STDs/HIV, receipt of condoms, and counseling related to family planning, condom use, and reducing STD/HIV risk. Among those who were sexually active (90% of the study population), only one in 10 had received services in all four areas. At least half were asked about sexual health, were tested for STDs or HIV, or reported receiving counseling about condom use. However, only 32% were provided condoms, and 23% were counseled about family planning.[4]

How to work with young men effectively to lower their risk of fathering an unintended pregnancy has not been studied extensively; to date, initiatives to help prevent unintended adolescent pregnancy have focused primarily on young women. Bell and colleagues have adapted a computer-assisted motivational interviewing (CAMI) intervention that originally was designed and tested with young women for use with young men ages 15 to 24 to reduce their risk of fathering an unintended pregnancy. They are piloting a randomized controlled trial, recruiting sexually active young men from urban health centers in New York City, and randomly assigning participants to one of two study arms: one focused on decreasing involvement in unintended pregnancy (CAMI-Teen Pregnancy Prevention) and the other focused on improving fitness (CAMI-Fitness). The two interventions are identical except for the topic, with participants in both intervention arms receiving four sessions of motivational interviewing coaching and using a smartphone app to track SRH and fitness behaviors and set health goals.[5]

Review the Guidelines

Many major medical and public health organizations have guidelines and recommendations for providing SRH services to young men and for increasing the provision of care that could decrease STI and HIV infections and promote healthy

relationships and positive sexuality. Among many recommendations for promoting health and well-being of young men, the American Academy of Pediatrics Committee on Adolescence recommends pediatricians and other healthcare providers caring for young men screen for sexual activity, screen appropriately for STIs, promote condom use, educate young men about emergency contraception, and provide information about dual method use to prevent unintended pregnancy and STIs.[6] The federal Healthy People 2020 campaign has set a goal to increase the proportion of sexually experienced young men who received reproductive health services by 10%.[7] The U.S. Preventive Services Task Force recommends counseling for sexually active adolescents and adults of all genders at risk for sexually transmitted infections.[8]

In 2013, The Partnership for Male Youth was founded, with the mission of advancing the health and well-being of adolescent and young adult (AYA) males. One of the partnership's first efforts was to create a toolkit for healthcare providers. This toolkit includes guidance on a variety of health topics, including SRH. Within each health topic, the toolkit includes a provider checklist, suggested patient interview questions, a video library, and additional supporting material and references. The toolkit is available at http://www.ayamalehealth.org. Teaching modules and case videos focused on caring for adolescent and young adult men also are available through Physicians for Reproductive Health at https://bit.ly/2mzZsme.

Such resources, along with recommendations from professional and global health organizations, can guide providers toward offering care that young men need to have healthy sexual lives, but it is up to healthcare providers to offer this care to patients. Opportunities to discuss sexual and reproductive health exist outside of visits dedicated to such services. Sports physicals, work physicals, immunization visits, acute care, or chronic care visits — any health-related visit — can be an opportunity to start or continue the discussion about sexual health. ■

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CME/CE QUESTIONS

1. **What do both the American College of Obstetricians and Gynecologists and draft guidance from the U.S. Preventive Services Task Force recommend for HPV testing in women younger than 21 years of age?**

   a. Co-testing with liquid-based cytology and HPV testing
   b. Testing with liquid-based cytology
   c. HPV testing
   d. Testing is not recommended

2. **Which is *not* a symptom of Zika virus infection?**

   a. Fever
   b. Rash
   c. Bleeding gums
   d. Headache

3. **What is another name for prasterone?**

   a. Dehydroepiandrosterone
   b. Androstenedione
   c. Androstenediol
   d. Testosterone

4. **What is the leading cause of death in U.S. women?**

   a. Lung cancer
   b. Cardiovascular disease
   c. Breast cancer
   d. Ovarian cancer

CME/CE OBJECTIVES

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

1. identify clinical, legal, or scientific issues related to development and provisions of contraceptive technology or other reproductive services;
2. describe how those issues affect services and patient care;
3. integrate practical solutions to problems and information into daily practices, according to advice from nationally recognized family planning experts;
4. provide practical information that is evidence-based to help clinicians deliver contraceptives sensitively and effectively.

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HIV Testing: Time to Combat Missed Opportunities

Many at risk say they were not offered testing at last clinical visit

Results of a recent national analysis suggest many people who are infected with human immunodeficiency virus (HIV) but unaware of their infection were not offered HIV testing during recent clinical visits.[1] The Centers for Disease Control and Prevention (CDC) recommends testing at least annually for people who are at high risk for HIV infection, including men who have sex with men and injection drug users.

It is estimated that in 2015, about 15% of persons in the United States who were living with HIV were not aware they were infected. However, this same population accounted for about 40% of annual HIV transmissions.[2,3]

To conduct the current analysis, researchers looked at data from the National HIV Behavioral Surveillance, which evaluates biobehavioral data from populations at high risk in cities with high HIV burden. The scientists examined information about adults 18 years of age or older from 19 U.S. cities. The data about men who had ever had sex with another man (MSM) were collected in 2014. For men and women who had injected drugs (PWID) in the previous year, data were collected in 2012 and 2015, and were combined to make sure the estimates were stable.[1] Participants reported if they had been tested for HIV, visited a clinician, or been offered an HIV test by a healthcare provider during the past year.

> ALTHOUGH PROGRESS HAS BEEN MADE IN HIV PREVENTION, CARE, AND TREATMENT, HIV TESTING IS 'CRITICAL' IN THE FIGHT AGAINST THE PANDEMIC.

Of the 9,105 men who had ever had sex with another man, 22% had tested positive for HIV infection; 8% of the 19,357 men and women injecting drugs had positive test results. In looking at the HIV-positive participants, researchers found that 8% of MSM and 12% PWID were not aware of their infection. Further analysis of those unaware of their positive status shows that 81% MSM and 65% PWID reported visiting a healthcare provider in the past year. Of those who were not tested for HIV in the past year, 52% of men who have sex with men and 45% of injection drug users said they were not offered HIV testing, despite visiting a healthcare provider.[1]

Everyone, no matter their perceived risk, should be tested at least once for HIV, and those who are at a higher risk should be tested frequently, says **Michael Ruppal**, executive director of The AIDS Institute. Although progress has been made in HIV prevention, care, and treatment, HIV testing is "critical" in the fight against the pandemic, says Ruppal.

Review Testing Guidance

According to CDC guidance, all adults ages 13-64 should be tested for HIV, with repeated screening at

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EXECUTIVE SUMMARY

Results of a recent national analysis suggest that many people who are infected with HIV but not aware of their infection were not offered HIV testing during recent clinical visits. The Centers for Disease Control and Prevention recommends testing at least annually for people who are at high risk for HIV infection, including men who have sex with men and injection drug users.

- It is estimated that in 2015, about 15% of persons in the United States who were living with HIV did not know they were infected. However, this same population accounted for about 40% of annual HIV transmissions.
- Tests can differ according to the type of specimen tested, such as whole blood, serum, or plasma; oral fluid; or urine.

least every year for those who have a higher risk.[4] Gay and bisexual men who are sexually active may be helped by testing that is more frequent, for example every three to six months. At-risk behaviors include:

- engaging in unprotected vaginal or anal sex, including unprotected sex with MSM;
- engaging in unprotected sex with a partner who is HIV-positive or whose HIV status is unknown;
- injecting drugs or sharing equipment with others;
- providing sex in exchange for drugs or money;
- having a diagnosis of hepatitis, tuberculosis, or a sexually transmitted disease or receiving treatment for those conditions; or
- having unprotected sex with a person who has engaged in these behaviors.[4]

In addition, HIV testing is recommended in pregnant women and in newborns when the HIV status of the mother is unknown.[4] If treatment is given to pregnant women who are HIV-positive and their infants for four to six weeks after delivery, the risk of transmission is reduced to 1% or less.[5] Recommendations also call for HIV testing of anyone who has been sexually assaulted.

Who Is Getting Tested?

Results from a 2014 survey of U.S. adults ages 18-64 conducted by the Kaiser Family Foundation show that 54% of Americans had received testing for HIV, including 16% who indicated they had been tested in the past year. Although the percentage of the public who say they have received testing for HIV at some point has increased from 1997 and 2004, such numbers have remained constant, the foundation says.[6]

Results of a 2014 Kaiser Family Foundation survey of gay and bisexual men in the United States show that while seven out of 10 indicate they have been tested for HIV during their lives, just one in five reported they had been tested in past six months.[7] About 33% said they had never been tested, with 44% younger than 35 years of age reporting such untested status.

Review Test Options

What type of HIV testing is used in your practice setting? Tests can differ depending on type of specimen that is tested, whether it is whole blood, serum, or plasma; oral fluid; or urine. Test specimens may be collected by a blood draw or venipuncture, finger prick, oral swab, or via urination. Tests may be processed in the lab, at point of care, or at home, with result times ranging from conventional to rapid.

Conventional blood tests involve a sample drawn by a healthcare provider, with results tested in a lab. The test results typically can be available within an hour to several days.

With an oral fluid sample, a swab inside the mouth is collected by a healthcare provider, with results available in days to about two weeks. Avioq is the only HIV test of oral fluid that is approved by the Food and Drug Administration (FDA). The test is used with OraSure, an oral fluid collection device approved by the FDA.

Many providers look to rapid tests for HIV tests, since results can be ready in less than 10 minutes. When test results are negative, further testing is not needed; however, positive test results require confirmation using conventional methods.

Eight rapid tests approved by the FDA are available:

- OraQuick Advance Rapid HIV-1/2 Antibody Test, which uses whole blood from a finger prick or venipuncture, plasma, or oral fluid;
- Reveal Rapid HIV-1 Antibody Test, which uses serum or plasma;
- Uni-Gold Recombigen HIV Test, which uses whole blood from a finger prick or venipuncture, serum, or plasma;
- Multispot HIV-1/HIV-2 Rapid Test, which uses serum or plasma;
- INSTI HIV-1 Antibody Test, which uses whole blood finger prick, venipuncture, or plasma;
- Alere Determine HIV-1/2 Ag/Ab Combo Test, which uses serum, plasma, whole blood finger prick, or venipuncture;
- Clearview HIV 1/2 Stat Pak and Clearview Complete HIV 1/2, which both use whole blood, serum, or plasma.

Some of the rapid tests have received regulatory waivers that allow them to be used outside of traditional laboratories. ■

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Radar Is Up for Rise of *Mycoplasma Genitalium*

Concerns about *Mycoplasma genitalium* (MG), a sexually transmitted infection, are on the rise. The British Association of Sexual Health and HIV just released draft guidance in July 2018 regarding testing and treatment strategies.

What prompted the move? Public health officials cite concerns that the infection often is misdiagnosed as chlamydia. In treating as such, antimicrobial resistance is encouraged.

Mycoplasma genitalium is a major cause of urethritis in men. In a 2015 meta-analysis, *M. genitalium* infections were associated with about a two-fold increase in the risk of cervicitis, pelvic inflammatory disease, preterm delivery, and spontaneous abortion.[1] Research now indicates that treatment failure rates following azithromycin treatment have risen because of the emergence of macrolide resistance in the infection.

In the draft guidance, the association calls for testing urine samples and swabs for antibiotic resistance, treating all partners, and testing of cure five weeks after treatment initiation. Azithromycin treatment should not be repeated, as such use could lead to antibiotic resistance. Condom use should be stressed, the guidance states.[2]

EXECUTIVE SUMMARY

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- Research now indicates that treatment failure rates after azithromycin treatment have risen because of the emergence of macrolide resistance in the infection.

Get Up to Speed

Mycoplasma genitalium is a bacterium first identified in 1980 that infects the reproductive tract and is transmitted via sexual contact. Unlike most other bacteria, it is difficult to grow in culture, taking about six months to develop. Researchers were hampered in studying the epidemiology of *M. genitalium* infections until polymerase chain reaction tests were developed in the early 1990s. Antibiotic resistance has developed in the bacteria. Treatment of the infection is challenging because rates of resistance are high.

No Food and Drug Administration (FDA)-approved diagnostic test for *M. genitalium* is available currently in the United States. However, in April 2018, the FDA listed Sydney, Australia-based

SpeeDx's ResistancePlus MG Positive Control kit for sale in the United States. The assay received CE marking in 2016.

Research indicates that a single 1-gram dose of azithromycin is more effective against *M. genitalium* than doxycycline.[3] However, resistance to azithromycin is increasing. In both men and women, the median cure rate is about 85%, but the most recent trial found it to be only 40%.[4] Cure rates for moxifloxacin range from 70-100%. Fluoroquinolones other than moxifloxacin are not recommended for the treatment of *M. genitalium*, according to the Centers for Disease Control and Prevention.[3]

In Australia, for initial treatment of *M. genitalium*, clinicians are using 100 mg doxycycline for one week, followed by either azithromycin or moxifloxacin.

"If macrolide-sensitive MG is detected, then this can be treated with azithromycin with greater confidence," said **Tim Read**, MBBS, PhD, a research fellow in the Central Clinical School at Melbourne, Australia-based Monash University in a press release. "We are hopeful, but less certain, that this reduction in bacterial load will also increase the likelihood of success with moxifloxacin treatment."

Symptoms May Not Be Present

Detecting the presence of infection can be a challenge; about 40-75% of women and 70% of men are asymptomatic.[5] Women may present with increased or altered vaginal discharge; urethritis that is acute, persistent, and recurrent; dysuria or urgency; occasional intermenstrual bleeding or post-coital bleeding; cervicitis; or lower abdominal pain. Men may have symptoms such as urethritis. dysuria, urethral discharge, and proctitis.[5]

How can science aid in better detection and treatment? Clinical trials are needed to find out whether to recommend widespread screening for *M. genitalium* that is asymptomatic and treatment. More effective antibiotics also must be identified to treat infections. Clinicians need diagnostic tests that can detect resistance genes to a range of antibiotic drug classes. Additional research is needed to assess potential new antibiotics, determine potential vaccine targets, and understand the lifecycle of *M. genitalium* in the reproductive tract.[6] ■

> CLINICAL TRIALS ARE NEEDED TO FIND OUT WHETHER TO RECOMMEND WIDESPREAD SCREENING FOR M. GENITALIUM THAT IS ASYMPTOMATIC.

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