MANAGEMENT OF Cesarean scar pregnancy
Luis Izquierdo, MD, MBA, and Mariam Savabi, MD, MPH

Endometrial cancer screening
Updated guidelines

Perinatal depression
Diagnosis and treatment

ACOG COMMENTARY
Caring for victims of sexual assault

TEST YOUR KNOWLEDGE
Ulcerations unresponsive to treatment
Enhancing patient outcomes, managing costs, and optimizing delivery of care.

The value of care: CANCER PREVENTION

From screening to diagnosis, treatment decisions, and surveillance, LabCorp supports the continuum of care. Our advanced technologies enable clinicians to detect and define the disease more accurately for informed treatment decisions, including hereditary breast and ovarian cancer testing (BRCA 1/2), VistaSeq® hereditary cancer panels, cervical cytology, colorectal and thyroid screening.

Value beyond testing. LabCorp’s full-service offerings, specialty test options, genetic counseling programs, cost estimator, and coast-to-coast patient service centers set our value apart and put your patients at the heart of our efforts to improve health and improve lives.

For more information, please visit www.labcorp.com/value-care-cancer
EDITORIAL
03 The age of acceleration
CHARLES J. LOCKWOOD, MD, MHCM
A new book may inspire a new way of thinking about global challenges and how they affect women.

ACOG GUIDELINES
12 Sexual assault
PAULA J. ADAMS HILLARD, MD
Expert commentary on providing trauma-informed care.

TEST YOUR KNOWLEDGE
17 Vulvar conditions
KATHRYN WELCH, MD, ROSALYN MABEN-FEASTER, MD, DIANA CURRAN, MD, JOHN O. DELANCEY, MD, AND HOPE K. HAEFNER, MD
A patient presents with non-healing vulvar ulcerations - What is your diagnosis?

PEER-REVIEWED
21 Endometrial cancer screening
GIUSEPPE DEL PRIORE, MD, AND ROLAND MATTHEWS, MD
A fresh perspective on who should be tested for endometrial cancer and when.

PEER-REVIEWED
24 Perinatal mood disorders
DIKEA ROUSSOS-ROSS, MD
Prompt diagnosis and treatment of mood disorders is vital for both mother and offspring.

SPECIAL REPORT
28 Sexual health in the arthritic patient

IN ADDITION
31 Residents Corner
35 Practice Matters
41 Legally Speaking

CORRECTION
In the article “What today’s ob/gyn needs to know about Asherman’s syndrome” which appeared in the June 2019 issue several references are made to the work of Charles March, MD. In those references, Dr. March’s name was misspelled. The editors apologize for this error.

Let us know what you think. Email us at COGeditorial@mmhgroup.com
Coping in the age of acceleration

We have the power to mitigate the adverse impact of rapid advancement in information technology.

If you find yourself on a mountain or at a lake this summer with those rarest of modern gifts—peace, solitude, and the chance for a few days of uninterrupted reading—I recommend Tom Friedman’s Thank You for Being Late. It is vintage Friedman with the meticulously researched reportage expected from a three-time Pulitzer Prize winner. The book addresses three of the weightiest subjects of our time: the simultaneous acceleration of information technology, economic globalization, and climate change. While these three challenges ought to matter to every human on the planet, they have special resonance for ob/gyns because globally their impacts fall disproportionately on women and because women hold a key to the planet’s ability to overcome their collective threat.

When did the world change?

While these three forces seem suddenly upon us, climate change reflects centuries of industrialization. On the other hand, the explosion in computing power and economic globalization have emerged over decades. In fact, most of the critical components of the latter two forces date back to one year – 2007. That year the iPhone and Android operating system were introduced, AT&T invested in a massive expansion in software-enabled networks setting the stage for logarithmic increases in wireless traffic, and IBM’s Watson was created giving birth to the dawn of artificial intelligence (AI). Also, in 2007, Kindle was rolled out by Amazon, and Airbnb was conceived. Twitter, LinkedIn and Facebook all started around that year using software developed by a company called Hadoop that generated software algorithms allowing hundreds of thousands of computers to function as one. In biotech, 2007 saw leveraging of this raw computational power to begin to dramatically reduce the cost and unimaginably increase the speed of DNA sequencing. Interestingly, that was also the year that experimental proof of CRISPR was reported. Thus, “infotech” and “biotech” are inextricably linked. All these changes accelerated economic globalization disrupting traditional markets in goods and services (including healthcare), labor and capital.

How is the world changing?

Acceleration of information technologies

Moore’s law states that the speed and capacity of computing doubles every 2 years in parallel to the number of transistors that can be placed on a microchip. To illustrate this geometric expansion, Friedman notes that compared to its first-generation microchip, Intel’s sixth-generation chip has 3,000 times the performance and 90,000 times the energy efficiency at 60,000 times lower cost. The acceleration in information technology has also been made possible by startling advances in collectively developed open-source soft-
ware (e.g., GitHub) and development of seamlessly interactive application programming interfaces (APIs). These APIs are the programming commands that allow you to save and send files, connect various web applications, buy stuff on-line, make apps, and permit individual computers to be networked—basically they make the Web the Web. Moreover, investments in ultra-fast transmission fiber optic cabling coupled with introduction of Code Division Multiple Access (CDMA) software to exponentially increase wireless capacity have allowed unprecedented and previously unimaginable levels of connectivity.

The “cloud,” a vast network of computers spread across the globe, now stores, accesses, and shares data and permits software and services to run directly off the Internet, further amplifying acceleration of information technologies. Simultaneously, there have been dramatic improvements in computer sensors from cameras to detectors of motion, water pressure, energy consumption, engine performance, traffic congestion, temperature, global positioning, etc., all of which can broadcast their data, leading to the “Internet of things” and permitting both preventive and prescriptive maintenance (i.e., letting you know when a device will fail). In health care the Internet of things will generate 1 million GB of personal health information for each patient in her lifetime, which is equivalent to about 300 million books.1

All these advances have vastly amplified the flow of data while reducing the complexity and cost of accessing it and accelerating the potential power of AI. One consequence for physicians is that a primary care doctor would need 630 hours per month just to keep up with the explosion of new literature.1 However, this accelerated flow of information affects all professions, contributing to the pervasive burnout being experienced across society.

Acceleration of economic globalization
Friedman’s second great acceleration is globalization of the economy. Access to abundant and nearly free flows of information has led to many disruptive business innovations from Amazon, Lyft and Uber to Airbnb, all of which have displaced workers and whole industries across the planet. I recently received a harangue from a taxi driver in Nashville about the evils of Uber and what it had done to his income. While I sympathized with his plight, I realized he might as well be howling at the moon. Self-service whether it’s to create legal contracts, complete tax returns, book hotel and airline flights, or conduct real estate transactions has disrupted all those industries. Your iPhone is quickly replacing credit cards, and blockchain-derived currencies like Bitcoin may soon replace cash. Physicians will not be immune from this revolution. Wait till telehealth and facilitated self-service Internet-based medicine drive the provision of health care to the lowest bidder and soon we may be howling at the moon as well.4

Access to abundant and free information also allows innovative start-ups to blossom from anywhere in the world where someone has sufficient training, a computer, and access to the Internet.1 Friedman notes that Massive Open Online Courses (MOOCs) are allowing poor students in rural India take some of the most advanced IT courses offered by top US colleges. Even manufacturers now crowdsource across the globe to optimize designs for new products. All this is fueling acceleration of the globalized economy. And restricting immigration will not limit the spread of innovative business disruption delivered via a new app developed by a creator in Turkey or Turkmenistan. Friedman points out that in 2014, $30 trillion in goods, services, and capital—equal to nearly 40% of the planet’s gross domestic product—crossed national borders, a 6-fold increase from 1990. And that does not begin to measure the impact of the free flow of information around the world. Tariffs may raise costs but are unlikely to stop that flow!

Acceleration of climate change
Friedman’s third great acceleration is climate change. The atmosphere now has 400 parts per million (ppm) of carbon dioxide, which is 50 ppm above the limit needed to prevent catastrophic global warming. Biodiversity is diminishing as deforestation has reduced the earth’s original forests to 62% while most climate scientists believe we cannot afford to dip below 75%. Pesticides and fertilizers are creating toxic algae blooms while ocean acidification is...
destroying our coral reefs and native fish populations. Desertification is a major threat to sub-Saharan Africa and drought is leading to crop failure in Central America. Climate change is also harming global health by driving alterations in vector ecology including expansion of pathogens such as malaria and Lyme disease, and arboviruses such as chikungunya, dengue, Zika, and West Nile. Additional adverse health effects accrue related reductions in drinking water quality, air pollution, and heat-related illnesses.

Friedman also notes, ironically, that improved global health measures have reduced infant mortality, fueling population increases in impoverished lands already unable to fully feed, educate or employ their current populations. Overpopulation leads to over-farming, deforestation, and a growing scarcity of fresh water, which in turn worsen climate change. For example, Niger’s population in 1950 was 2.5 million, in 2016 it was 19 million, and by 2050 it is predicted to be 72 million, while the planet will have 9.7 billion inhabitants.

**Why adapting to change is so difficult for humans**
Since 2007, the pace of change in information technologies, economic globalization and climate change have all accelerated beyond Homo Sapiens’ ability to adjust their educational structures, economies, energy consumption, government regulations, and social safety nets to accommodate to them. Friedman argues that while technology platforms turn over every 5 to 7 years, it takes 10 to 15 years for humans to adapt to these new technologies. And this maladaptation is far greater in under-resourced countries that are also the most adversely impacted by climate change, leading to further impoverishment, famines, and mass migrations of primarily young men northward into Europe and North America.5,6 Thus, in these under-resourced areas it is women who are left behind on failing farms, often with no education and with elderly relatives and many young mouths to feed. Increasingly, though, women and children are contributing to the refugee crisis, exacerbating the adverse public health consequences of associated violence, accidents, inadequate nutrition, and lack of medical care.

**Solutions**
So how do Americans and the citizens of industrialized nations cope with the disruptive impact of information technologies and a globalized economy? For example, how do ob/gyns and other physicians adjust to an era when medical knowledge doubles every 73 days such that between the start of medical school and the end of residency training, students will experienced three doublings of medical knowledge?7 The strategy is the same for physicians and plumbers. To remain viable in this new workplace, everyone must embrace lifelong learning by transforming AI
into IA – which includes intelligent assistance and intelligent assistants.

Friedman suggests that intelligent assistance is a way for government, employers, and, I would add, universities and academic health centers to provide powerful online learning tools to facilitate lifelong learning. New companies are already filling this niche (e.g., Udacity, edX, Coursera, Khan Academy) and LinkedIn has assembled a large repertoire of mini-courses to assist lifelong learning. Universities are offering MOOCs while medical schools and hospitals are expanding their professional development programs and simulation centers. For our part, Contemporary OB/GYN monitors current women’s health reports and pushes out summaries in our weekly e-newsletter while assembling various resource centers containing curated reviews.

Intelligent assistants consist of the AI interface between humans and the tools they need to complete a job. (Think of a Da Vinci robot blocking you from ligating a ureter.) In medicine, intelligent assistants could also consist of an electronic health record with AI-stoked decision support providing just-in-time and point-of-care access to relevant data needed to precisely choose the correct diagnostic test or prescribe the optimal personalized medication. It could also include AI-empowered search engines that not only search what you query but know what you don’t know and should be searching. Of course, when search engines decide what you should know, should do and should think, we will have even bigger problems!

But what about the vast majority of the globe’s population who do not live in industrialized nations or worse, reside in failed states like Syria where chaos holds sway? It has been estimated that 4.5 billion people are either urban or rural poor. As noted, these parts of the globe are most affected by climate change and overpopulation, which is promoting collapse of their agriculture. They also have substantial educational systems, limited web access, and inchoate manufacturing sectors. This leaves millions of disaffected young men (and some young women) prone to join drug gangs, guerilla groups or jihadists. While addressing climate change should be the planet’s top priority, Friedman suggests that in the short run we should focus on three simple remedies. The first is planting trees across sub-Saharan Africa to slow desertification (“the Great Green Wall”). The second is providing chickens to desperately poor families because chickens require minimal resources to maintain and can serve as both a source of protein-rich nutrition and modest income. But perhaps the best hope for these countries to escape the effects of the three “accelerations” is increased access to high-quality education for women. This will enhance economic development and help break the cycle of violence generated by disaffected young men who fall prey to irrational ideologies. Education should also help increase access to and use of contraception so desperately needed to break the cycle of poverty in under-resourced nations.

Take-home message
We live in the age of acceleration. Advances in information technology occur at a pace exceeding the human mind’s ability to adapt. This, in turn, is fueling acceleration of economic globalization and both trends are disrupting traditional employment models. Economic privation and climate change are also accelerating mass refugee migrations from under-resourced countries and failed states to Europe and North America fueling a toxic cycle of extremism, violence, and nativism. But humans created all three of these accelerations and if we embrace empiricism, rationality, and evidenced-based policies while eschewing baseless ideologies, mysticism, and fear, we have the power to mitigate their adverse impacts. In addition to addressing climate change by thoughtfully but expeditiously transitioning to renewable energy sources and promoting “reforestation”, we need to address accelerating technological complexity and economic globalization by embracing lifelong learning achieved through converting AI to IA. We must also pursue a global commitment to educating all the world’s women and providing universal access to contraception.

Dr. Lockwood, editor in chief, is Senior Vice President, USF Health, and Dean, Morsani College of Medicine, University of South Florida. He can be reached at DrLockwood@mhmgroup.com

FOR REFERENCES VISIT contemporaryobgyn.net/AgeofAcceleration
WHO issues new Zika updates

by BEN SCHWARTZ

The World Health Organization (WHO) has released two Zika virus (ZIKV)-related updates, one on epidemiology and the other with information for travelers.

According to the WHO, four of six of its regions (African Region, Region of the Americas, South-East Asia Region, and Western Pacific Regions) have reported ZIKV infections. Although infection rates have steadily declined since peaking in 2016, as of July 2019, a total of 87 countries and territories have had evidence of autochthonous mosquito-borne transmission of ZIKV. In 2018, a total of 31,587 suspected, probable, and confirmed cases of ZIKV disease were reported in the WHO region of the Americas. However, only 3,473 (11%) of them were laboratory confirmed.

Reporting practices vary across the Americas, which makes surveillance difficult because results are not uniform or consistent. Mexico, for example, reports only laboratory-confirmed cases, while other countries report suspected and probably cases as well. Cuba had the highest number in the Caribbean (873 confirmed cases, estimated incidence of confirmed cases 7.6/100,000 population). Three countries—Canada, Chile and Uruguay—have never reported autochthonous mosquito-borne transmission of ZIKV.

In updating its information for travelers visiting countries with ZIKV, the WHO advises against any restriction of travel to or trade with countries, areas and territories with ZIKV transmission.

However, pregnant women should avoid these areas, particularly during outbreaks. Pregnant women, women who may become pregnant within 2 months of travel, and male travelers whose partner may become pregnant within 3 months of travel should check with their healthcare providers and carefully consider the risks and possible consequences before travelling. In addition, national governments may make public health and travel recommendations to their own populations and travelers need to be aware of these recommendations if they exist.

Travelers who do visit areas with potential transmission of ZIKV should take the following precautions:

- Wear clothing, preferably lighter colored, that covers as much of the body as possible.
- Use insect repellents that contain...
Despite mounting evidence that 12-month dispensing strategies for oral contraceptive pills (OCP) improve contraceptive access and reproductive outcomes, most insurance only allows for 3-month supplies as a means to control costs. To better understand the financial impact of a 12-month prescription, a recent study in *JAMA International* estimated the financial and reproductive health implications of implementing such a dispensing option in the Veterans Affairs (VA) health system.

The authors developed a decision model from the VA payer perspective to estimate incremental costs to the health care system if the option was available to receive a 12-month supply of OCPs up front, rather than the 3-month maximum currently in place. The model assumed a cohort of reproductive-aged, heterosexual active female VA enrollees who wish to avoid pregnancy for at least 1 year. Pregnancy outcomes included abortion, miscarriage, and live birth. Stillbirths and ectopic pregnancies were not included in the model since these outcomes represent fewer than 2% of pregnancies. Model outcomes were per-woman mean costs for 3-month and 12-month dispensing, incremental cost difference between strategies, and total incremental annual cost difference among all women using OCPs.

A couple of assumptions were also made for the model. Base case analyses assumed that 50% of OCP users opt to receive a 12-month supply of OCPs, and this value was varied from 0% to 100% in sensitivity analyses. Discontinuation rates were also treated as a single variable in the model and equivalent between the 3- and 12-month strategies.

The model included a cohort of 24,309 women to calculate total annual costs. This number was based on the amount of VA enrollees who filled an OCP prescription during fiscal year 2017 (FY2017). Costs of OCP provision and pregnancy-related care were derived from VA administrative data. Veteran copayments represented negative intermediate costs to the VA and were fixed at $24 per 3-month supply or $96 per 12-month supply. Outcome costs included the mean costs incurred by the VA for live births (prenatal care, intrapartum and delivery care, and newborn care) and miscarriages. The VA does not cover pregnancy termination under any circumstance, so abortion cost was set at $0.

For the 12-month dispensing option, the mean annual cost per woman was $700.60 compared to $787.72 for the 3-month dispensing option (incremental VA cost savings = $87.12 per woman per year with the 12-month option). The cost savings from dispensing for the full 12 months resulted from reductions in unintended pregnancies.

On returning home, travelers should continue to use insect repellent for at least 3 weeks to avoid being bitten and transmitting the disease. They should also practice safer sex through consistent condom use and consider abstaining from sex for at least 3 months since possible exposure for men and 2 months for women.

DEET, IR 3535, or KBR3023. If repellents and sunscreen are used together, sunscreen should be applied first. Use physical barriers on doors and windows. Sleep under mosquito nets during the day when Aedes mosquitoes are most active. Both women and men should practice safer sex, including use of condoms, or abstinence.

**FINANCIAL, HEALTH IMPLICATIONS OF 12-MONTH SUPPLIES OF OCs**

By Ben Schwartz

Despite mounting evidence that 12-month dispensing strategies for oral contraceptive pills (OCP) improve contraceptive access and reproductive outcomes, most insurance only allows for 3-month supplies as a means to control costs. To better understand the financial impact of a 12-month prescription, a recent study in *JAMA International* estimated the financial and reproductive health implications of implementing such a dispensing option in the Veterans Affairs (VA) health system.

The authors developed a decision model from the VA payer perspective to estimate incremental costs to the health care system if the option was available to receive a 12-month supply of OCPs up front, rather than the 3-month maximum currently in place. The model assumed a cohort of reproductive-aged, heterosexual active female VA enrollees who wish to avoid pregnancy for at least 1 year.

Pregnancy outcomes included abortion, miscarriage, and live birth. Stillbirths and ectopic pregnancies were not included in the model since these outcomes represent fewer than 2% of pregnancies. Model outcomes were per-woman mean costs for 3-month and 12-month dispensing, incremental cost difference between strategies, and total incremental annual cost difference among all women using OCPs.

A couple of assumptions were also made for the model. Base case analyses assumed that 50% of OCP users opt to receive a 12-month supply of OCPs, and this value was varied from 0% to 100% in sensitivity analyses. Discontinuation rates were also treated as a single variable in the model and equivalent between the 3- and 12-month strategies.

The cost savings from dispensing for the full 12 months resulted from reductions in unintended pregnancies.

By Ben Schwartz

Despite mounting evidence that 12-month dispensing strategies for oral contraceptive pills (OCP) improve contraceptive access and reproductive outcomes, most insurance only allows for 3-month supplies as a means to control costs. To better understand the financial impact of a 12-month prescription, a recent study in *JAMA International* estimated the financial and reproductive health implications of implementing such a dispensing option in the Veterans Affairs (VA) health system.

The authors developed a decision model from the VA payer perspective to estimate incremental costs to the health care system if the option was available to receive a 12-month supply of OCPs up front, rather than the 3-month maximum currently in place. The model assumed a cohort of reproductive-aged, heterosexual active female VA enrollees who wish to avoid pregnancy for at least 1 year.

Pregnancy outcomes included abortion, miscarriage, and live birth. Stillbirths and ectopic pregnancies were not included in the model since these outcomes represent fewer than 2% of pregnancies. Model outcomes were per-woman mean costs for 3-month and 12-month dispensing, incremental cost difference between strategies, and total incremental annual cost difference among all women using OCPs.

A couple of assumptions were also made for the model. Base case analyses assumed that 50% of OCP users opt to receive a 12-month supply of OCPs, and this value was varied from 0% to 100% in sensitivity analyses. Discontinuation rates were also treated as a single variable in the model and equivalent between the 3- and 12-month strategies.

The cost savings from dispensing for the full 12 months resulted from reductions in unintended pregnancies.

Financial, health implications of 12-month supplies of OCs

By Ben Schwartz

Despite mounting evidence that 12-month dispensing strategies for oral contraceptive pills (OCP) improve contraceptive access and reproductive outcomes, most insurance only allows for 3-month supplies as a means to control costs. To better understand the financial impact of a 12-month prescription, a recent study in *JAMA International* estimated the financial and reproductive health implications of implementing such a dispensing option in the Veterans Affairs (VA) health system.

The authors developed a decision model from the VA payer perspective to estimate incremental costs to the health care system if the option was available to receive a 12-month supply of OCPs up front, rather than the 3-month maximum currently in place. The model assumed a cohort of reproductive-aged, heterosexual active female VA enrollees who wish to avoid pregnancy for at least 1 year.

Pregnancy outcomes included abortion, miscarriage, and live birth. Stillbirths and ectopic pregnancies were not included in the model since these outcomes represent fewer than 2% of pregnancies. Model outcomes were per-woman mean costs for 3-month and 12-month dispensing, incremental cost difference between strategies, and total incremental annual cost difference among all women using OCPs.

A couple of assumptions were also made for the model. Base case analyses assumed that 50% of OCP users opt to receive a 12-month supply of OCPs, and this value was varied from 0% to 100% in sensitivity analyses. Discontinuation rates were also treated as a single variable in the model and equivalent between the 3- and 12-month strategies.

The cost savings from dispensing for the full 12 months resulted from reductions in unintended pregnancies.

Ben Schwartz is the associate editor of Contemporary OB/GYN.

**SOURCES**


The cost savings from dispensing for the full 12 months resulted from reductions in unintended pregnancies.
12 months primarily resulted from reductions in unintended pregnancies. Annually, 149 unintended pregnancies per 1000 women were expected with the 12-month option, while the 3-month option resulted in 173 expected unintended pregnancies per 1000 women. The absolute reduction of 24 unintended pregnancies translates to 583 unintended pregnancies averted annually.

The authors believe their findings are important for guiding policy on OCP dispensing. Because controlling cost is the main reason that insurance providers limit dispensing OCPs to 3 months, these results illustrate how implementing a 12-month OCP dispensing option actually provides greater cost savings for the VA while simultaneously providing better support for women’s reproductive goals.

**Ben Schwartz** is the associate editor of Contemporary OB/GYN.


---

### CDC releases ‘benchmark’ data on pelvic exams

*by JUDITH M. ORVOS, ELS*

The Centers for Disease Control and Prevention (CDC) has released a new analysis that may be a benchmark for women’s behavior regarding pelvic exams before the American College of Obstetricians and Gynecologists (ACOG) made a sea change in guidance on when to perform the tests. Published in an NCHS Data Brief, the report spans a 19-year period and reveals trends in compliance with annual testing related to patient age, race, and socioeconomic status.

Published in an NCHS Data Brief, the report is based on interview data from more than 10,000 women aged 15 to 44 in the National Survey of Family Growth (NSFG). The NSFG is a nationally representative survey of US men and women aged 15 to 44 designed to gather data on fertility, cohabitation, marriage, divorce, infertility, use of contraception and general and reproductive health.

The authors looked at trends overall and by age from 1988 to 2017 in receipt of pelvic exams in the past year and differences by Hispanic origin and race, education, poverty status, and health insurance status for 2015 to 2017. Percentages were compared using two-tailed t tests at the 0.05 level and no adjustments were made for multiple comparisons.

In 2012, ACOG issued a Committee Opinion recommending annual pelvic exams for women aged 21 and over as part of the well-woman visit. The guidance was changed in 2018, when the organization issued a Committee Opinion advising that the test be performed when indicated by medical history or symptoms.

**The key findings of the CDC analysis are as follows:**

- Women aged 15 to 44 in 1998 were more likely to have undergone a pelvic exam than women at any later NSFG study period.
- The decrease in receipt of pelvic exams occurred primarily in women aged 15 to 29.
- From 1988 to 2017, the percentage of women who said they had received a pelvic exam in the past 12 months fell by 65% in the 15-to-20 age group, 57% in the 21-to-29 age group, and 6% in those aged 30 to 44.
- Non-Hispanic black women were most likely to have had a pelvic exam in the past 12 months (59.5%), followed by non-Hispanic white women (53.8%), and Hispanic women (45.4%).
- Only 38.9% of women polled from 2015 to 2017 who had no health insurance were likely to have had a pelvic exam, versus 56.2% of those with private insurance, 49.1% with Medicaid, and 58.1% of women who had Medicare, military, or other government insurance.
- Likelihood of getting a pelvic exam increased with educational level, with 68.7% of women who had a bachelor’s degree saying they had the test versus 51.5% of those with less than a high school diploma.

**Judith M. Orvos, ELS,** is an editorial consultant for Contemporary OB/GYN.

Screen, rescreen, and rescreen again

I enjoyed the update in the article on the rise of congenital syphilis. I have been giving prenatal care since the late 1980s and have always screened initially then again at 35-36 weeks. We did not see patients in the hospital, but when they returned to us for their postpartum visit, they would be tested again.

It astounds me to hear that some of the reasons for not rescreening may be that “providers are hesitant to ask uncomfortable questions about sexual histories” or that “providers assume a treated patient will remain infection-free and do not retest”...or for that matter...that someone that has been treated is not rescreened because they are “not high risk??” I would think if they had syphilis and were treated... they would be high risk?? Common sense needed here, perhaps?

As healthcare providers, we are trained in this area - sexual practice assessment - and with experience comes comfort. So I strongly recommend if one is in the business of the provision of health care, then one should become comfortable in the area of asking questions - any questions - and getting answers, whether pleasant or not, to enable provision of the best health care possible. NOT asking is close to negligence, in my mind anyway.

Thank you very much for the simple reminders of how important it is to screen, rescreen and then hopefully at delivery...rescreen again.

Veronica L. Howard-Burch, PhD, MSN, RNC
Women’s Health Nurse Practitioner-BC
FORT STOCKTON, TEXAS

---

Burnout

All the articles coming out now about physician burnout seem to be too late and today, physicians like me are treading water.

Since 1974, as a woman student, intern, resident, and private practitioner, I have seen the evolution of medicine. In that time, there have been many positive changes, but the negatives seem to now outweigh the positives, resulting in physician burnout.

In my medical career, I have been though many struggles and right now, I’m feeling a lack of control. It’s a sense of being in an environment in which no one is listening.

As a woman, I was treated differently. When I got accepted into medical school, I was made to feel that I had taken away a spot from a male candidate, because of course I would give up my career once I got married and had children. As a student, all the patients thought I was a nurse even though I was wearing a white medical jacket. When I was a resident and pregnant, an attending said he didn’t want to scrub with me because I might faint and force him to finish the case by himself. My 2-week maternity leave was resented by male colleagues, but they had no problem...
when a male resident took the same amount of time off after a broken affair.

From what I see now, female residents are treated much better, one of the positive changes in medicine.

On the negative side, there has been a great erosion in physicians’ autonomy to practice over the last 20 years. When I was a resident, we were drilled to think, make a differential diagnosis, decide on the top diagnosis and treat. Now, if I want to admit my patient for observation for PIH, severe hyperemesis, and bleeding, I have to justify it to the MFM, residents, and financial powers of the hospital. To order an MRI for a woman who has a strong family history of breast cancer with questionable results on a mammogram, I have to justify it to a young non-medical person. If I feel a patient needs to be delivered, it has to be cleared with MFM. Putting a patient with a history of PTB on Makena requires justification to the insurance carrier. Treatment is summarily disallowed after I engage in peer-to-peer review with a complete stranger who doesn’t really know my patient or her previous pregnancy losses. And there are times when the residents do not respect my judgment or experience because they feel it isn’t evidence-based medicine. What they don’t realize that I have seen the cycle of medicine—always VBAC, never VBAC, OK with one C/S, OK with two, deliver all breeches, only multiparous, no none and now, maybe PTL treatment—alcohol, magnesium sulfate, terbutaline shots/pumps, home monitoring. Procardia, Makena. What I hope they can understand is that experience is worth something even if it hasn’t been printed in an obstetrical journal. With increased use of electronic charting, there appears to be a gap in direct hands-on practice.

Ultimately, the system of medicine has eroded the patient-doctor relationship. With changing insurance plans, sometimes patients have to change doctors. Their doctors can’t change with them, since the insurance rosters are full.

With the EMR, a doctor can spend more time with the computer than with the patient. Even if you hire a scribe, it really isn’t the same thing. EMRs themselves are tiresome, and not all the boxes are relevant to every encounter. But if they are not filled out correctly, that is more fodder for the litigation lawyers.

In regards to the business of medicine, the normal business model is not there. Most models are built on the premise that if expenses rise, they can be offset with a higher charge for the product. We are living in a time of higher expenses with diminishing reimbursements. There is the looming threat of malpractice rates. I live in New York, which will never institute litigation caps due to the resistance in Albany.

Many doctors are retiring or selling their practices to large medical networks or hospitals. Physicians have given up delivering, but to stay in practice in their office, they still have to pay full obstetric malpractice rates, leading them to take a pay cut.

The tragedy that I see and feel is that I have spent my whole life struggling, striving to become a caring ob/gyn and running a private practice while being a mother, wife, and grandmother. I have enjoyed the practice of medicine but with restrictions and constraints, it is getting harder to do.

Dr. S. Rais
In private group practice
BROOKLYN, NEW YORK
How to diagnose and treat cesarean scar pregnancy

CSP is a challenge but management is possible with a multidisciplinary approach.

by Luis Izquierdo, MD, MBA, and Mariam Savabi, MD, MPH

Since the 1960s there has been a worldwide increase in primary cesarean deliveries from 5% to 32%.1-3 North America has the second highest rate of cesareans in the world, which has resulted in high rates of repeat cesarean deliveries and worsening maternal morbidity including surgically-related infections, bowel and bladder injury, transfusions, hysterectomy, abnormal placentaion, and cesarean scar pregnancy (CSP).5-6 CSP is considered an ectopic pregnancy and can carry very serious consequences, including hemorrhage, abnormal placentaion, and uterine rupture.4 Due to the rarity of the condition and the possible serious consequences it requires specialized care to manage appropriately. The number of prior cesarean deliveries does not seem to correlate with risk of CSP and a meta-analysis found that 52% of such pregnancies were in women with one prior cesarean.7 This review examines the literature on CSP regarding pathophysiology, signs and symptoms, ultrasound diagnosis, management options, and future fertility for women with the condition.

Pathophysiology
To better understand CSP, an appreciation of placental development is important. As a brief overview, at the time of implantation, the blastocyst results in modification of endometrial stromal cells, which enhances the decidualization reaction. The decidua, in turn, is able to regulate endometrial receptivity to modulate architectural changes that facilitate immune and vascular cell function to further trophoblastic invasion.8 Trophoblasts continue to invade until meeting the decidua basalis in which a zone of fibrinoid degeneration is created, described as the Rohr stria and Nitabuch layer.8-9

Prior uterine scar tissue from a cesarean often results in absence of the

DR. IZQUIERDO is L Ben Curel Professor of Obstetrics and Gynecology, Department of Obstetrics and Gynecology, University of New Mexico School of Medicine, Albuquerque.

DR. SAVABI is an ob/gyn in the Department of Obstetrics and Gynecology, University of New Mexico School of Medicine, Albuquerque.
decidua basalis or partial disruption with a faulty layer of fibrinoid degeneration.\textsuperscript{8} In the setting of CSP, the pregnancy is not surrounded by or implanting into the decidualized endometrium, but rather, embeds in fibrous scar tissue and myometrium.\textsuperscript{10,11} The pregnancy is abnormal from the moment of implantation and management requires careful consideration.

**Presentation and diagnosis**
Most patients with CSP are asymptomatic. Symptoms can, however, include light vaginal bleeding that is either painless or associated with mild to moderate abdominal pain.\textsuperscript{7,10} There are no signs or symptoms that are pathognomonic for CSP.

Diagnosis is performed using transvaginal ultrasound (TVUS). Transabdominal ultrasound has been used to diagnose CSP but TVUS continues to be the imaging modality of choice. Figure 1 shows four ultrasonographic findings that have been described as diagnostic of CSP:

1. Empty uterine cavity with bright hyperechoic endometrial stripe
2. Empty cervical canal
3. Intrauterine mass in the anterior part of the uterine isthmus
4. Absence of the myometrium, absent or thin between the bladder and gestational sac, measuring less than 5 mm.\textsuperscript{8,12,13}

Using 3D sonography of the lower uterine segment may help to clarify this pathological entity (Figures 2 and 3). Magnetic resonance imaging (MRI) may be an option for diagnosis and evaluation, but the literature appears to demonstrate that overall, TVUS with color Doppler is superior and that MRI should be reserved for inconclusive or difficult-to-diagnose cases.\textsuperscript{10} Once a diagnosis is made, management should be multidisciplinary, and management options should be reviewed with the patient.

**Management**
Because CSP is rare, management has largely been described in the literature in case reports and small cases series, as summarized here. We will outline different treatment options that have been most frequently chosen including what we do in our institution.
There are multiple considerations for management of CSP. Goals of care are to treat the CSP with complete resolution and to ensure the mother’s safety. Keys to optimizing clinical outcomes include identification and termination of an early gestation and a multidisciplinary approach to management.

Medical therapy
Methotrexate (MTX) is standard treatment for many types of ectopic pregnancy and has also been used to treat CSP effectively. Patients who are pain-free, hemodynamically stable, and have an unruptured CSP < 8 weeks’ gestation are candidates for MTX. This type of medicine stops cells from dividing. It can be used as a way (other than surgery) to treat a pregnancy that’s implanted outside the uterus (ectopic pregnancy). The drug can be given via intra-sac or local injection, as systemic therapy, or in a combination of systemic therapy and intra-sac injection.

Local injection appears to work well but additional surgical treatment or systemic medical management often is required (Table 1). Administration of a single injection of MTX, potassium chloride (KCL), hyperosmolar glucose, or crystalline trichosanthin under TVUS or transabdominal ultrasound guidance has been used.

Systemic MTX is commonly used for tubal or cervical ectopic pregnancies. Reassuring results have been reported with systemic regimens, with and without intra-sac medication injections, for CSP. Both single-dose and multidose protocols have been used. The standard single-dose regimen for MTX is 50 mg/m² whereas the multidose protocol includes four doses of MTX 1 mg/kg given on Days 1, 3, 5, and 7 with alternating days of folinic acid 0.1 mg/kg. Patients with ectopic pregnancies and HCG levels < 5000 mIU/mL appear to respond best to systemic MTX.

In many case series, a combination of systemic therapy and intra-sac injections have been used as first-line management of CSP. In these regimens, the intra-sac injections have been done primarily with KCL or methotrexate at the doses shown in Table 1.

Surgery
Uterine curettage and hysteroscopy
We strongly caution against performing uterine curettage as first-line treatment for CSP. The pregnancy is often not in the uterine cavity so the products of conception may not be accessible, resulting in failure of the procedure. In addition, risk of uterine rupture and hemorrhage associated with the procedure is increased because of the thinness of the myometrial layer. Uterine curettage, however, can be considered after successful medical management, which is usually performed when Doppler ultrasound does not demonstrate active blood flow around the gestational sac.

Hysteroscopy (HSC) can also be used to guide uterine curettage. Some providers have evaluated CSP with HSC and coagulated vasculature noted around the CSP. In a case series by Pan et al, HSC was used in conjunction with laparoscopy. If anterior myometrial thickness was < 3 mm on ul

CONTINUED ON PAGE 33
EXPERT PERSPECTIVES ON BULLETINS AND OPINIONS

COMMITTEE OPINION 777: Sexual Assault

ABSTRACT: Sexual violence continues to be a major public health problem affecting millions of adults and children in the United States. Medical consequences of sexual assault include sexually transmitted infections; mental health conditions, including posttraumatic stress disorder; and risk of unintended pregnancy in reproductive-aged survivors of sexual assault. Obstetrician-gynecologists and other women’s health care providers play a key role in the evaluation and management of sexual assault survivors and should screen routinely for a history of sexual assault.

When sexual violence is identified, individuals should receive appropriate and timely care. A clinician who examines sexual assault survivors in the acute-care setting has a responsibility to comply with state and local statutory or policy requirements for the use of evidence-gathering kits. This document has been updated to include model screening protocols and questions, relevant guidelines from other medical associations, trauma-informed care, and additional guidance regarding acute evaluation of survivors and evidence-gathering kits.

COMMENTARY

Why and how to perform trauma-informed care

by PAULA J. ADAMS HILLARD, MD

Violence against women, including intimate partner violence and sexual violence, has been characterized by the World Health Organization (WHO) as a major public health problem, and a violation of women’s human rights.1 The Committee on Health Care for Underserved Women of the American College of Obstetricians and Gynecologists (ACOG) recently updated the Committee Opinion on Sexual Assault.2 This document recognizes the frequency of sexual assault as a public health problem, exhorts ob/gyns and other women’s health care clinicians to screen all women for a history of sexual assault, addresses the issues that must be addressed in the acute evaluation of survivors, highlights the short- and long-term health consequences of sexual assault, and emphasizes the need to provide trauma-informed care when assessing the needs of sexual assault survivors.

Because sexual assault is so common (nearly one in five US women have been victims of a completed or attempted rape during their lifetime), all of us as ob/gyns will see women who have been sexually assaulted, even if this event occurred in the distant past.3 Thus it is imperative that we be familiar with the issues addressed in this Committee Opinion. The acute consequences of sexual assault include acute traumatic injuries that may be severe and life-threatening, as well as pregnancy and sexually transmitted infections.

In today’s world, myths about women’s reproductive health abound and are being perpetuated by misinformed politicians and others with a political agenda. It has been inaccurately claimed that “legitimate rapes” (whatever that hot-button term means) don’t result in pregnancies. The statistics from a longitudinal study on the prevalence and incidence of rape found the national rape-related pregnancy rate to be 5.0% per rape among victims of reproductive age, with approximately 32,000 pregnancies yearly in the United States resulting from rape.4 It really should go without saying that we must counter this misinformation at every turn.

The long-term health consequences of sexual assault can include physical...
symptoms, decreased social functioning, changes in health perception, and decreased quality of life. Many women with a history of sexual assault may not volunteer this history, but may present with chronic pelvic pain, dysmenorrhea, and sexual dysfunction. The psychological and mental health sequelae of sexual assault can be profound, from an acute disorganization phase to delayed symptoms such as nightmares, flashbacks, phobias, somatic symptoms, and post-traumatic stress disorder (PTSD), characterized by a re-experience of the trauma, avoidance, and hyper-arousal. Women with substance use disorders have very high rates of a history of rape or sexual assault, and thus it is particularly important to screen for this history when we detect substance use disorders, and conversely, when a history of sexual assault is elicited, to screen for substance use disorders that may result as a mechanism for coping with the history of trauma.

ACOG recommends screening all women for a history of sexual assault by asking direct questions in a nonjudgmental manner, validating the patient, as well as providing appropriate referrals. The Committee Opinion provides examples of appropriate screening questions. When a history of sexual abuse is disclosed, medical procedures including pelvic, rectal, and breast exams, as well as transvaginal ultrasound exams, may be triggering and associated with PTSD. Women with a history of sexual assault are at increased risk for PTSD and depression after childbirth.\(^5\)

Trauma-informed care is essential for all women with a history of sexual assault, but I would suggest that we approach ALL women with these principles, including acknowledging the effects of trauma, recognizing its signs and symptoms, and practicing so as to avoid retraumatizing. To that end, we need to ensure every woman’s physical and emotional safety, assure patients of our trustworthiness, prioritize individual choice and control during examinations, and seek to empower individuals. We should also encourage peer support, including during gynecologic exams. I would suggest that we treat all women in this manner, given that women may not feel comfortable acknowledging a difficult past history of sexual assault. In addition, we must avoid doing exams that themselves can be traumatizing or triggering. Our performance of the gynecologic exam should be predicated on the principles of “catalyzing women’s empowerment,” as described by Wijma and Siwe.\(^6\)

Many hospitals today have implemented programs whereby acute medical exams for sexual assault victims are performed by Sexual Assault Nurse Examiners (SANEs) or Sexual Assault Forensic Examiners (SAFEs). When I was an intern, many moons ago, I learned how to assess the appropriate medical issues for sexual assault survivors, and to collect forensic evidence using a “rape kit,” which fortunately included a checklist of the appropriate steps and required documentation. The Committee Opinion lists a website that facilitates localization of a specialized sexual assault examiner, because for an assault victim, being examined by such an expert is much preferable to being in the hands of someone who is inexperienced. Today, many fewer residents in ob/gyn do these evaluations, which is likely preferable for individual survivors of sexual assault, but which means that many clinicians today have never done such exams. The ACOG document acknowledges that in some locations or situations, the ob/gyn may remain responsible for the acute exam. A detailed protocol for sexual assault medical forensic examinations is available online from the U.S. Department of Justice’s Office of Violence Against Women at https://www.justice.gov/ovw/sexual-assault. ACOG has other resources on this topic, available at www.acog.org/More-Info/Sexual-Assault. When we do provide acute care for survivors of sexual assault, it is important to provide instructions in writing, and also critically important to arrange for both clinical and psychologic follow-up.

As ob/gyns, it is our responsibility to screen all patients for physical and sexual violence, and to provide compassionate trauma-informed care for all women. This ACOG Committee Opinion provides basic information that can inform that care.

DISCLOSURE The author reports no potential conflicts of interest with regard to this article.

FOR REFERENCES VISIT contemporaryobgyn.net/Trauma-informedCare
Non-healing vulvar ulcerations in a 33-year-old woman

What’s your diagnosis in a woman who has ulcerations unresponsive to treatment for yeast?

by KATHRYN WELCH, MD, ROSALYN MABEN-FEASTER, MD, DIANA CURRAN, MD, JOHN O.L. DELANCEY, MD, AND HOPE K. HAEFNER, MD

**PRESENTATION**

A 33-year-old woman is referred to you by her primary care physician for evaluation of two non-healing lesions on the vulva. She has tried multiple treatments for yeast without improvement. She is otherwise healthy.

**WHAT CONDITION OFTEN HAS THIS CLASSIC WIDE FISSURE?**

A. Squamous cell carcinoma (SCC)
B. Cutaneous Crohn’s disease
C. Group A *streptococcus*
D. Chancroid
E. Primary syphilis

**WHAT TEST MAY HELP YOU TO CONFIRM YOUR DIAGNOSIS?**

A. Vulvar biopsy
B. Aerobic culture
C. Polymerase chain reaction (PCR) test for *Haemophilus ducreyi*
D. Syphilis serological test

For the diagnosis, treatment plan, and discussion turn to PAGE 18
VULVAR ULCERATIONS

Non-healing vulvar ulcerations

CONTINUED FROM PAGE 17

Discussion of Cutaneous Crohn’s disease
Crohn’s disease (CD) is characterized by a chronic granulomatous inflammatory condition primarily affecting the gastrointestinal (GI) tract. Metastatic disease includes cutaneous lesions (including vulvar lesions), as well as joint, hepatobiliary and ophthalmic involvement. Cutaneous involvement is reported in up to 19% of cases, with the vulva being most commonly affected. The cause is unknown but likely multifactorial.

Background
Incidence of vulvar CD is 10 to 20 per 100,000 person-years and the prevalence is 300 per 100,000 persons. Cutaneous manifestations are rare, yet probably underreported and underdiagnosed. Vulvar lesions may precede intestinal disease in 25% of cases. Most patients are young, with disease manifesting in the teens and twenties. A few new cases have been reported to occur after age 45.

Diagnosis
Often the vulva appears edematous. Linear, “knife-cut” fissures or ulcers are the hallmark of vulvar CD. A biopsy is indicated for diagnosis. A 4-mm punch biopsy should be performed at the edge of the lesion and in the ulcer bed (if there is also suspicion for cancer). If the patient already has a diagnosis of gastrointestinal CD, then a biopsy is not required with this classic appearance of vulvar CD. If not previously performed, endoscopic evaluation to evaluate for intestinal involvement is indicated.

Treatment
For limited disease, first-line treatment is with potent or super-potent topical corticosteroids (e.g. clobetasol 0.05% ointment or halobetasol 0.05% ointment), which can be used for short periods of time such as 2 weeks. To avoid steroid overuse, a switch can be made to a calcineurin inhibitor (tacrolimus 0.1% ointment twice a day) if there is no burning, if desired, although it is rarely used. Intraleisional triamcinolone 10 mg/mL (up to 40 mg total on the vulva) is also a reasonable therapy for localized or limited disease. Generally, excision is avoided but it may be appropriate in some cases.

For more diffuse disease, systemic corticosteroids are needed. One study demonstrated that oral metronidazole can be effective in 87.5% of cases alone or in combination with steroids. Also, 10% topical metronidazole three times daily for 4 weeks can help with perianal disease. If patients are recalcitrant to these therapies or you are unable to taper them off of systemic steroids, then biologic therapies are often used. The most commonly used biologic therapies are tumor necrosis factor-alpha inhibitors such as infliximab. There are also other steroid-sparing immunosuppressive medications that have demonstrated efficacy in cutaneous Crohn’s including azathioprine, methotrexate, cyclosporine, and thalidomide. We often consult our gastroenterology colleagues for assistance with these steroid-sparing agents if there is also GI involvement, or dermatology if there is no GI involvement. Because biologics have recently been very effective for some patients, they are sometimes used as first-line therapy.

Group A streptococcus (GAS)
GAS is primarily Streptococcus pyogenes. GAS vulvovaginitis is typically thought of in prepubertal girls; however, adult women can be affected, too. Symptoms include pruritus and pain. A common sign is copious vaginal discharge. Risk factors include exposure to GAS and/or vaginal atro-
IF YOU THINK IT’S CHLAMYDIA.

AND IT ACTS LIKE CHLAMYDIA.

IT MIGHT BE MYCOPLASMA GENITALIUM.

Many healthcare providers are unfamiliar with *Mycoplasma genitalium*—that’s why awareness is so important.

*Mycoplasma genitalium* is a highly prevalent STI that, when symptomatic, often presents like a chlamydial infection. Symptoms may be consistent with cervicitis or urethritis.¹ Misdiagnosis could lead to ineffective treatment and serious health consequences for your patients, including potential female infertility, increased risk of HIV acquisition and transmission and antimicrobial resistance.² ⁶

Visit HologicEd.com for diagnosis and treatment strategies.

VULVAR ULCERATIONS

phy. Treatment is typically oral penicillins or topical clindamycin. GAS is also a cause of monomicrobial necrotizing fasciitis. Since 2010, approximately 700 to 1200 cases have occurred every year in the United States. The hallmark of this life-threatening condition is pain out of proportion to appearance and rapidly spreading erythema and induration. In later stages, dusky gray tissue may be present. This is a surgical emergency that requires early and extensive debridement of affected tissue in combination with parenteral antibiotics and supportive care.

**Syphilis**

Approximately 27,000 cases of primary and secondary syphilis were reported in 2016. This sexually transmitted infection (STI) typically results in a single painless ulcer (chancre) in the vulvar area approximately 3 to 4 weeks after exposure. However the ulcer can become painful if secondarily infected. It has a punched-out appearance with raised edges but is most commonly located in the posterior commissure. It is often accompanied by inguinal lymphadenopathy. Resolution occurs after 2 to 4 weeks. Of note, secondary syphilis occurs 8 to 12 weeks after transmission and is characterized by condylomata lata in the vulvar and perianal area (eroded papules) and a macular rash with fever and malaise. There can be sequelae later in life if untreated. Diagnosis is made from dark field microscopy with detection of Treponema pallidum or from PCR-DNA analysis in conjunction with serological testing (non-treponemal and treponemal). Treatment for primary syphilis is with benzathine penicillin 2.4 million U IM (refer to the MMWR 2015 Sexually Transmitted Diseases Treatment Guidelines for the most up-to-date treatment recommendations).

**Chancroid**

This is a rare STI caused by *H. ducreyi*. Only seven cases were reported in the United States in 2016. It is characterized by development of a painful ulcer with suppurrative discharge in the introitus. There may be development of multiple nonindurated ulcers around it. Painful, enlarged inguinal lymph nodes (buboes) develop 1 to 2 weeks afterward and this purulent fluid may drain through the skin, resulting in formation of ulcerations. Diagnosis is primarily based on history and physical examination as the culture media and PCR tests are not readily available. One treatment option is azithromycin 1 g orally in one dose but there are other antibiotic options as well (refer to the MMWR Sexually Transmitted Diseases Treatment Guidelines for the most up-to-date antibiotic treatment recommendations). Of note, fluctuant lymphadenopathy may require incision and drainage or needle aspiration to resolve the lymphadenopathy.

**Squamous cell carcinoma**

Vulvar cancer represents 0.3% of all new cancer cases in the United States. Approximately 6000 cases have been reported to date in 2019. SCC is the most common type of vulvar cancer, making up approximately 75% of all invasive cancers in the United States. It is more common among white women compared to black or Hispanic women and the average age at diagnosis is 69. Risk factors for developing SCC including history of differentiated vulvar intraepithelial neoplasia, smoking, lichen sclerosus, history of human papillomavirus-mediated disease (cervical high-grade squamous intraepithelial lesion [HSIL] or cancer, vulvar HSIL), and immunodeficiency. Most patients present with a single vulvar lesion which can be a plaque, ulcer or mass. Patients may also complain of pruritus, pain and bleeding. Given this, a biopsy is critical to rule out this diagnosis in the setting of a vulvar ulcer. Of note, when you perform a biopsy you should be sure to biopsy at the edge and also in the center, if the lesion is irregular and firm. You should also try to include some underlying stroma and try to avoid removing the entire lesion, if it is large, as it can make future surgical planning more difficult.

Aside from biopsy of a visible lesion, you should also consider performing vulvoscopy to further evaluate the vulva. Once SCC is identified via biopsy, it is recommended to perform cervical cytology (with colposcopy if indicated), complete blood count, biochemical profile, liver profile, HIV testing, and a...
Will screening for endometrial cancer soon be routine?

A rigorous assessment of who, when, and how to screen may lead to regular testing in a broader population.

by GIUSEPPE DEL PRIORE, MD, AND ROLAND MATTHEWS, MD

Major organizations currently recommend screening for endometrial cancer (EC) only for women with an inherited mismatch repair defect, commonly known as HNPCC (hereditary non-polyposis colorectal cancer) and Lynch syndrome. For women with HNPCC—which typically is identified after diagnosis of EC—endometrial biopsy is recommended annually or less frequently, starting at age 35. The precise definition and diagnostic criteria for Lynch and HNPCC syndromes vary. Genetic proof of these inherited disorders is not always available. In these circumstances, clinical criteria such as Amsterdam Criteria or a high index of suspicion should be sufficient to consider EC screening at some arbitrary interval and starting age.¹

The homogeneity of opinions about EC screening, however, may be ending. The Centers for Disease Control and Prevention (CDC) publicly announced that it is looking into EC screening, an initiative spurred by an unrelated, highly publicized case of morcellation.² An incidentally discovered sarcoma is being used by at least one legislator to justify a request to the CDC to examine mandating endometrial biopsy before all hysterectomies. Many surgeons already perform biopsies before all hysterectomies and ovarian surgeries in at-risk women. In essence, these practitioners are screening for EC in an at-risk population: women about to undergo pelvic surgery.

Biopsy considerations
Routine screening for EC was studied during the initial experience with selective estrogen receptor modulators (SERMS).³ The attention was due to an increase in EC in patients with breast cancer who use SERMS to prevent recurrence. The conclusion of most opinions at that time was that screening was not warranted due to a low incidence and positive predictive value of the then-favored screening modality, ultrasonography. Only ultrasonography was considered because of a perceived increased risk of office endometrial biopsy. Based on these assumptions, screening was not adopted by most practitioners because of the poor specificity of ultrasonography and the low prevalence of EC. In retrospect, that decision still seems appro-

DR. DEL PRIORE is a professor at Morehouse School of Medicine in Atlanta, Ga.

DR. MATTHEWS is a professor and Chair of the Department of Obstetrics and Gynecology at Morehouse School of Medicine in Atlanta, Ga.
appropriate, given the information available at that time.4

Data on complications of endometrial biopsy (perforation, bleeding, pain, infection) are derived from reports of a population with a strong indication for sampling (i.e., symptoms and presumed cancer until proven otherwise). In triage of this patient group, sampling attempts persist until successful, thus adding additional risks to the overall goal of sampling the endometrium.5,6

On the other hand, sampling asymptomatic patients, or screening, would exclude women at increased risk of complications from the procedure. In other words, patients at increased risk of complications from a screening biopsy would not be put through additional invasive procedures or attempts. For instance, a woman considered for screening who has cervical stenosis or severe comorbidities would not be subjected to dilatation and curettage in the operating room. Instead such a patient could be triaged to serial pelvic ultrasonography or other safer office maneuvers, such as cervical "ripening," before biopsy.7 Thus, risk associated with biopsy for EC screening could be adjusted and lower than previously reported for endometrial sampling for other indications. In general, in-office sampling for screening should have little to no risk, as there are alternatives for difficult patients and procedures.8,9

**Disease prevalence as a factor**

Once risk of screening with biopsy is potentially acceptable, then disease prevalence becomes the next important area to consider. Currently some populations are at higher risk than the originally proposed group of patients using SERMs for breast cancer prevention. In those women, prospective cohort data suggest an endometrial cancer incidence of approximately 1/1000 to 1/2000.3 However, more recently reported data on community-based and risk-adjusted population incidence reveal much higher rates. For instance, in communities with high non-communicable disease (NCD) rates, EC incidence has been reported to be as high as 6/1000.10,11 In other populations, high-risk cohorts can be identified on the basis of risk factors such as age and weight. Using these risk modifiers, a subpopulation at even higher risk can be identified with rates theoretically approaching 1/100 for 50-year-olds with body mass indices (BMI) of 40 or more.10,11

This prevalence approximates and compares favorably to that in patients with symptoms. In those women, who have the traditional indication for endometrial biopsy, the rate of diagnosed cancers is higher, but that should not be the sole criterion for deciding when to biopsy.1,10 Using the current standard, EC outcome is not optimal because overall survival can be as low as 80% in communities suffering from disparities.

**Other considerations**

To justify screening, several other conditions must be met, including existence of a premalignant condition, availability of a realistic intervention, and likelihood that patients will adhere to treatment. EC screening is conceivable based on all of these parameters, including existence of a premalignant condition that can be treated to prevent progression to cancer.

Hyperplasia in its various forms does respond to medical treatments and likely even lifestyle changes, including weight loss. Medical therapies such as a progesterone-delivering intrauterine device can be both effective for premalignant conditions and less morbid than surgical treatment for EC. The increased safety of medical treatment for a premalignant condition versus surgery for frank EC is a given. That benefit may be magnified because premalignant conditions occur years before development of EC and may have an earlier peak occurrence in women who are younger, and presumably healthier, than patients destined to be diagnosed with EC. Certainly for any patient contemplating surgery, whether for EC or a precursor, doing so at the youngest age possible may be an advantage.

Most promising of all is evidence to suggest that lifestyle changes such as exercise and weight loss and interventions such as metformin that are aimed at underlying causes may have additional health benefits beyond interrupting progression to EC.12,13 Even if screening only leads to EC diagnosis at an earlier stage, it is theoretically possible that less invasive surgery, such as simple vaginal hysterectomy, can replace more extensive procedures using the current standard, EC outcome is not optimal because overall survival can be as low as 80% in communities suffering from disparities.
Incidence is lower for endometrial than for breast and prostate cancer, but the latter diseases have an indolent counterpart, which EC does not.

Screening in EC versus other cancers

Finally, compared with other cancers for which screening is done, EC is an attractive target. Its incidence and other characteristics are similar to those of breast, prostate, colon, and lung cancer. To be clear, incidence is lower for endometrial than for breast and prostate cancer, but the latter diseases have an indolent counterpart, which EC does not. Given the potential for overtreatment of breast and prostate cancer, controversy exists regarding the risk/benefit equation for their respective screening programs. There is no way to screen for "indolent" EC, so the watchful waiting, active surveillance, and other treatment algorithms evolving for breast and prostate cancer do not exist for EC. Screening and triage for EC is relatively simple compared with the techniques used for colon and lung cancer. Incidence of the latter two diseases is slightly higher than for EC, but the complexity, expense, and risk of work-up for EC makes screening for it potentially comparable.

Other screening programs have been tailored to specific segments of the population, such as smokers and patients with chronic hepatitis, who are at risk of lung and liver cancer, respectively. EC screening could be further refined by known risk factors, such as age and BMI, until a consensus is agreed upon that the adjusted risk warrants screening. This risk adjustment could be extended nearly universally in communities that share high-risk factors. For instance, in a community with high-reported NCD rates, EC was 2.5, 3.5, 8 and 10.7 times more likely to be diagnosed than breast, colon, cervical and ovarian cancers, respectively. All of those other benchmark cancers are either being screened for or are the subjects of intense investigations for improved screening. EC is not currently experiencing the same focus, but the relative incidence of it suggests that it should be. Further, the high mortality associated with some cancers for which effective screening is being sought—such as ovarian and cervical cancer—is the rationale for that screening. In high-risk communities, however, EC, however, may actually be a more common cause of death than those diseases.

In-office versus hospital-based screening

Screening can take many forms and may need to be community- or hospital-based, depending on the anticipated impact on compliance. Hospital-based screening, however, might be effective, given the association between EC and comorbid conditions and NCDs that lead to frequent hospital visits. For instance, at our safety net hospital, approximately 96% of women with EC had been seen an average of 1.7 years before their diagnosis, suggesting that earlier detection at screening may have been possible. Many of these patients had prior Pap smears, imaging, and biopsies for other diagnoses, which suggests that a hospital-based screening program would be possible. Women at risk for EC who have intermittent, unpredictable, and uncertain access to healthcare may benefit even more from hospital-based screening for the disease because it may be effective even at long intervals between screening. This is based on the well-established relationship of EC with hyperplasia and the long latency period between EC and its premalignant precursors.

Conclusion

Relative incidence of EC is higher than that for many cancers for which we already screen, including cervical cancer and other cancers with active screening research programs, such as ovarian cancer. EC does not have the same controversies that exist around prostate and breast cancer screening. (Screening may do more harm than good in the subsets of patients with those cancers whose disease has a long indolent natural history.) Overall, as risks factors for EC become more prevalent, and the affected population grows older with increasing related comorbidities, the need becomes more urgent for a thorough, rigorous, and scientific approach to determining who, when and how to screen. It will also be important to consider relative costs and benefits associated with these strategies. Changes in the overall health of our society have now made it imperative for all stakeholders to reconsider screening for EC.

DISCLOSURES The authors report no potential conflicts of interest with regard to this article.

FOR REFERENCES VISIT contemporaryobgyn.net/EndometrialCancer
Up to 20% of all pregnant and postpartum women will suffer from depression during the perinatal period, including the period up to 1 year postpartum. Although perinatal depression is more common than hypertensive disorders in pregnancy (2%-8%) and gestational diabetes (7%), many women with it go untreated for lack of diagnosis and/or intervention.¹,² There are several reasons that perinatal depression may not be identified and subsequently treated, but the two most common are non-disclosure from patients and inadequate screening of pregnant and postpartum women. Given the far-reaching effects of perinatal depression on mothers and their offspring, appropriate and timely diagnosis and treatment are imperative.

Making the diagnosis
A diagnosis of perinatal and/or postpartum depression is made when symptoms of depression last longer than 14 days.³ Symptoms include changes in sleep and appetite, which may be considered “normal” for pregnancy and thus overlooked by both the patient and the clinician. In addition, patients may report decreased energy, concentration, and interest, as well as feelings of guilt. These symptoms interfere with a woman’s ability to perform normal activities of daily living and cause significant impairment. Patients who describe symptoms of depression should always be screened for thoughts of self-harm/suicide. If thoughts of self-harm are accompanied by a plan, intervention becomes acutely necessary. In addition, women should be screened for signs and symptoms of psychosis as this may be associated with the rare diagnosis of postpartum psychosis, which is considered a psychiatric emergency because it puts women at risk of suicide and infanticide.

Patients who suffer from perinatal depression may have concomitant anxiety disorders, such as generalized anxiety disorder, which affects approximately 10% of pregnant and postpartum women.⁴ Diagnosis may be delayed or overlooked due to the overlap of anxiety and depression symptoms. Symptoms of generalized anxiety disorder (GAD) include excessive worry, inability to focus/concentrate, irritability, restlessness, fatigue and muscle tension.³ Another associated anxiety disorder seen in perinatal women is obsessive-compulsive disorder (OCD). Perinatal and postpartum OCD is believed to affect approximately 3% of pregnant and postpartum women. Approximately 50% of women with perinatal OCD also have a diagnosis of perinatal depression. Symptoms include obsessions related to fears of harm or death of the infant, contamination fears, and compulsions such as frequent checking and cleaning behaviors.

DR. ROUSSOS-ROSS is an ob/gyn in the Department of Obstetrics and Gynecology, University of Florida, Gainesville, Fla.

Left untreated, depression in the perinatal period can have serious repercussions for both mother and offspring.

by DIKEA ROUSSOS-ROSS, MD
Risk factors
Women are at risk of developing perinatal depression when they have been diagnosed with a depressive disorder previously, have a history of postpartum depression in a prior pregnancy, or have a family member with a diagnosis of depression or anxiety. In addition, women who are young, of lower socioeconomic status, and who have limited resources and limited social support are at higher risk. Interestingly, women who have a history of premenstrual dysphoric disorder are also at risk for perinatal depression. Research shows that hormone fluctuations, and not specific levels of estrogen and progesterone, may be related to onset or exacerbation of symptoms. In fact, women are at increased risk of depression during specific times in their lives, including onset of menses, pregnancy, and the perimenopausal period, all times in which there is noted fluctuation in hormone levels.

Screening
Screening women for depression during pregnancy and in the postpartum period is recommended. Several self-report screening tools have been validated for use in the perinatal period. Two commonly used screening tools for use in pregnant and postpartum women are the PHQ-9 and the Edinburgh Postnatal Depression Scale (EPDS). The EPDS is available in 50 languages including Spanish. The PHQ-9 is available in English and Spanish. Patients who have a positive screening result (a 12 or greater for EPDS, a 10 or greater for PHQ9) should be further evaluated to determine whether they require intervention.

Treatment options
Therapy and pharmacologic management are mainstays of treatment for perinatal depression. For patients who have mild-to-moderate symptoms, therapy should be considered first line. Typically interpersonal therapy is preferred for depression, but cognitive behavioral therapy (CBT) is also beneficial and is preferred for coexisting anxiety disorders. For moderate-to-severe symptoms, pharmacologic management can be initiated, and selective serotonin reuptake inhibitors (SSRIs) typically are considered first line. A combination of therapy and medications is preferable for patients who have moderate to severe symptoms. In patients with severe symptoms or suicidal/homicidal thoughts, hospitalization in a psychiatric facility should be considered.

Initiating psychiatric medications in pregnancy may cause anxiety for both patient and physician, thus it is important to understand the indications, risks, benefits, and alternatives for treatment in pregnancy. First, there are well-documented risks to the fetus if a woman with moderate to severe depression in pregnancy is left untreated. These risks include limited prenatal care, preterm labor, low infant birth weight, hypertensive disorders of pregnancy, and risk of exposure to illicit substances and alcohol.

After delivery, if the mother continues to be moderately to severely depressed or develops postpartum depression, additional risks come into play. Risks to the newborn include attachment disorders between mother and infant, inability of the mother to identify and respond to newborn cues, and poor bonding. Later in childhood, affected children are at increased risk of behavioral and psychiatric disorders and their total IQ points may be affected. Based on this information, there are adequate data to illustrate the importance of intervention and initiation of treatment of depression in pregnancy.

Educating patients about risks of SSRIs
When reviewing risks of SSRIs for treatment of perinatal depression, the following perinatal risks should be reviewed with the patient: congenital malformations, persistent pulmonary hypertension of the neonate (PPHN), neonatal adaptation syndrome and cognitive/behavioral issues.

In the general population, 2% to 4% of neonates unexposed to prenatal antidepressants will be born with a congenital malformation versus 3% to 5% with such drug exposure. Thus, exposure to antidepressants does not
significantly increase the risk of congenital malformation.14,15

Risk of PPHN has been investigated in several studies. Chambers et al demonstrated the risk of PPHN in the general population, for neonates not exposed to antidepressants in pregnancy to be approximately 1 to 2/1000 and the risk in exposed neonates to be approximately 6 to 12/1000.16 A more recent study by Kallen shows the risk of exposed neonates to be approximately 1 to 6/1000.17 Again, this is very similar to the risk in unexposed neonates, thus there is less than 1% risk of PPPN in SSRI-exposed neonates.16,17

Neonatal adaptation syndrome has been well studied and researchers have documented up to a 30% risk of development in the neonate who is exposed to antidepressants in pregnancy to be approximately 1 to 2/1000 and the risk in exposed neonates to be approximately 6 to 12/1000.16 A more recent study by Kallen shows the risk of exposed neonates to be approximately 1 to 6/1000.17 Again, this is very similar to the risk in unexposed neonates, thus there is less than 1% risk of PPPN in SSRI-exposed neonates.16,17

Medication selection

Table 1 lists options for pharmacologic management of perinatal depression.

TABLE 1 Options for pharmacologic management of perinatal depression

<table>
<thead>
<tr>
<th>Medication</th>
<th>Starting dose</th>
<th>Target dose</th>
<th>Maximum dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sertraline</td>
<td>50 mg</td>
<td>150 mg</td>
<td>200 mg</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>10 mg</td>
<td>40 mg</td>
<td>60 mg</td>
</tr>
<tr>
<td>Citalopram</td>
<td>5 mg</td>
<td>40 mg</td>
<td>40 mg</td>
</tr>
<tr>
<td>Escitalopram</td>
<td>10 mg</td>
<td>20 mg</td>
<td>20 mg</td>
</tr>
<tr>
<td>Mirtazapine</td>
<td>15 mg</td>
<td>30 mg</td>
<td>45 mg</td>
</tr>
<tr>
<td>Venlafaxine</td>
<td>75 mg</td>
<td>150 mg</td>
<td>225 mg</td>
</tr>
<tr>
<td>Bupropion</td>
<td>75 mg</td>
<td>150 mg</td>
<td>300 mg</td>
</tr>
</tbody>
</table>

Of SSRIs, fluoxetine and sertraline have been extensively studied and escitalopram and citalopram have also been well studied, all of which are believed to be safe in pregnancy. Paroxetine, also an SSRI, has been shown in some studies to possibly increase risk of cardiac malformations, however, in further study, the risk has been shown to be negligible. Despite this, unless necessary, other SSRIs should be initiated instead of paroxetine.

In women who are naïve to antidepressants, initiation of sertraline should be considered as first line because of the lack of active metabolites and 24-hour half-life. Medications should be titrated serially to achieve remission of symptoms. All antidepressants take 4 to 6 weeks to show effect, thus it is important to recognize symptoms and diagnose the mood disorder so that treatment can be initiated as early as possible. Importantly, before prescribing an antidepressant, women should always be screened for bipolar disorder because using these drugs alone in such patients could precipitate a manic episode.

It bears mentioning that women with a history of depression who are on psychiatric medications at the time of pregnancy confirmation should not stop have a history of significant depression or anxiety that failed to respond to multiple medications. Although much of the data available are related to SSRI use in pregnancy, there is sufficient research on other classes of antidepressants such as serotonin-norepinephrine reuptake inhibitors and atypical antidepressants to show adequate safety data.24,26 Again, the goal is to help the woman achieve remission as quickly and effectively as possible.

Of SSRIs, fluoxetine and sertraline have been extensively studied and escitalopram and citalopram have also been well studied, all of which are believed to be safe in pregnancy. Paroxetine, also an SSRI, has been shown in some studies to possibly increase risk of cardiac malformations, however, in further study, the risk has been shown to be negligible. Despite this, unless necessary, other SSRIs should be initiated instead of paroxetine.

In women who are naïve to antidepressants, initiation of sertraline should be considered as first line because of the lack of active metabolites and 24-hour half-life. Medications should be titrated serially to achieve remission of symptoms. All antidepressants take 4 to 6 weeks to show effect, thus it is important to recognize symptoms and diagnose the mood disorder so that treatment can be initiated as early as possible. Importantly, before prescribing an antidepressant, women should always be screened for bipolar disorder because using these drugs alone in such patients could precipitate a manic episode.

It bears mentioning that women with a history of depression who are on psychiatric medications at the time of pregnancy confirmation should not stop
Infertility issues are on the rise in the United States. What are the most common? When are general ob/gyns equipped to manage patients on their own; when should they refer to specialists instead?

In this supplement, two infertility experts discuss diagnosis and treatment of abnormal uterine pathology during infertility work-ups, as well as tools that are available to providers, particularly for hysteroscopy.

Read this supplement at: contemporaryobgyn.net/hysteroscopy
Addressing the sexual health needs of patients with arthritis

This article offers ob/gyns tips to help patients feel more comfortable discussing issues related to sexual function.

by KIM A. GORGENS, PH.D., ABPP

What is sexual health?
Sexual health is the broadest category of sex, sexuality, intimacy and sexual activity. The World Health Organization defines sexual health as “a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.” Sexual function is the single facet of the human condition that is equal parts physical, psychological, relational, and cultural. It is somatic, emotional, intellectual, social and sometimes even spiritual. On the other end side of that experience is sexual dysfunction, a disruption of any component of sexual activity. That disruption can include sexual frustration, painful sex, or reduced sexual pleasure, all of which are overrepresented among patients with chronic disease, especially chronic inflammatory diseases.

People with rheumatic diseases often have pain, restricted joint movement, fatigue and may also experience mood disturbances and a deterioration in self-esteem. Any one of those problems can cause sexual dysfunction. The percentage of arthritic patients who experience sexual dysfunction is reported to range from 31% to 76%. A recent study published in *Rheumatology International* found that 57% of patients with rheumatoid arthritis report difficulty with sexual intercourse. Those same high rates of sexual dysfunction are also reported among patients in Mexico and Brazil. And the shockingly high prevalence rates aren’t limited to western countries with more progressive sexual norms. A recent study in Taiwan reported the prevalence of sexual dysfunction among female arthritis patients to be 67%. In Persia, 53% of women with arthritic conditions report sexual dysfunction and in conservative Malay culture, sexual dysfunction including problems with libido, arousal, orgasm and satisfaction are more common among women with rheumatoid arthritis than in healthy controls. The same is true in Morocco and Egypt. In that latter study with Egyptian patients, problems with orgasm, arousal, and satisfaction were the most common reports.

The actual frequency of sexual dysfunction is likely even higher. In research, sexual problems are defined differently from study to study. Some

---

DR. GORGENS is clinical professor and Director of Continuing Education, Graduate School of Professional Psychology, University of Denver. For more articles from Dr. Gorgens, visit her blog “Brains Matter.”
settings query “sexual difficulties” and others assess the frequency of specific types of sexual dysfunction. And, in actual clinical practice, sexual dysfunction is often underdiagnosed because patients decline to report the problem because they are ashamed or frustrated and they also fail to report the problem when they aren’t asked about it. In fact, one study reported that 66% of patients were never asked about the impact of arthritis on their sex lives. 12

Why is sexual dysfunction so common here?
The impact of chronic inflammatory disease on sexual function may seem obvious but it is poorly understood. Pain, morning stiffness, joint swelling and fatigue can lead to a decreased sexual interest and can inhibit actual intercourse. 13 Drugs used in the treatment of arthritis conditions can also cause sexual dysfunction (e.g., DMARDS, methotrexate, hydroxychloroquine, and sulfasalazine). And common medications that treat mood disorders or whose side effects contribute to depression are also implicated in a loss of libido and loss of sexual satisfaction (e.g., corticosteroids, tricyclic antidepressants, serotonin reuptake inhibitors). 14 These psychological contributors to sexual dysfunction are paramount. Depression, altered body image, poor performance in daily physical activities and worries about partner interest are all directly related to sexual dysfunction. Patients who have been exposed to physical or sexual trauma are especially vulnerable to sexual dysfunction.

As to the different types of sexual dysfunction, there are three principal categories. Primary sexual dysfunction refers to impaired libido, poor lubrication, and inability to orgasm. Secondary sexual dysfunction refers to physical limitations, such as joint pain or limited mobility, that affect the ability to engage in or enjoy sexual activity. Tertiary sexual dysfunction refers directly the impact of the patient’s psychology (e.g., shame and guilt).

You have to go there
In traditional healthcare settings, all manner of measurements are recorded: clinical parameters, functional classifications/activities of daily living, disease activity, articular index, hand grip, laboratory values, x-rays and objective measures of mental status and depression.

Sexual functioning (dysfunction or otherwise) isn’t part of traditional intake questionnaires or screening tools used to assess physical function or quality of life but it is imperative that health professionals invite conversations about sexual function.

Still, most healthcare professionals avoid it altogether. A 2013 study of healthcare professional’s reluctance to address sex identified 19 themes relating to lack of experience, fear about “opening up a can of worms,” lack of time/resources/training, worry about causing offense, personal discomfort, and a lack of awareness about the frequency of sexual problems. 15 Some areas with particular hesitation included addressing the sexuality of an opposite-gender patient, of black and ethnic minority groups, of older and non-heterosexual patients, and of patients with cognitive impairments. 16 And, in an increasingly interdisciplinary practice landscape, it is also easy to assume another provider will address sex. Surprisingly, even ob/gyns often fail to ask about sexual function. In one large study, 60% of ob/gyns failed to routinely ask about sexual problems. Even fewer asked about sexual satisfaction, pleasure with sexual activity, or sexual orientation/identity. 16 On the latter point, a 2008 study reported that only one provider in a sample of 81 physicians routinely asked their lesbian, gay, bisexual, and transgender patients about their sexual function. 17

How to go there
One of the best clinical conceptualizations of sexual function is a sex-positive approach which encourages professionals to attend to both dysfunction and the capacity for pleasure. 18, 19 There are some hallmark publications to frame this discussion. Panush, Mihai-lescu, Gornisiewicz and Sutaria adapted the PLISSIT model (permission, limited information, specific strategies and intensive therapy) for use with arthritis patients. 20 In the general PLISSIT model, the first level is permission, which involves giving your patient permission to broach the topic, to change their lifestyle or to get help. Permission includes questioning the patient about her sexual dysfunction and inviting a dialogue with the patient’s partner if that applies. The second level is limited information, where patients are provided with limited and specific information. The third level is specific suggestions, where the healthcare professional makes sug-
gestions to address the patient’s specific sexual concern (e.g., recommending specific activities, medications, or making outside referrals).

As to the management of sexual dysfunction, there are a few contemporary models to guide physicians and medical teams. A 2014 review by Tristano provides specific treatment recommendations for the causes primary sexual dysfunction and an English-language translation of a review by De Almeida, Ferreira, Kurizky, Muniz, and Da Mota features a multidisciplinary perspective for assessment and treatment and a useful series of visual guides/handouts for sexual positioning.13, 21

Your homework
With these guides, handouts, and mnemonics, professionals should feel equipped to ‘go there’ and invite conversations with their patients about sexual function and that alone will contribute to a vast improvement in patient experience and well-being. That conversation though, is a single step towards changing a healthcare culture that fails to encourage professionals to have this conversation and may even suppress the initiative.

Your responsibility for culture change includes a few imperatives. The first is a self-reflective assessment of your own beliefs, taking careful stock of your hesitations, assumptions and bias. Review and challenge those constructs with colleagues and mentors and seek out professional (and/or personal) consultation from experts in sexual health and dysfunction. Your second responsibility is to create the kind of practice and healthcare culture where sex is spoken. Some settings hang a “SEX IS SPOKEN HERE” sign but it is otherwise more subtle but no less powerful.

Add sexual health questions to your patient self-report forms (alongside symptom inventories or HIPAA forms), add that query to your intake assessment and to your routine re-evaluations. The aim isn’t to have an in-depth conversation with *every single* patient but to send a message that you are willing to field these questions or concerns.

Planned Parenthood, arguably the experts in sex education, calls this making yourself “askable.” And perhaps your most important responsibility is to be OK with not knowing the answers but to make the investigation and your commitment to it, plain to the patient. Show your patients how and where you find those answers and that you are willing to do so. The value is more often in seeing you puzzle it out (an alternate version of the adage about “teach a man to fish” comes to mind). All told, the cost of desexualizing patients is counted in patient satisfaction but also in health outcomes.

DISCLOSURES The author reports no potential conflicts of interest with regard to this article.

FROM THE PAGES OF contemporaryobgyn.net/AddressSexualHealth

Permission consists of questioning the patient about his/her sexual dysfunction, taking the liberty and showing openness to dialogue. The doctor must show the patient that his/her sexual problems can be mitigated. Furthermore, it is essential that the doctor encourages the dialogue with the patient’s partner, due to his/her need to be aware of the difficulties of the couple.

The second step is to search and provide information about sexual dysfunction. At this stage, one should establish the cause of the problem – lack of libido, pain, fatigue, vaginal dryness, anxiety, fear of not having a good performance or not satisfying the partner are possible causes.

The third phase is to develop specific strategies for each problem. Low sexual desire can be circumvented by replacing medications, psychotherapy and stress reduction. Transdermal testosterone may be used in women with low levels of this hormone or in those undergoing surgical menopause. As to vaginal dryness, lubricating oils or intravaginal estrogen creams may be used. With regard to pain and fatigue, the practice of different sexual positions, resting before intercourse and the use of muscle relaxants or painkillers are recommended. The use of supports in the joints helps in maintaining the sexual positions; on the other hand, heat in the form of compresses reduces joint stiffness. It is recommended, though, to take a warm bath before intercourse, to achieve muscular relaxation.21
Hubris

A resident is reminded that while mistakes are never good, sometimes they can be an unfortunate necessity for keeping his level of confidence in check.

by LUKE BURNS, MD

No tool better personifies the surgeon than the scalpel. It’s the only instrument an individual can legally plunge into the skin of another person in a room full of observers. It’s hard not to feel an electric energy every time the room falls quiet and the attending says, “The knife to Dr. Burns, please.” Holding the instrument like a pencil, I slowly etch its blade into the skin, cognizant that I am tattooing the patient, scarring her for life. A nurse behind me yells, “incision!” marking the beginning of the case, the first step into the unsealing of the abdominal cavity.

After that dramatic entrance, the truth is that the scalpel is usually put away and rarely makes another appearance throughout the rest of a procedure. Most surgeries continue with electrocautery, scissors or even blunt dissection with gloved fingers. The ultra-sharp blade of the scalpel is far too dangerous to use anywhere beyond the first few layers of skin.

By the end of my first year of residency, after opening the skin on numerous cesarean sections, postpartum tubal ligations and laparoscopic oophorectomies, I felt fairly confident wielding a scalpel. I had also used it to marsupialize Bartholin cysts, excise post-radiation tissue and even drain an abscess on someone’s forearm.

And then came the final day of my intern year, when I was standing in the OR, scalpel poised above the patient’s skin. It was the end of a long day of laparoscopic surgeries and I was working with one of my favorite attendings. She was new to her job, fresh out of residency and, like me, had just finished her own difficult year of uncertainty and self-doubt.

Something in the attending’s voice when she said “That’s way too deep,” made my breath catch.

While we maintained a professional work ethic in the OR, we were friends outside of work and I felt more at ease with her than I did with other attendings.

Our last case was an elective laparoscopic salpingectomy. At my institution, most surgeons start the surgery with a 5-mm nick in the bellybutton with a scalpel. It’s meant to be quick and shallow, just wide enough to accommodate a camera port.

My attending gestured for me to begin, and I placed the tip of the knife into the patient’s navel—“incision!”—then sliced carefully toward the pubic bone. But something felt different. Instead of the rubbery firmness I had come to expect with epidermis, the tissue was soft and yielding. It was like dragging a spoon through pudding and, before I knew what had happened, half the blade had gone beneath the surface.

Something in the attending’s voice when she said, “That’s way too deep,” made my breath catch. Then she paused and told me to place the Veress
This was it, my worst nightmare. A patient had come in for an elective procedure and I’d thrust a knife so deep into her belly that I’d cut into her intestines.

My attending managed to crack a smile, but I was so shaken that I could barely hold my instruments. We finished up the rest of the case without issue, took another final survey of the abdomen, and closed the patient’s incisions. Later, when I shouted out the attending in the physician’s workroom wanting to debrief, I felt like bursting into tears. What went wrong?

She smiled and said, “Simple. You made a classic second-year resident mistake.”

She turned to me and explained what she meant. “When you first held a scalpel you were too scared to go deeper than a few nanometers. But as the year has worn on, as you built your confidence, you started cutting deeper and deeper. And today you went too deep.”

Seeing that I was upset and not quite convinced, the attending reached out her arm and placed it gently on my shoulder. “You’re not a bad doctor. Believe it or not, none of the attendings you meet were born in scrubs as gynecological surgeons. We had to start from the bottom. We had to make mistakes. And we had to avoid hubris.”

Despite the confidence in our intraoperative assessment, the attending later told me she called the patient after the surgery every day for a week. The patient, pleased but a little bit surprised by the attention she was getting from her surgeon, made a full recovery from her surgery. Her bowel was fine, uninjured, and we never found an explanation for the ominous hiss of air that came from within the abdomen.

Of course, the next time I operated, I was back to scraping nanometers off the surface with my scalpel. The next attending admonished me for not committing to a deeper incision, saying I should be confident enough now to press harder with the knife. But I had learned my lesson.

My intern year was a bewildering experience, an indescribable amalgamation of joy and fear and terror. I can hardly remember most of it. But surviving it had made me begin to feel invincible. After that day in the OR, I feel vulnerable again, and, more important, human. As I begin to adapt to more responsibility, I raise my own self-expectations. But I also anticipate more errors, more mistakes, more lapses in judgement. I need to learn to forgive myself and to seek wisdom from those, like my attending, who have been there before. I am no longer afraid to take the knife when it is handed to me. I just have a greater respect for the scars it might leave behind.
**Cesarean scar pregnancy**

Trasound, laparoscopy was performed prior to HSC to dissect bladder peritoneum from the lower uterine segment to attempt to remove the bladder from the site of surgical management and decrease risk of injury. In this case series, 44 patients were successfully treated with removal of products of conception.

**Uterine artery embolization**

Uterine artery embolization (UAE) has been chosen by providers as a first-line approach in managing CSP to theoretically decrease risk of hemorrhage before ultimate management with surgery. In the event that UAE is considered for treatment of a CSP, consideration should be given to a patient’s plans for future fertility because information is limited on fertility after the procedure.

**Double-balloon catheter**

In a small case series, a double uterine balloon was presented as a minimally invasive option for managing CSP. This technique is novel and appears to have very high success rates overall. Briefly, a double balloon catheter was placed into the uterus under ultrasound guidance. Each balloon was inflated, with the lower uterine segment balloon placed to compress the CSP. The patient was then appropriately monitored and returned over the next few days for reevaluation with ultrasound. Once embryonic cardiac activity had ceased, the catheter was removed. With this procedure, treatment of CSP was successful and neither medication or dilation and curettage was needed in the published case series.

**Medication**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methotrexate</td>
<td>60 mg intrasac</td>
</tr>
<tr>
<td>Potassium chloride (KCl)</td>
<td>1 or 2 meq/mL (up to 5 meq/L)</td>
</tr>
<tr>
<td>Hypertonic glucose 50%</td>
<td>3 mL intrasac</td>
</tr>
<tr>
<td>Crystalline trichosanthin</td>
<td>1.2 mg intracervical</td>
</tr>
</tbody>
</table>

**Hysterectomy**

Occasionally, patients fail to respond to all the above-mentioned procedures or they have severe abdominal pain (suspicious for uterine rupture) with bleeding. In these cases, hysterectomy should be considered (Figure 4).

**Fertility after CSP**

Very little information exists with which to guide patients with CSP about future fertility. In a few case series, patients with CSP have undergone scar resection. The procedure has been performed with laparoscopic excision, CO₂ laser, or ultrasound knife, with suture reapproximation of the myometrium afterwards in all cases. Data are limited regarding fertility after these procedures, but all patients who did achieve fecundity appeared to deliver via planned cesarean.

In a case series from Israel, eight of 18 patients with CSP treated with unclear methods went on to become pregnant again. Two of the eight ended up with a repeat CSP, for an incidence of 25%. The remaining six patients all had cesarean deliveries, four of which were uncomplicated and two emergent. The reasons for the emergent cesareans were placental abruption at 34 weeks’ gestation in one case and nonreassuring fetal status at 41 weeks in the other case.

Currently there is no evidence to indicate that a pregnancy has an affinity to locate in the cesarean delivery scar. Given the unpredictability of CSP, it is important to offer patients who have received treatment a very early ultrasound in their next pregnancy to ensure there is no recurrence. Outcomes of pregnancies in women previously treated for CSP are unclear.

**Conclusion**

The multiple challenges associated with managing a suspected CSP start with identification of the abnormal pregnancy. For best clinical outcomes, once a CSP is diagnosed, the following should be prioritized: (1) facilitating a multidisciplinary discussion to create an individualized treatment plan; (2) early gestational termination; and (3) disrupting trophoblastic invasion prior to surgical management. CSP is a complicated medical condition, but possible adverse outcomes can be avoided with a considerate approach to treatment.

**DISCLOSURES**

The authors report no potential conflicts of interest with regard to this article.

FOR REFERENCES VISIT contemporaryobgyn.net/CesareanScarPregnancy
Non-healing vulvar ulcerations

For pregnant women who are severely depressed or at danger of self-harm through neglect or active thoughts of self-harm, more rapid treatment may be required. Electroconvulsive therapy (ECT) is a well-studied intervention that has been shown to quickly improve symptomatology and advance women towards remission. Ideally, ECT is performed in the second trimester, but it can be done in all trimesters if needed. ECT should not significantly increase risk of preterm delivery or cause non-reassuring fetal heart rate tracings. Typically, ECT is performed three times weekly; patients typically receive four to 12 treatments with the option of maintenance treatment on a once-weekly or once-monthly basis.

Conclusion
Identification and treatment of perinatal depression can positively affect a woman's pregnancy and the health of her offspring. Women should be screened for perinatal depression at least once in pregnancy and again in the postpartum period. Screening tools such as the EPDS and PHQ-9 can detect at-risk patients and aid with expedition of treatment. Resources for patient referral are valuable in the physician’s armamentarium, but may be limited due to lack of availability of providers, transportation-related issues, and cost. Educating ob/gyns about proper diagnosis and management of perinatal depression is key to ensuring that they feel confident and comfortable about initiating treatment for this condition.

Mood disorders

medications without speaking first to their psychiatrist or obstetrician.

Finally, care should be given to adolescent and young adult women when beginning antidepressants due to the black box warning showing possible increased risk of suicidality in this age group with initiation of SSRIs. It is imperative that all women—especially younger women—be seen within 1 to 2 weeks of medication initiation for follow-up. In addition, they should all be counselled to notify the clinician about any adverse effects associated with initiation of pharmacologic therapy.

Electroconvulsive therapy
For pregnant women who are severely depressed or at danger of self-harm through neglect or active thoughts of self-harm, more rapid treatment may be required. Electroconvulsive therapy (ECT) is a well-studied intervention that has been shown to quickly improve symptomatology and advance women towards remission. Ideally, ECT is performed in the second trimester, but it can be done in all trimesters if needed. ECT should not significantly increase risk of preterm delivery or cause non-reassuring fetal heart rate tracings. Typically, ECT is performed three times weekly; patients typically receive four to 12 treatments with the option of maintenance treatment on a once-weekly or once-monthly basis.

Conclusion
Identification and treatment of perinatal depression can positively affect a woman’s pregnancy and the health of her offspring. Women should be screened for perinatal depression at least once in pregnancy and again in the postpartum period. Screening tools such as the EPDS and PHQ-9 can detect at-risk patients and aid with expedition of treatment. Resources for patient referral are valuable in the physician’s armamentarium, but may be limited due to lack of availability of providers, transportation-related issues, and cost. Educating ob/gyns about proper diagnosis and management of perinatal depression is key to ensuring that they feel confident and comfortable about initiating treatment for this condition.

The author reports no potential conflicts of interest with regard to this article.

DISCLOSURES

For references visit contemporaryobgyn.net/PerinatalDepression

PATIENT HANDOUT: In the United States, the Edinburgh Postnatal Depression Scale (EPDS) is the validated screening tool for postpartum depression most commonly used in current clinical practice. It takes approximately 5 minutes to complete and has a high sensitivity and specificity for depression diagnosis. A cut-off score of 13 is a very reliable indicator of postpartum depression. Find a copy of the Edinburgh Postnatal Depression Scale patient questionnaire on contemporaryobgyn.net/PostnatalDepression
Ever notice a tendency to focus more on what’s wrong than what’s right? To notice what people do wrong more than what they do well? Or to offer criticism or advice more than positive appreciation?

Well, you are not alone: Our brains are hardwired for a negativity bias. That means that negative experiences and information grab more of our attention, are more memorable and their effects last longer than positive experiences. At the end of the day, it’s the negative experiences that we remember more than the positive ones.

The negativity bias not only affects how we feel, it also impacts work culture and patient care. Let’s first look at its implications on the workplace.

If people are more strongly impacted by the negative than the positive AND if we tend to notice the negative more, then people are probably getting more criticism or “helpful” advice (which, when unsolicited, is perceived as criticism) than they are receiving appreciation or positive acknowledgments.

This is what I consider low-hanging fruit for improving interactions at work. We know that it takes about eight or nine positives to counteract the negativity bias. By giving employees specific and genuine recognition for a job well done, we can shift the workplace culture to one of greater collaboration and appreciation.

And best of all, it’s easy and free. Tell people what specific behaviors they are doing or have done that made a positive impact. Recognition or appreciation is rewarding to the brain. What’s more, anything that is rewarding tends to be repeated. Not only does positive feedback make people feel good, it reinforces behaviors that we want to be reinforced, a win-win.

An additional benefit of mitigating the negativity bias is that when people feel appreciated by others, they are more likely to want to collaborate and improve patient safety and outcomes:

- Build a culture that rewards the reporting and discussion of medical errors and reframes them as learning opportunities. Rewards can take the form of verbal and/or written recognition. There might be a “case of the month,” where managers identify a case or cases with the greatest learning opportunity.
- Provide a system that encourages reporting of near misses, which are also great learning opportunities.
- Ask questions focused on the what, why or how and less on the who when creating a learning opportunity from a near miss or an error. This will help minimize feelings of blame and shame.
- Delay submissions of incident reports until after you speak with the person who is identified in the report. This avoids the problem of many reporting systems where people write someone up rather than communicate directly.
- Augment learning from errors or mistakes with lots of acknowledgement of what people have done well. Remember, it takes about eight or nine positives to overcome the effects of the negativity bias.

CONTINUED ON PAGE 37
lieved that Dr. B performed the extraction and delivery of the infant at issue due to the adhesions noted. Following delivery, a bilateral tubal ligation was performed by Dr. B. No complications were encountered subsequent to the surgery and the mother was discharged without issue on June 15, 2015.

The mother’s postpartum visit on July 13, 2015, with Dr. B was unremarkable. No mention was made of the infant during this visit.

The birth records for the infant indicate that a moderate amount of meconium was encountered at the time of delivery and was aspirated with bulb and wall suction. She breathed immediately, cried spontaneously and had well-flexed muscle tone and a vigorous cry. Her Apgar scores were 9/9 at 1 and 5 minutes. The infant was transferred to the newborn nursery where she weighed 7 lb 7 oz and was 20.4 inches in length. Her head circumference was 36 cm. All admitting vital signs were normal and she passed stool and clear urine. The admitting exam by the resident and the pediatric attending physician was performed. No abnormalities were noted, and the neurologic portion of the exam noted normal range of motion in the infant’s neck; an intact right and left clavicle with no crepitus; no spinal curvature, hair tuft, or sacral dimple; five digits on all hands and feet with no digit fusion; and symmetrical movement in all extremities. It was also documented that the infant had normal muscle tone. The pediatric attending physician separately documented her exam, which also showed that there were no abnormalities of the hands, feet, spine, or hips. The neurologic exam showed a normal cry and suck, a normal right and left grasp, symmetrical movement in the extremities, no irritability, no hypo- or hypertonia, no jitteriness, and no paresis or paralysis on the right or left.

A nurse’s note made at 8:00 AM on June 14 showed that the infant’s body tone was flexed, normal, and appropriate for a newborn. Examination by the attending at 12:10 PM showed no change and the infant was clinically stable and bonding and feeding well, and established newborn care was continued. At 8:15 PM, the nurse again noted that the infant was moving all extremities. The nursing assessment the following morning was unchanged, and the infant was moving all extremities and was awake and alert.

The final pediatric attending exam, done before discharge on June 15, 2015, showed nothing changed from the prior exams, except for new findings of a cardiac murmur and decreased left arm movement. A cardiology consult at 2:00 PM showed that the infant was moving all four extremities equally with good tone and intact reflexes and that she was alert, awake, and had appropriate mental status for her age. An electrocardiogram was pending, but echocardiography showed a multi-fenestrated atrial septum with two to three small defects, but otherwise normal intracardiac anatomy. The pulmonary flow murmur was felt to likely be secondary to the multi-fenestrated atrial septum and because the small defects were within normal limits for the infant’s age, it was felt they would likely close spontaneously. As such, it was recommended that the infant follow up with cardiology in 1 year.

Clavicular x-ray performed at 3:24 PM revealed an intact left clavicle with no fracture, no osseous destruction, and no periostitis. The indication for the study was reported as “birth trauma.”

The infant later presented to Defendant Hospital on December 18, 2015, for a magnetic resonance imaging (MRI) of the cervical spine and brachial plexus. The diagnosis on admission was Bell’s palsy. Physical exam indicated that the infant had appropriate mobility for her age and that she was moving all four extremities voluntarily or on command. The short stay form indicated that the

**Who’s at fault with a noncompliant patient?**

CONTINUED FROM PAGE 41

This case offers more of a legal than a medical lesson. By staying attuned to the failure to produce the requisite documentation affirming that the plaintiffs had properly vetted their claim under the law, and by applying constant pressure for compliance, we were able to get this specious claim discontinued at an early stage rather than putting all of the defendant physicians and hospital through protracted discovery. Early discussion of the case and analysis of the support in the literature for potential theories allowed us to take a firm posture in pressuring for proof of merit or dismissal.
Chief complaint was weakness of the left arm and left Erb’s Palsy following delivery by cesarean. Neurologic findings on the short stay form were left Erb’s Palsy and brachial plexus injury. The MRI revealed a normal cervical spine and left brachial plexus with no evidence of root evulsion, brachial plexus mass, or hematoma.

Allegations
Plaintiff alleged that defendants did not use proper care in their performance of cesarean delivery, resulting in a brachial plexus injury. Significantly, the plaintiff did not annex a Certificate of Merit to their Verified Complaint affirming that they had spoken to an expert who reviewed the records prior to commencement of the lawsuit and was willing to testify that there had been a departure or departures from standards of care sufficient to result in injury to the infant.

Discovery
The resident OB advised that he had never personally encountered a case of Erb’s Palsy occurring as a result of cesarean delivery, but he was aware of some literature that brachial plexus injury can occur, either as a result of in utero issues or at delivery. He stated that there is no strong science to back up the theories with regard to in utero development of Erb’s Palsy, but that there has been consideration of occurrences such as decreased oxygen to the fetus during pregnancy or positioning of the baby in utero causing stretching of the nerves in the neck. He doubted the mother’s non-compliance with her asthma medication or her severe chronic asthma could cause decreased oxygenation during the pregnancy sufficient to result in nerve ischemia.

Likewise, one of the delivering attendings opined that there are published case reports of brachial plexus injury occurring in association with cesarean delivery. These case reports, in his opinion, support a theory that brachial plexus injury can occur as natural sequelae of the birth process and is not always caused by shoulder dystocia. In this case, it was even more difficult to explain the injury because the plaintiff was not in active labor and the head was not engaged, thus the fetus had not experienced the propulsive forces of traveling down the birth canal.

Outcome
Secondary to pressure from our office to produce the aforementioned certificate of merit or suffer dismissal, opposing counsel, apparently unable to acquire an expert to support his theory, moved for dismissal of the infant’s claim, extinguishing his claim.

Negativity bias in medicine continued from page 35

Contribute. Their morale and engagement at work improves as well, making them more productive and effective.

Now let’s shift our focus to how the negativity bias impacts patient care. The negativity bias is alive and well in medicine. It starts in medical school where students are frequently exposed to teaching methods that create feelings of shame, ineptitude and incompetence. Early on in their careers, physicians learn both the importance of preventing and avoiding errors as well as the need for perfection.

And yet, we know that mistakes are inevitable. We also know that if we talk about them, we are more likely to prevent their recurrence. The problem is that healthcare workers often avoid acknowledging that an error has occurred. This is typically due to a culture where mistakes are accompanied by some form of punishment, and people often feel humiliated and blamed. Hospital settings can also perpetuate a culture where the negativity bias is enhanced with physician peer review committees and incident reporting systems.

We need a solution. We need to transform a culture of blame into a culture of learning, where the reporting of medical errors is welcomed because it serves as a teaching opportunity. Even the word “error” can sound daunting and intimidating. I encourage healthcare professionals to instead think of errors as learning opportunities to make it easier to talk about.

To paraphrase Alexander Pope, “To err is human, but to learn is divine.”

Catherine Hambley, PhD, is CEO of Brain-Based Strategies Consulting, where she specializes in executive coaching, leadership and team development and organizational transformation. Catherine works with medical professionals to create cultures of learning, collaboration and engagement.

FROM THE PAGES OF PHYSICIANS PRACTICE
Content Licensing for Every Marketing Strategy

Marketing solutions fit for:
Outdoor | Direct Mail | Print Advertising | Tradeshow/POP Displays | Social Media | Radio & TV

Leverage branded content from Contemporary OB/GYN to create a more powerful and sophisticated statement about your product, service, or company in your next marketing campaign. Contact Wright’s Media to find out more about how we can customize your acknowledgements and recognitions to enhance your marketing strategies.

For information, call Wright’s Media at 877.652.5295 or visit our website at www.wrightsmedia.com
The Department of Obstetrics and Gynecology at Penn State University College of Medicine, Milton S. Hershey Medical Center is an educational, research, and healthcare center that provides a wide variety of general women’s health care; gynecologic care; infertility, prenatal, and genetic counseling; obstetrics care; women’s gynecologic cancer care and research education in women’s health.

We are currently seeking qualified applicants for the following positions:

- Division Chief of Women’s Health
- General OB/GYN
- Maternal Fetal Medicine
- Gynecology Oncology
- Reproductive Endocrinology and Infertility

Located in a safe family-friendly setting, Hershey, PA, our local neighborhoods boast a reasonable cost of living whether you prefer a more suburban setting or thriving city rich in theater, arts, and culture. Known as the home of the Hershey chocolate bar, Hershey’s community is rich in history and offers an abundant range of outdoor activities, arts, and diverse experiences. We’re conveniently located within a short distance to major cities such as Philadelphia, Pittsburgh, NYC, Baltimore, and Washington, DC.

Approximately 78,000 outpatient visits a year
Over 2,000 deliveries a year
33 obstetrician-gynecologists on staff
Six divisions, offering care at five locations in central Pennsylvania
One of only four programs in the U.S. that provides live telesurgery partnerships for educational outreach

FOR MORE INFORMATION, PLEASE CONTACT:
Ashley Nippert, Physician Recruiter
Phone: (717) 531-0003 x320184
E-mail: anippert@pennstatehealth.psu.edu
Reach your target audience.

**Our audience.**

Women’s health professionals. Contact me today to place your ad.

**Joanna Shippoli**  
Account Manager  
440-891-2615  
jshippoli@mmhgroup.com

Place a recruitment ad in *Contemporary OB/GYN.*

Joanna Shippoli • National Account Manager, Healthcare Careers • 440-891-2615 • jshippoli@mmhgroup.com

**ADVERTISER INDEX**  
Companies featured in this issue

To obtain additional information about products and services advertised in this issue, use the contact information below.  
*This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.*

**HOLOGIC**  
Aptima Mgen ........................................................................................................................................................................................ 19  
HologicEd.com

Qual iFN ....................................................................................................................................................................................................... CV4  
www.hologic.com

**LABCORP** ................................................................................................................................................................................................... CV2  
www.labcorp.com

**UTAH**

Intermountain is frequently referenced nationally as one of the leaders in delivering high quality/low cost healthcare. Intermountain Healthcare needs OB/GYN's in multiple cities throughout Utah. Contact: Physician Recruiting, 800-888-3134, phsicianrecruit@imail.org, http://physicianjobsutah.org

**CALIFORNIA**

» Established ObGyn practice available  
» Beautiful area; across the street from hospital  
» Current ObGyn physician will split the rent and stay for the transition (1 to 2 years) so that you can take over the practice  
Please call 818 599 2258 or email schmoneobgyn@gmail.com
If a patient is noncompliant, can the ob/gyn be at fault?

When a plaintiff brings forth a specious claim, constant pressure from the defense is key.

Facts
The infant-plaintiff was the patient’s seventh pregnancy and fourth delivery. The mother’s obstetrical history was significant for six gestations with three term deliveries and two abortions. The first delivery was spontaneous vaginal at 39 weeks in 1999. The labor was complicated by macrosomia, the infant weighed 3,493 g. The neonatal course was complicated by shoulder dystocia, a brachial plexus injury, and Erb’s palsy. The second delivery, in 2002, was a cesarean done at 39 weeks due to the 3010-g infant’s breech position. No complications were noted. The third delivery, by elective cesarean in 2009, was also at 39 weeks with no complications.

The mother’s prenatal care for the pregnancy at issue was received at Defendant Hospital. Her history was significant for hypertension and chronic severe asthma, for which she had been hospitalized in 2012. At the first prenatal visit, in December 2014, she was age 35 and considered obese at 4’11” and 130 lb. She reported possible elevated blood pressures in her last pregnancy and postpartum hemorrhaging with her prior two cesarean deliveries.

The prenatal records show that the mother was noncompliant with her care recommendations and failed to appear for multiple follow-up visits, including missing the opportunity for prenatal serum screenings. She was also advised on multiple occasions to see a pulmonologist but did not do so until May 21, when she was sent directly to the labor and delivery triage for a pulmonary consult and maternal sonogram due to concern for uncontrolled asthma and inconsistent use of bronchodilators and montelukast. She also did not present on June 12 for her scheduled cesarean, and instead presented in labor after spontaneous rupture of membranes at 4:51 AM on June 13, 2015.

On June 13, the patient was admitted and seen in triage. Defendant A performed a vaginal examination and documented that the cervix was 2 cm dilated, 90% effaced, and the head was at -3 station. Presentation was vertex. The history of the patient’s prior deliveries was extensively documented in the records and it was noted that she was to be delivered by elective cesarean with no trial of labor and that a bilateral tubal ligation was to be performed at delivery.

The mother was seen by Dr. B shortly before being taken to the operating room for delivery at 6:21 AM. The records indicate that Dr. B performed the cesarean by a low segment transverse incision and that the infant’s presenting position was cephalic. The delivery note documents moderate adhesions encountered during the delivery, as well as the bladder being severely adhered to the lower uterine segment, which resulted in the incision being made as low as possible. No fetal anomalies were noted. Dr. B delivered the female infant “by the head” by “manual extraction” at 7:22 AM. Dr. C assisted during the delivery and be-

FOR MORE LEGALLY SPEAKING
TURN TO PAGE 36

Andrew I Kaplan, Esq is a partner at Aaronson, Rappaport, Feinstein & Deutsch, LLP in New York City, specializing in medical malpractice defense and healthcare litigation. This case was handled by one of his partners.
fFN + TVUS dramatically increases sPTB prediction

<table>
<thead>
<tr>
<th>Risk of sPTB &lt;7 days in patients with symptoms of preterm labor</th>
<th>CL &lt;30mm</th>
<th>~1 out of 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVUS Alone</td>
<td>CL &lt;30mm</td>
<td>~1 out of 10</td>
</tr>
<tr>
<td>TVUS + fFN</td>
<td>CL &lt;30mm + Negative fFN</td>
<td>~1 out of 2</td>
</tr>
<tr>
<td>TVUS + fFN</td>
<td>CL &lt;30mm + Positive fFN</td>
<td>~1 out of 2</td>
</tr>
</tbody>
</table>

Technology Matters:  
Next-Generation RNA-Based Diagnostics Improve Disease Detection

Authors:  
Erik Munson, PhD, D(ABMM)  
Assistant Professor, Clinical Laboratory Science  
Marquette University, College of Health Sciences  
Milwaukee, WI

Mark Spitzer, MD, FACOG  
Clinical Professor, Obstetrics and Gynecology  
Donald and Barbara Zucker School of Medicine at Hofstra/Northwell  
Lake Success, NY

Introduction
Molecular assays are rapidly becoming the standard of care in the diagnosis of many infectious gynecologic conditions as providers seek objective tools for guiding clinical practice. However, misconceptions surrounding these essential tools, such as understanding the attributes of assays that detect DNA versus RNA sequences, currently exist among clinicians. The capability to detect nucleic acid sequences, made possible by recent advancements in nucleic acid amplification tests (NAATs), has powerful clinical ramifications for the detection of infectious organisms as well as the identification of cervical cancer precursors. Clinicians can now diagnose patients with improved accuracy for numerous pathogens, including Mycoplasma genitalium, the organisms that are associated with bacterial vaginosis (BV) and vulvovaginal candidiasis (VVC), Trichomonas vaginalis (TC), and human papillomavirus (HPV). Aptima® assays, RNA-based molecular diagnostics, will be reviewed in this report.

Background and Benefits of NAATs
Stemming from their superior sensitivity and specificity compared to traditional microscopic techniques and quick turnaround time compared to culture, NAATs are currently recommended by the Centers for Disease Control and Prevention (CDC) to detect Neisseria gonorrhoeae, Chlamydia trachomatis, herpes simplex virus, and other gynecologic pathogens.1-3 NAATs can detect low-titer infections by amplifying DNA or RNA molecules by a million-fold within hours, improving diagnostic sensitivity and accuracy.4

The first NAAT was a DNA amplification method known as polymerase chain reaction (PCR) that was developed in the 1980s.4 PCR denatures a segment of DNA into two single-stranded DNA molecules and then rebuilds the double-stranded DNA via DNA polymerase.5 This process, resulting in a duplication of the original DNA, can be repeated, creating numerous copies of the target DNA. After amplification, nucleic acid hybridization is performed using a fluorescently-labeled probe that pairs with a sequence of interest, such as one unique to an infectious organism.5 An instrument then measures the amount of fluorescent signal emitted, which increases relative to the amount of the target pathogen present. Other types of NAATs are based on RNA amplification. Transcription-mediated amplification (TMA), one type of RNA amplification, follows a process similar to that of PCR but uses RNA sequences as the initial target.

Differentiating NAAT Technologies: The Aptima® System
Unlike other RNA-based NAAT methods, the Aptima® assays use magnetic microparticles to capture the hybridized target.6 The captured oligonucleotides, which are hybridized to the target RNA sequence, are drawn to
the side of the tube by magnets and separated from the rest of the specimen. After multiple washes to remove unbound material, including potentially interfering substances, just the hybridized target remains. The next step, target amplification, is performed using a reverse transcriptase and RNA polymerase. Finally, using a chemiluminescent marker, nucleic acid hybridization is performed, allowing for the detection of the specific RNA transcript. RNA-based NAAT assays can be used to detect ribosomal RNA (rRNA), a structural component of the ribosome of which there can be thousands of copies per cell. NAATs can also detect messenger RNA (mRNA), which is the precursor of proteins in the cell and can indicate not only the presence of a specific nucleotide sequence, but also that it is functional and may be contributing to a disease process.

**M. genitalium: Prevalence and Detection Challenges**

* M. genitalium, an underdiagnosed and undertreated genitourinary pathogen, has traditionally been difficult to diagnose. Culture of the organism can take up to 6 months. Gram stains, used to screen for other bacterial pathogens, are not useful given that *M. genitalium* lacks a cell wall. Although the CDC recommends diagnosis by NAAT, no US Food and Drug Administration (FDA)-cleared tests have been available until recently, leading to missed opportunities for diagnosis and treatment.

Data over the last decade have demonstrated that *M. genitalium* is not only more prevalent than previously thought, but a significant healthcare concern with long-term sequelae, similar to *C. trachomatis* or *N. gonorrhoeae*. Although prevalence is estimated at 0.8% to 4.1% among low-risk women, higher rates have been reported among high-risk patients presenting to sexually transmitted infection (STI) clinics.

Found in the epithelial cells of the genital and urinary tracts, *M. genitalium* is more prevalent than *N. gonorrhoeae* and just as common, if not more, than *C. trachomatis*. Figure 1 illustrates the prevalence of *M. genitalium* when compared to other common STIs. The referenced studies were performed in both symptomatic and asymptomatic men and women in diverse clinical sites, including family medicine, obstetrics and gynecology, family planning, public health, and STI clinics.

As most women infected with *M. genitalium* are asymptomatic, a sensitive test is essential. Without early diagnosis and treatment, these women are at risk for cervicitis, pelvic inflammatory disease (PID), infertility, preterm birth, and other adverse pregnancy outcomes. *M. genitalium* has been identified in up to 30% of women with clinical cervicitis, and up to 22% of women with pelvic inflammatory disease. As *M. genitalium* infections have similar symptoms as chlamydia or gonorrhea, empiric treatment with azithromycin frequently occurs, but suboptimal treatment can contribute to macrolide resistance and difficult-to-treat organisms.

**The Aptima® M. genitalium Assay**

In January 2019, the FDA approved the first in-vitro diagnostic assay for *M. genitalium*, the Aptima® M. genitalium assay, which detects rRNA. The Aptima® M. genitalium assay was shown to be both sensitive and specific for the detection of *M. genitalium* in a multicenter prospective trial of over 3,000 sexually active men and women. Up to four specimens were collected from each female (including urine, patient-collected vaginal, clinician-collected vaginal, and endocervical samples), and up to three specimens collected from each male (including urethral, penile meatal, and urine samples). All specimens were tested using the Aptima® M. genitalium assay as well as three alternate TMA assays to ensure validity. Patients were considered to be infected with *M. genitalium* if at least two alternate TMA assays resulted positive. Among females, vaginal swabs achieved a specificity of approximately 98% and sensitivity of 92% to 98%. Urine testing and endocervical swabs, while slightly less sensitive and specific, still resulted in acceptable accuracy. Another study, recently published in the *Journal of Clinical Microbiology*, revealed that the Aptima® M. genitalium assay achieved 100% sensitivity and 99.9% specificity in the detection of *M. genitalium*.

DNA testing methods have also been studied for the detection of *M. genitalium*, rRNA testing is preferable, as it is more sensitive at detecting infections with a low bacterial load. When compared to DNA, rRNA is much more abundant in the cell. Given that many *M. genitalium* infections are low titer and require a highly sensitive detection method, RNA-based assays are preferable to DNA-based assays. A 2017 study compared the Aptima® M. genitalium assay to both PCR testing and the SpeeDx DNA assay. While both RNA and DNA methods showed similar specificities, Aptima® testing achieved higher sensitivity over DNA PCR (100% versus 59.74% respectively), indicating that the use of DNA-based assays are more likely to result in missed diagnoses.

**Vaginitis Diagnosis via rRNA**

Just as the diagnostic accuracy of *M. genitalium* can be improved using rRNA detection, the diagnosis of infectious vaginitis can also be improved via rRNA testing methods. Using NAATs, rRNA from bacteria associated with BV and fungal organisms associated with yeast infections can be detected and quantified, ensuring an accurate diagnosis.
Vaginitis, defined as vaginal inflammation associated with vulvovaginal itching, burning, irritation, and discharge, remains one of the most frequent reasons women visit their gynecologists.26 These symptoms can lead to significant pain and sexual dysfunction, resulting in poor self-image.26 Common infectious causes of vaginitis, representing over 90% of cases, include BV, vulvovaginal candidiasis, and T. vaginalis.26,28 Among women with symptomatic vaginitis, 22% to 50% are diagnosed with BV, 17% to 39% with vulvovaginal candidiasis, and 4% to 35% with Trichomonas.27 As symptoms can be nonspecific and overlapping, clinical diagnosis alone is often insufficient. The CDC currently recommends NAAT for Trichomonas, given that the traditional wet mount and visualization of organisms is only about 50% sensitive.28 BV and vulvovaginal candidiasis are traditionally diagnosed clinically.

Similar to BV, the diagnosis of vulvovaginal candidiasis is typically performed in the office setting using microscopy via direct visualization of blastospheres or pseudohyphae on saline or 10% KOH microscopy.26 Up to 89% of cases are caused by Candida albicans.31 Candida glabrata, representing the majority of non-albicans infections, causes similar symptoms but is less likely to respond to azole treatment.26 As traditional methods of Candida vaginitis diagnosis do not discriminate between species, these women may experience persistent or recurrent symptoms. Although species evaluation can be performed using a yeast culture, this can take up to 7 days.26

However, NAAT technology using rRNA has recently become available, promising to improve the sensitivity and specificity in diagnosing these infections.

The Aptima® BV and CV/TV Assays
The Aptima® BV assay is a NAAT that detects rRNA from anaerobic bacteria commonly implicated in BV, such as G. vaginalis and A. vaginae, as well as three species of Lactobacillus (L. crispatus, L. jensenii, and L. gasseri).7 Using the assay software, an algorithm then calculates the relative abundance of healthy lactobacillus to pathogenic bacteria in order to diagnose BV.7 Test results are reported as positive, negative, or invalid for BV.7 The Aptima CV/TV assay detects a Candida spp group (C. albians, C. tropicalis, C. parapsilosis, and C. dubliniensis), C. glabrata, and Trichomonas vaginalis.

Both the Aptima® BV and CV/TV assays were evaluated in prospective, multicenter studies of over 1,000 women with symptomatic vaginitis, using traditional diagnostic methods for reference testing.7,8 As shown in Table 1, both tests were found to be highly sensitive and specific for the detection of both BV and vaginal Candida spp. Looking at C. glabrata, specificity was even further improved (Table 1).

In addition to the detection of Candida, the Aptima® CV/TV assay also detects T. vaginalis, another common cause of vaginitis.8 T. vaginalis is a sexually transmitted pathogen that leads to similar symptoms as BV and vulvovaginal candidiasis. In addition, infection has been associated with an increased risk of HIV acquisition, prolonged HPV infection, and increased risk of concurrent STIs.8 Traditional microscopic wet mount is only 50% sensitive for the detection of Trichomonas.26 Therefore, the CDC currently recommends NAAT for the diagnosis of this pathogen.26 The Aptima® CV/TV assay uses the same CDC-recommended assay as is currently offered as a standalone Trichomonas assay. Using the Aptima® assays, the three main infectious causes of vaginitis can be identified with improved specificity and sensitivity over traditional microscopic diagnostic methods.

Cervical Cancer Screening via mRNA
Improved cervical cancer screening has also been made possible via the detection of HPV with RNA-based technology. Given that high-risk HPV subtypes are responsible for most cervical cancer cases, expert organizations, such as the American College of Obstetricians and Gynecologists (ACOG) and the Society of Gynecologic Oncologists (SGO), now recommend HPV screening for all women over 30.32,33 Screening can be performed using DNA or RNA detection methods. Although DNA testing methods are acceptable, the presence of HPV DNA only indicates that the virus is present. It does not distinguish between active disease with oncogenic potential verses an infection which is likely to be cleared by the immune system.34–36 Alternatively, an RNA-based assay detects messenger RNA, which is produced after the HPV DNA integrates into the host genome, indicating an active infection with true oncogenic potential.34–36

The Aptima® HPV Assay
Currently, six HPV tests are approved for cervical cancer screening by the FDA.37,38 Five of these detect DNA; one, the Aptima® HPV assay, detects HPV mRNA, including 14 high-risk types of HPV.37 While all of the available HPV detection assays are highly sensitive and minimize false negatives, the HPV RNA detection assay exhibits a higher specificity, indicating that when a positive infection is detected, it is more likely to correlate with clinically-relevant cervical disease.39–58

The largest trial to date performed on the Aptima® HPV mRNA test was the CLEAR trial, which included over 11,000 women.39 The study consisted of two arms: women with atypical squamous cells of undetermined

---

### Table 1: Sensitivities and Specificities for the Aptima® Vaginitis Assays7,8

<table>
<thead>
<tr>
<th>Assay</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinician-Collected Swab</td>
<td>95%</td>
<td>89.6%</td>
</tr>
<tr>
<td>Patient-Collected Swab</td>
<td>97.3%</td>
<td>85.8%</td>
</tr>
<tr>
<td>Candida species (general)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinician-Collected Swab</td>
<td>94.5%</td>
<td>94.2%</td>
</tr>
<tr>
<td>Patient-Collected Swab</td>
<td>94.4%</td>
<td>90.9%</td>
</tr>
<tr>
<td>Candida glabrata</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinician-Collected Swab</td>
<td>94.3%</td>
<td>99.1%</td>
</tr>
<tr>
<td>Patient-Collected Swab</td>
<td>88.9%</td>
<td>98.6%</td>
</tr>
</tbody>
</table>
significance (ASCUS) and women negative for intraepithelial malignancy (NILM) on routine cytologic examination. Women with an ASCUS result were referred for colposcopy while those with negative cytology underwent colposcopy, but only if Aptima® testing was positive. Researchers concluded that, when compared to HPV DNA testing methods, the Aptima® HPV assay had similar sensitivity and superior specificity for the detection of CIN2 and CIN3. Since the CLEAR trial, numerous studies have confirmed these findings.

Trials have also demonstrated that results from HPV mRNA detection are equivalent to the DNA-based assays for detecting moderate to severe cervical dysplasia up to 7 years after baseline testing (summarized in Table 2). By reducing false-positive screening tests, clinicians can reduce unnecessary colposcopies, decrease patient anxiety, and improve patient quality of life.

### Table 2: Long-Term Equivalency of HPV mRNA Detection Compared to DNA-Based Assays

<table>
<thead>
<tr>
<th>Study</th>
<th>Screening Population</th>
<th># Years of Follow-Up</th>
<th>Risk of CIN2+ Following Baseline HPV mRNA-</th>
<th>Risk of CIN2+ Following Baseline HPV DNA-</th>
<th>Statistically Significant Difference?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reid et al. CLEAR study</td>
<td>n=10,509</td>
<td>3</td>
<td>0.23%</td>
<td>0.26%</td>
<td>No</td>
</tr>
<tr>
<td>Cook et al. FOCAL study</td>
<td>n=3,476</td>
<td>4</td>
<td>0.53%</td>
<td>0.56%</td>
<td>No</td>
</tr>
<tr>
<td>Iftner et al. GAST study</td>
<td>n=10,040</td>
<td>6</td>
<td>0.62%</td>
<td>0.47%</td>
<td>No</td>
</tr>
<tr>
<td>Forslund et al.</td>
<td>n=65,911</td>
<td>7</td>
<td>0.16% for CIN3+</td>
<td>0.12% for CIN3+</td>
<td>No</td>
</tr>
</tbody>
</table>

**Conclusion**

RNA-based testing modalities represent an improvement over clinical and microscopic assessments as well as DNA assays, both in the detection of infectious organisms and the identification of cervical cancer precursors. The high sensitivity of RNA detection methods ensures that infections are diagnosed and treated, while the high specificity of these methods prevents patients from being subjected to unnecessary treatment.

Emerging NAAT technologies have enabled numerous RNA amplification techniques to be utilized in women’s health, including those used for the detection of *M. genitalium*, BV, vulvovaginal candidiasis, *T. vaginalis*, and HPV. With advanced RNA-based diagnostics, such as the Aptima® assays reviewed above, infectious organisms can be identified and treated earlier, preventing long-term sequelae and patient suffering while minimizing false-positive results. Using these tools, clinicians can feel confident they are achieving accurate diagnoses and providing optimal patient care.

---

**Authors’ Biographies**

**Erik Munson, PhD, D(ABMM)**

Erik Munson is affiliated with the College of Health Sciences at Marquette University in Milwaukee, Wisconsin. Dr. Munson completed postdoctoral training at the Wisconsin State Laboratory of Hygiene and the University of Iowa Hospitals and Clinics. He has attained diplomate status with the American Board of Medical Microbiology. Dr. Munson and his staff have published peer-reviewed manuscripts with respect to molecular diagnostics of STI pathogens, optimization of FDA-cleared assays, and local surveys of antimicrobial resistance. Dr. Munson has served as past Chair of American Society for Microbiology Division V and currently is associate editor for the *Journal of Clinical Microbiology*.

**Mark Spitzer, MD, FACOG**

Dr. Mark Spitzer is Clinical Professor of Obstetrics and Gynecology at Donald and Barbara Zucker School of Medicine at Hofstra/Northwell in Lake Success, NY. He is a past President of the American Society for Colposcopy and Cervical Pathology (ASCCP). Dr. Spitzer is a recognized educator and thought leader in the field of colposcopy and lower genital tract disease. He has authored a book as well as many textbook chapters, original reports and review articles as well as several Practice Bulletins, Committee Opinions and Precis chapters for The American College of Obstetricians and Gynecologists (ACOG).
References


