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INSIDE

Research Examines Effect of Immediate Postpartum Use of DMPA in Breastfeeding Moms

80% of U.S. babies born in 2015 started out breastfeeding

New mothers are definite candidates for family planning. Statistics indicate that more than 30% of women in the United States experience interpregnancy intervals of less than 18 months.[1] While the traditional time to initiate contraception has been at the six-week postpartum visit, many women fail to attend this important visit, especially in high-risk populations.[2]

Many new mothers are adjusting to breastfeeding their infants. According to 2018 data from the CDC, of the approximately 4 million babies born in 2015, 83.2% started out breastfeeding.[3] The American College of Obstetricians and Gynecologists has issued guidance recommending exclusive breastfeeding for the first six months, with continued breastfeeding as complementary foods are introduced during the infant's first year of life, or longer, as mutually desired by the woman and her infant.[4] Key 2020 public health goals set by the U.S. Department of Health and Human Services include increasing numbers for infants initially breastfed, exclusively breastfed through six months

OBSERVATIONAL STUDIES HAVE DEMONSTRATED THE SAFETY OF DMPA WHEN ADMINISTERED BEFORE DISCHARGE HOME TO WOMEN WHO PLAN TO BREASTFEED.

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of life, and continuing to breastfeed through at least one year of life.[5]

"We are pleased that most U.S. babies start out breastfeeding and over half are still breastfeeding at six months of age," said **Ruth Petersen**, MD, MPH, director of CDC's Division of Nutrition, Physical Activity, and Obesity in a press statement issued with the 2018 data. "The more we support breastfeeding mothers, the more likely they will be able to reach their breastfeeding goals." *(The statement and data are available online at: https://bit.ly/2moCH7V.)*

Is Shot Appropriate for New Moms?

While the contraceptive injection depot medroxyprogesterone acetate (DMPA) is a popular birth control option for many women, there is no definitive evidence on its immediate postpartum effect on breastfeeding. The National Institute of Child Health and Human Development awarded funding to Ohio State University researchers to evaluate the effects of immediate postpartum initiation of DMPA on breastfeeding and on long-term patterns of contraceptive use.

Researchers hope the new inquiry will provide definitive answers on use of the contraceptive injection immediately postpartum. While the U.S. Medical Eligibility Criteria for Contraceptive Use ranks its use as Category 2 (a condition for which the advantages of using the method generally outweigh the theoretical or proven risks), international guidance from the World Health Organization differs.[6] Because of the theoretical concern of neonatal exposure to steroid hormones, use is classed as Category 3 (a condition where the theoretical or proven risks usually outweigh the advantages of using the method).[7]

The American College of Obstetricians and Gynecologists endorses the U.S. Medical Eligibility Criteria, stating that the advantages of progestin-only pills, injectable contraception, contraceptive implant, and intrauterine devices outweigh the risks for use any time in the postpartum period, including immediately after birth.[4]

Observational studies have demonstrated the safety of DMPA when administered before discharge home to women who plan to breastfeed,[8,9] says **Anita Nelson**, MD, professor and chair of the obstetrics and gynecology

EXECUTIVE SUMMARY

While the contraceptive injection DMPA is a popular birth control option for many women, there is no definitive evidence on its immediate postpartum effect on breastfeeding.

- The National Institute of Child Health and Human Development has awarded funding to Ohio State University researchers to evaluate the effects of immediate postpartum initiation of DMPA on breastfeeding and on long-term patterns of contraceptive use.
- Many U.S. women choose to breastfeed their infants. According to 2018 data, of the approximately 4 million babies born in 2015, 83.2% started out breastfeeding.

department at Western University of Health Sciences in Pomona, CA.

Study to Provide Answers by 2023

Determining advisable timing of DMPA initiation among breastfeeding mothers is a critical step for Ohio State University researchers, who are leading the way on further study of DMPA. The five-year, $1.88 million study will be directed by principal investigator Maria Gallo, PhD, associate professor of epidemiology in Ohio State's College of Public Health, and co-investigators Lisa Keder, MD, director of Ohio State's Division of General Obstetrics and Gynecology. The Ohio State Center for Clinical and Translational Science, which received a multi-year Clinical and Translational Science Award from the National Institutes of Health, will aid with recruitment and retention assistance, as well as data safety and monitoring, for the project.

The postpartum family planning study will evaluate the effects of immediate postpartum initiation of DMPA on breastfeeding and on long-term patterns of contraceptive use. The randomized controlled trial will follow 429 adult women who have delivered a healthy, full-term infant at Wexner Medical Center, who intend to breastfeed for at least six months, and who want to use DMPA. The study will randomize women to receive within 48 hours of delivery DMPA, a placebo injection or no injection. Scientists will then collect data on lactogenesis, infant feeding and growth, and contraception use during 12 follow-up months. Investigators expect to report study results in 2023.

Providers should not delay comprehensive contraception discussions with breastfeeding women. The Lactational Amenorrhea Method (LAM) relies on the new mother feeding her baby only breast milk for up to six months and having no periods or spotting during that time. It requires exclusive, frequent breastfeeding, which is defined as at least every four hours during the day and at least every six hours during the night of an infant less than six months of age.

Women who wish to use LAM must be counseled that another method of contraception is necessary when one or more of these events occur:

- menstruation resumes,
- less frequency or duration of nursing;
- bottle feeding is introduced;
- the baby reaches six months of age. ■

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Experts Push for Adolescent HPV Vaccination

While the CDC recommends that all preteens should receive the human papillomavirus (HPV) vaccine when they are ages 11 or 12 years to protect them before they are ever exposed, data from a 2018 nationwide survey indicate that few are receiving the shot. Overall, just 51% of all teens ages 13-17 years received all recommended doses of the HPV vaccine, a 2% increase from 2017.[1]

New data from the CDC indicate that an estimated 92% of cancers caused by HPV could be prevented by the vaccine.[2] This news comes as several national professional organizations banded together to emphasize the critical importance of the 16-year-old immunization visit.

A future without HPV cancers is within reach. However, "urgent" action is needed to boost vaccine coverage rates, says **Brett Giroir**, MD, Department of Health and Human Services Assistant Secretary for Health. The federal agency will continue to push for increasing HPV vaccination coverage to 80%, set as the Healthy People 2020 target, he notes.

The American Academy of Family Physicians, American Academy of Pediatrics, American College Health Association, American College of Obstetricians and Gynecologists, American Pharmacists Association, Society for Adolescent Health and Medicine, and Immunization Action Coalition are calling on healthcare professionals to ensure that all patients age 16 years receive the HPV vaccine and other shots as outlined in the Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2019.

Exam Provides Opportunity

In 1995, when the Advisory Committee on Immunization Practices (ACIP) created a standalone column in its official schedule for children ages 11-12 years, both immunization rates and preventive care visits increased.[2] Officials say establishing the platform for 16-year-olds will help ensure adherence to receiving recommended vaccines, as well as encourage such recommended adolescent screenings as those for sexually transmitted infections and anxiety/depression. Providers also can counsel on tobacco/alcohol use and substance abuse, as well as discuss pregnancy intention and contraception during such exams, officials state.

Establishing a healthcare visit for immunizations for 16-year-olds reinforces the need for a preventive health visit at that age, notes **Amy Middleman**, MD, MPH, MSEd, ACIP liaison for the Society for Adolescent Health and Medicine.

"This visit enables providers to address multiple healthcare needs for the patient, with an age-appropriate emphasis on behavioral health needs," said Middleman in a press statement. "By emphasizing the 16-year-old visit, providers have the opportunity to address other preventive strategies while also administering a high yield preventive strategy in the form of vaccines." *(The statement can be viewed at: https://bit.ly/2mu0T9a.)*

Recommendation Makes a Difference

According to the analysis of the 2018 survey data, HPV vaccination rates were higher in teens whose parents reported receiving a recommendation from their child's healthcare provider.[1] Research indicates that clinicians play a key role in educating parents and are the most trusted source of information for parents of preteens eligible for vaccination.[4,5]

The HPV vaccine continues to be the best way to protect young boys and girls from developing certain cancers, including cervical cancer, said CDC Director **Robert Redfield**, MD.

"This new data shows one in four parents who received a medical recommendation for the HPV

EXECUTIVE SUMMARY

New information indicates that an estimated 92% of HPV-related cancers could be prevented by vaccine. Several national professional organizations have come together to emphasize the critical importance of immunization visits to help teens receive the HPV shot and other needed immunizations.

- Data show that 51% of teens ages 13-17 years in the United States received all recommended doses of the HPV vaccine in 2018, a 2% increase from 2017.
- Research shows that HPV vaccination rates are higher in teens whose parents reported receiving a recommendation from their child's healthcare provider.

vaccine chose not to have their child vaccinated," Redfield said in a statement. "The HPV vaccine is safe, and we encourage parents to get their pre-teens vaccinated and take the next step to prevent their children from developing HPV-related cancer later in life." *(Redfield's statement can be viewed online at: https://bit.ly/2zf6bYX.)*

The push to increase adolescent HPV vaccination comes as ACIP approved use of the 9-valent HPV vaccine for persons ages 27-45 years. The committee's recommendation is for men and women in the noted age range who have not previously received an HPV vaccine series and who are at risk for acquisition of HPV. While the shot is most effective when administered during the recommended ages of 11-12 years, some adults in the 27-45 years age range who are not vaccinated for HPV may decide to be vaccinated after speaking with their provider about their risk for new HPV infections and the possible benefits of vaccination. ■

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Pharmacist Prescribing of Hormonal Contraceptives Available in Utah

Contraceptive access has expanded for adult women in Utah, as pharmacists have begun to prescribe hormonal contraceptives. As of September 2019, pharmacies in more than 75 Utah cities signed up to participate in the program.

In 2018, the Utah legislature passed Senate Bill 184 to allow women aged 18 years and above to obtain hormonal contraceptives from a qualified pharmacist without a visit to a healthcare provider. Utah Department of Health Executive Director **Joseph Miner**, MD, issued a standing order in March 2019 allowing women to obtain birth control pills, contraceptive patches, or vaginal rings from participating pharmacies without needing a provider's prescription.

Pharmacists enrolled in the program are required to complete an online training program, register with the state health department, and submit annual reports on their contraceptive dispensing activities. Women may receive birth control from pharmacists after they complete a health history form, undergo a blood pressure test, and discuss which contraceptive method will work best for them.

"This standing order will remove some of the barriers many women encounter when trying to access family planning services," Miner said in a statement. "My hope is that pharmacists throughout the state will take the time to educate

EXECUTIVE SUMMARY

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- Pharmacists in the program are required to complete an online training program and register with the state health department. Pharmacists also must submit annual reports on their contraceptive dispensing activities.
- Women may receive birth control from pharmacists after they complete a health history form, undergo a blood pressure test, and discuss which method will work best for them. Women must see a healthcare provider at least once every two years if they wish to continue receiving contraception via the pharmacist.

themselves about the new program and participate in dispensing contraceptives to women who wish to receive them."

Utah's program requires patients to see a healthcare provider at least once every two years if they wish to continue receiving contraception through a pharmacist.

"While it's important to remove barriers to care, it's also important for all patients to have a relationship with a primary healthcare provider," Miner said. *(Miner's remarks can be found online at: https://bit.ly/2TArhZz.)*

Few States Offer Pharmacist Option

According to the Association of State and Territorial Health Officials, 11 states and the District of Columbia allow pharmacists to issue contraception without a prescription. Almost all states require pharmacists to assess patients before prescribing and dispensing contraceptives, most often by using a self-screening risk assessment. Most states also require pharmacists to provide patients with a standardized information sheet about contraceptives, a written summary of the consultation, advice about follow-up with a primary care provider, and a referral to a reproductive care provider or clinic if there is no established contact.

Sixty-five percent of pharmacists say they are interested in prescribing birth control, according to a 2019 study designed to assess U.S. community pharmacists' perspectives on prescribing contraception.[1] Individual patient contact was seen as the top motivation for prescribing contraception, according to study results.

Pharmacist participation in providing contraception may take time. In 2016, California implemented legislation allowing pharmacists to prescribe birth control, but results of a 2018 study indicate few of the state's pharmacies were actually offering the service.[2] Just 11% of the state's more than 5,000 community-based retail pharmacies offered birth control through the pharmacist. More than 60% charged a fee for the service.

> "WHILE IT'S IMPORTANT TO REMOVE BARRIERS TO CARE, IT'S ALSO IMPORTANT FOR ALL PATIENTS TO HAVE A RELATIONSHIP WITH A PRIMARY HEALTHCARE PROVIDER."

Pharmacist prescribing privileges can be effective in expanding access. Findings from a study of the Oregon prescribing program indicate that in the first two years, pharmacist-prescribed contraception prevented more than 50 unintended pregnancies and saved $1.6 million in associated taxpayer costs.[3,4]

An examination of Oregon Medicaid claims suggests that of the 3,614 Medicaid patients who received a new prescription for oral or transdermal contraceptives, 367 received their prescription from a pharmacist. Of those women, 252 had been enrolled in Medicaid for at least 180 days prior to receiving their first prescription. In further analysis, researchers found that 74% of the 252 women had no history of a birth control prescription in the preceding 30 days.[3,4]

Will Women Use Option?

Before access to pharmacist prescription in Washington, DC, researchers conducted focus groups among teen girls ages14-17 years and young women ages 18-24 years to determine their views on such services.[5] While the young women said they viewed pharmacies as convenient locations to access contraceptives, they expressed concerns about privacy, affordability, and pharmacist approachability. Such concerns were seen as significant barriers by younger participants.

To protect privacy and confidentiality, participants suggested that pharmacies offer private consultation spaces and clear information about what insurance plans can disclose to parents. Participants also recommended that pharmacies create a youth-friendly, nonjudgmental environment and offer pharmacists training on contraceptive counseling for young women.[5] ■

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Research Discovery May Lead to New UTI Treatments

Recurrent urinary tract infections (UTIs) are extremely common. In a primary care setting, 53% of women above age 55 years and 36% of younger women reported a recurrence within one year.[1] Recent research indicates that some infections may stem from a persistent reservoir of *E. coli* residing in the intestine.[2]

While UTIs are caused by many species of microorganisms, 80-90% are caused by uropathogenic *E. coli*, predominantly O, K, and H antigen serotypes.[3] Researchers from the University of Queensland and the University of Utah examined the recurrences of UTI in a single patient, who had been treated for infection for 45 years. The patient, who had been treated with almost every type of antibiotic, recalled nine months as her longest symptom-free period.

Researchers performed a genetic analysis to find out if the infection came from a single bacterial reservoir in the body. Scientists isolated *E. coli* from the patient's urine during repeat infections and determined its entire DNA sequence. Researchers also collected and sequenced the DNA of *E. coli* recovered from the patient's fecal samples. Analysis indicated that the bacteria causing recurring UTIs were identical.

"We now know that bacteria can reside in the intestine for very long periods and cause recurring UTIs, despite antibiotic treatment," **Scott Beatson**, PhD, MSc, associate professor at the University of Queensland and a co-author of the current paper, said in a press statement. "Therefore, it's time we consider using antibiotics that will not just treat the UTI in the bladder, but also eliminate the infection reservoir in the intestine that seeds recurrent infection of the bladder."

If a patient is seeking treatment for an UTI episode, a fecal sample could determine if the infecting strain also resided in the intestine, using bacterial culture with genome sequencing technology, noted **Brian Forde**, PhD, first author and University of Queensland scientist.

"If the same strain keeps being identified, we could design tailored treatment to eliminate the bacteria from not just the patient's urine, but also the intestinal reservoir," Forde commented in the statement. *(The statement is available online at: https://bit.ly/2l2JZxO.)*

Check Treatment Options

About 62.7 million adults age 20 years and older have reported at least one episode of UTI, 81% of whom were women.[4] The prevalence of asymptomatic bacteriuria is higher in women than men, occurring in 5-6% of young, sexually active, nonpregnant women, compared with less than 0.1% in young men.[5]

Most UTI cases are caused by infection traveling from the urethra into the bladder. Bacteria can move up the urethra during urethral massage, sexual intercourse, or mechanical instrumentation, with colonization and infection occurring in the bladder. *Staphylococcus saprophyticus* often is the cause in lower UTIs and has been isolated in

EXECUTIVE SUMMARY

Recurrent urinary tract infections (UTIs) are extremely common. In a primary care setting, 53% of women above age 55 years and 36% of younger women reported a recurrence within one year.

- Recent research indicates that some UTIs may stem from a persistent reservoir of *E. coli* residing in the intestine.
- Nitrofurantoin, trimethoprim/sulfamethoxazole (where local resistance is less than 20%), and fosfomycin are appropriate first-line agents for acute uncomplicated cystitis in healthy, nonpregnant, premenopausal women. Fluoroquinolones, such as ciprofloxacin, should be reserved for situations in which other agents are not appropriate.

3% of nonpregnant, sexually active, reproductive-aged women with pyelonephritis.[6]

Women with acute bacterial cystitis usually present with dysuria, secondary to irritation of the urethral and bladder mucosa. They also may report suprapubic pain or pressure. To determine bacteriuria, a clean-voided midstream urine sample is used. A reading of 100,000 single isolate bacteria per milliliter has been used to define significant bacteriuria, but has a sensitivity of 50%.[3] By decreasing the colony count to 1,000-10,000 bacteria per milliliter in symptomatic patients, the sensitivity can be improved without significantly compromising specificity.

According to guidance from the CDC, nitrofurantoin, trimethoprim/sulfamethoxazole (TMP-SMX, where local resistance is less than 20%), and fosfomycin are appropriate first-line agents for acute uncomplicated cystitis in healthy, nonpregnant, premenopausal women. Fluoroquinolones, such as ciprofloxacin, should be reserved for situations in which other agents are not appropriate.[7] A three-day antimicrobial regimen is the recommended treatment for uncomplicated acute bacterial cystitis in women.[8] ■

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Early Clinical Trial Data Suggest Potential Chlamydia Vaccine Safe for Use

Reproductive healthcare providers are all too familiar with chlamydia, the most commonly reported sexually transmitted infection (STI) in the United States.[1] More than 1.7 million cases were diagnosed in 2017, with 45% recorded among young women ages 15-24 years.[1]

Results of an early clinical trial of a potential chlamydia vaccine indicate it is safe for use.[2] Although the vaccine, the first to reach Phase 1 clinical trial status, demonstrates promising early signs, further studies are needed to determine whether the immune response fully protects against chlamydia infection.

The chlamydia vaccine is based on a recombinant protein subunit (CTH522) in a prime-boost immunization schedule. Scientists looked at two different formulations: one with added liposomes designed to aid cellular immunity, and the other formulated with aluminum hydroxide, which helps to produce antibodies. A total of 35 healthy women ages 19-45 years were randomly assigned to three groups: two with the new vaccine, and one to placebo. Vaccinations were given to participants in three intramuscular injections in the arm, administered on day 0, 28, and 112, with two intranasal boosts given on day 126 and 140. A total of 32 participants received all five vaccinations.

Both formulations of the vaccine provoked an immune response in all participants, whereas no participants in the placebo group achieved an immune response. Researchers noted that while both vaccine formulations provoke immune response, the formulation with the added liposomes consistently performed better, producing 5.6 times more antibodies.

Studies of antibodies in mice have found that antibodies in the vagina are the first line of defense

against chlamydia infection, which suggests that they are key to how effective the new vaccine may be, says **Helene Juel**, PhD, a scientist at Statens Serum Institut in Copenhagen, Denmark, and lead author of the report. Significantly increased concentrations of these antibodies were found in women vaccinated with both formulations of the vaccine, notes Juel. Researchers are planning a Phase 2a study of the vaccine, with the added liposomes as the next stage of research.

The National Institute of Allergy and Infectious Diseases in May 2019 announced awards of $41.6 million over five years to develop vaccines to prevent STIs. The funding will establish four research centers to study the bacteria that cause syphilis, gonorrhea, and chlamydia.

The center focused on chlamydia vaccine research is based at the University of North Carolina (UNC) at Chapel Hill. Leading the center's efforts is **Toni Darville**, MD, chief of the UNC Division of Pediatric Infectious Diseases, vice chair of pediatric research, and a distinguished professor of pediatrics, microbiology and immunology at the UNC School of Medicine. Darville and scientists at the University of Pittsburgh previously studied the T-cell response against chlamydia.[3] Since chlamydia multiplies inside host cells in a protective vacuole, researchers are looking for a robust type 1 T-cell response for protection.

SIGNIFICANTLY INCREASED CONCENTRATIONS OF THESE ANTIBODIES WERE FOUND IN WOMEN VACCINATED WITH BOTH FORMULATIONS OF THE VACCINE.

In the first of three projects funded through the UNC center, Darville and researchers at the University of Pittsburgh will further study candidate vaccine antigens identified in their previous project. Scientists will enroll 150 women at high risk of chlamydia infection into a longitudinal study. All women will be tested for chlamydia, be treated with an antibiotic to clear infection, and followed at four time points over the next year to check for reinfection. Samples will be sent to UNC for further T-cell antigen testing, while collaborators at the German Cancer Research Center in Heidelberg will examine antibody responses.

While animals and humans can develop partial or complete immunity to chlamydia after prolonged or repeated infection, many people can be infected repeatedly — especially if his or her partner is not getting treated, noted Darville. Scientists are trying to determine specific T-cell and antibody responses to inform antigens and adjuvants for vaccine development, she explained.

"A preventive vaccine would greatly benefit women who suffer the brunt of disease due to this pathogen," said Darville in a press statement. "Men rarely suffer negative effects of infection other than transmitting it to their partners." *(The press statement can be found at: https://unc.live/2l8yzJ2.)* ■

EXECUTIVE SUMMARY

Results of an early trial of a potential chlamydia vaccine indicate it is safe for use. While the vaccine, the first to reach Phase 1 clinical trial status, demonstrates promising early signs, further studies are needed to determine whether the immune response fully protects against chlamydia infection.

- Chlamydia is the most commonly reported sexually transmitted infection in the US. More than 1.7 million cases were diagnosed in 2017, with 45% recorded among young women ages 15-24 years.
- The National Institute of Allergy and Infectious Diseases has announced $41.6 million over five years to develop vaccines to prevent syphilis, gonorrhea, and chlamydia. The funding will establish four research centers to develop vaccines.

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Mental Health Conditions May Be Linked to Unnecessary Oophorectomies

Results from a new study identify mental health conditions associated with an increased risk of unnecessary bilateral oophorectomies, despite nonmalignant indications.[1] In related research, findings indicate that hysterectomy is associated with an increased risk of long-term mental health issues, including depression and anxiety.[2]

Both analyses were conducted by scientists at the Mayo Clinic using data collected from the Rochester Epidemiology Project, a collaboration of clinics, hospitals, and other medical facilities in Minnesota and Wisconsin that share their medical records for research.

In the first study, researchers examined whether various psychiatric symptoms influence a woman's decision to undergo an oophorectomy, even if there was no threat of malignancy. The study included 2,000 women, each of whom was age-matched to a referent woman residing in the same county who had not undergone hysterectomy or oophorectomy before the index date. Researchers identified several psychiatric conditions associated with an increased risk of undergoing surgery, including mood disorders, bipolar disorders, anxiety disorders, schizophrenia, personality disorders, dissociative disorders, and somatoform disorders.[1]

While previous investigations have studied the effects of hysterectomy with or without concurrent bilateral oophorectomy on mental health outcomes, this new study is the first to identify psychiatric conditions before a bilateral oophorectomy.

"This study serves as an important reminder that mental health issues are common and can sometimes present with physical symptoms," **Stephanie Faubion**, MD, MBA, FACP, NCMP, medical director of the North American Menopause Society, said in a statement. "It is incumbent on primary care providers, including gynecologists, to determine whether mental health conditions are playing a role in gynecologic complaints in order to provide patients with the most appropriate care." *(Faubion's comments can be found at: https://bit.ly/2lCn10i.)*

There are significant, long-term, adverse health consequences associated with removing a woman's ovaries before the natural age of menopause in addition to the potential risks of an unnecessary surgical procedure, Faubion commented.

Procedure Leaves Lasting Effect

In the second analysis, which involved 2,100 women, researchers examined health records from 1980 to 2002, studying women who underwent removal of the uterus. Researchers looked for new diagnoses of depression, anxiety, dementia, substance abuse, and schizophrenia after hysterectomy, and excluded women with prior diagnoses.

The data showed an absolute risk increase of 6.6% for depression and 4.7% for anxiety over 30 years. For women who underwent hysterectomy between the ages of 18-35 years, the risk of depression was higher, with an absolute risk increase over 30 years of 12%.[2]

"Our study shows that removing the uterus may have more effect on physical and mental health than previously thought," says lead author **Shannon Laughlin-Tommaso**, MD, a Mayo Clinic obstetrician/gynecologist. "Because women often get a hysterectomy at a young age, knowing the risks associated with the procedure even years later is important." *(Read Laughlin-Tommaso's remarks at: https://mayocl.in/2lz5JSs.)*

Hysterectomy is performed

EXECUTIVE SUMMARY

Results from a new study identify mental health conditions associated with an increased risk of unnecessary bilateral oophorectomies, despite nonmalignant indications. Related research indicates that hysterectomy is associated with an increased risk of long-term mental health issues, including depression and anxiety.

- Hysterectomy is performed not only for malignant disease but also for many benign conditions, such as fibroids, endometrial hyperplasia, adenomyosis, uterine prolapse, dysfunctional uterine bleeding, and cervical intraepithelial neoplasia.
- Alternatives to hysterectomy include laparoscopic adenomyomectomy in the case of focal adenomyosis, uterine artery embolism for treatment of uterine fibroids, and thermal uterine balloon therapy system for endometrial ablation.

for malignant disease and many benign conditions, such as fibroids, endometrial hyperplasia, adenomyosis, uterine prolapse, dysfunctional uterine bleeding, and cervical intraepithelial neoplasia. Procedures include abdominal hysterectomy, vaginal hysterectomy, laparoscopic assisted vaginal hysterectomy, total laparoscopic hysterectomy, and subtotal laparoscopic hysterectomy, where there is no vaginal component and the uterine body is removed using a morcellator.[3]

Alternatives to hysterectomy include laparoscopic adenomyomectomy in the case of focal adenomyosis, uterine artery embolism for treatment of uterine fibroids, hysteroscopic cautery to the endometrium with resectoscope, and thermal uterine balloon therapy system for endometrial ablation.[3] If bleeding management is the goal, options such as pills, the levonorgestrel intrauterine device, contraceptive patch, or ring are options.

Hysterectomy once was the only widely available option for women with uterine fibroids. But new procedures are available, and clinicians need to understand the pros and cons of each. A session at the 2018 annual meeting of the American College of Obstetricians and Gynecologists focused on the surgical and nonsurgical options for women.

"If you look at the data across the United States, 75% of fibroid surgeries are hysterectomies," said **Elizabeth Stewart**, MD, professor of obstetrics and gynecology and chair of the Division of Reproductive Endocrinology and Infertility at Mayo Clinic, who presented on surgical treatment options. "While there's a place for hysterectomy, there are still many more women that can have an effective surgical alternative to hysterectomy." ■

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CME/CE QUESTIONS

1. What category does the U.S. Medical Eligibility Criteria for Contraceptive Use class immediate postpartum use of DMPA?

a. Category 1
b. Category 2
c. Category 3
d. Category 4

2. According to data from the CDC, how many cancers caused by HPV could be prevented by vaccine?

a. 67%
b. 76%
c. 85%
d. 92%

3. Which is an appropriate first-line agent for acute uncomplicated cystitis in healthy adult non-pregnant, premenopausal women?

a. Ciprofloxacin
b. Nitrofurantoin
c. Penicillin
d. Methenamine

4. What percentage of fibroid surgeries in the U.S. are hysterectomies?

a. 35%
b. 50%
c. 65%
d. 75%

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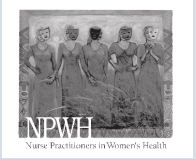

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