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Evidence-based commentaries on women's reproductive health

ABSTRACT & COMMENTARY

Management of Heavy Menstrual Bleeding: Levonorgestrel-Releasing Intrauterine System vs. Endometrial Ablation

By Katherine Rivlin, MD, MSc

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SYNOPSIS: In this multicenter, randomized, noninferiority trial among patients aged 34 years and older with heavy menstrual bleeding, the levonorgestrel-releasing intrauterine system did not meet the noninferiority threshold when compared to endometrial ablation for mean blood loss at 24 months following intervention. Both interventions did lead to large decreases in blood loss and comparable satisfaction and quality-of-life scores.

SOURCE: Beelen P, van den Brink MJ, Herman MC, et al. Levonorgestrel-releasing intrauterine system versus endometrial ablation for heavy menstrual bleeding. *Am J Obstet Gynecol* 2021;224:187.e1-187.e10.

Heavy menstrual bleeding is common and can affect a patient's health and quality of life dramatically. Two commonly used management options for heavy menstrual bleeding are the levonorgestrel-releasing intrauterine system (LNG-IUS) and endometrial ablation (EA). When compared to oral medications, the LNG-IUS reduces heavy menstrual bleeding more effectively and improves quality of life.[1,2] EA is a surgical intervention intended for patients who no longer desire pregnancy. Like the LNG-IUS, EA is a minimally invasive alternative to hysterectomy, but unlike the LNG-IUS, it is permanent. Although EA can be performed in the office, it is more commonly performed in an operating room by an OB/GYN. Direct comparisons of these two interventions have produced inconclusive and, at times, contradictory results, since most studies published previously have been limited by small sample sizes, high attrition, or short follow-up.

This multicenter trial occurred from 2012 to 2016 in the Netherlands. Participants were eligible for enrollment if they had heavy menstrual bleeding, defined as a score of 150 points or higher on the Pictorial Blood Loss Assessment Chart (PBAC). Participants were excluded if they were younger than 34 years of age; desired pregnancy; had abnormal cervical cytology in last five

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years; had intracavitary fibroids, polyps, or large intramural fibroids; had a uterine length greater than 10 cm; or had a uterine size greater than 10 weeks on ultrasound or bimanual exam. Consenting participants were randomized in a 1:1 ratio to an LNG-IUS insertion (performed in the office), or an EA procedure (performed either in the office under local anesthesia or conscious sedation, or in the operating room under general anesthesia or spinal anesthesia). Neither the participants nor the treating clinicians were blinded, given the nature of both interventions.

Participants completed PBAC scores prior to enrollment, and again at three, six, 12, and 24 months after randomization. This score is calculated by adding together the total number of tampons or pads used over the course of a month, with each product assigned a score of 1-20, depending on degree of saturation. The primary outcome was PBAC at 24 months. Secondary outcomes included controlled bleeding (PBAC < 75 points), complications and reinterventions, amenorrhea, spotting, dysmenorrhea, presence of clots, duration of blood loss, satisfaction with treatment (calculated on a five-point Likert scale), and quality of life.

Of 645 eligible participants, 270 consented to the study. Of the 132 participants randomized to the LNG-IUS, 122 (92%) had the Mirena intrauterine device inserted, with a median time to insertion of seven days. Of the 138 participants randomized to EA, 130 (94%) underwent the Novasure procedure, although in seven (5.4%) cases, the procedure could not be completed. The median time to EA was 27 days. Both groups had similar baseline characteristics. The mean PBAC at 24 months was 64.8 points in the LNG-IUS group compared to 14 points in the EA group (mean difference 50.5; 95% confidence interval [CI], 4.3-96.7). Since the upper limit of the 95% CI exceeded the predetermined noninferiority margin of 25 points, this study did not demonstrate noninferiority of the LNG-IUS to EA.

In both intervention groups, significant declines in mean PBAC were observed from the baseline score to the three-month follow-up score, with most below 75 in both groups. By 24 months, 87% of participants in the LNG-IUS group and 94% of participants in the EA group had PBAC scores below 75. Amenorrhea, duration of blood loss, spotting, presence of clots, and dysmenorrhea were the same between both groups. LNG-IUS removal occurred in 49 (39%) cases, and the LNG-IUS group was more likely than the EA group to receive additional surgical or drug reintervention within 24 months (35% vs. 27%; relative risk [RR], 1.77; 95% CI, 1.17-2.68). Until 12 months, satisfaction was higher in the EA group compared to the LNG-IUS group. At 24 months, satisfaction was comparable between groups, with 74% of participants in the LNG-IUS group and 84% in the EA group satisfied with their method (RR, 0.88; 95% CI, 0.76-1.01).

■ COMMENTARY

This randomized controlled trial does not demonstrate that the LNG-IUS is noninferior to EA when comparing mean PBAC scores at 24 months among people with heavy menstrual bleeding. However, both interventions led to a significant decrease in blood loss among participants, comparable quality-of-life and satisfaction scores. Most participants in both groups ended the study with PBAC scores under 75, which indicates controlled bleeding. Although the removal rate of the LNG-IUS was high (39%) and participants in the LNG-IUS group were twice as likely to require an additional drug or surgical intervention, hysterectomy rates were similar between the two groups. Participants in the EA group achieved satisfaction more quickly than those in the LNG-IUS group, likely because the EA works immediately, while the LNG-IUS can take a three to six months to reach its desired effects, with the potential for irregular or prolonged bleeding patterns in the interim.

This study benefits from a large sample size and a low loss to follow-up rate. Participant recruitment from both OB/GYN and primary care providers reflects real-life clinical practice. However, as with many studies conducted outside of the United States, the results may be of limited generalizability. For example, the average body mass index (BMI) in both groups is 27 kg/m^2, which is lower than the average BMI in the United States (29 kg/m^2). Not included in the results are participant medical comorbidities, such as rates of diabetes or hypertension. Was this study population at risk of endometrial pathology? What about anesthetic complications? In some clinical scenarios, a provider may encourage an LNG-IUS over EA given the protective effect of progestin on the endometrium. In others,

medical comorbidities may put patients at higher risk of anesthetic complications, making the operating room a less desirable option.

The shorter median time to LNG-IUS insertion (seven days) compared to EA provision (27 days) in this study highlights the ease and convenience of an LNG-IUS insertion, both for providers and patients. Additionally, while in practice and in this study most EAs were performed by OB/GYNs, primary care providers also can insert an LNG-IUS, which expands access. Finally, although no data are included on rates of insurance coverage in the study population, insurance coverage is an important predictor of healthcare access. Without health insurance, a same-day LNG-IUS insertion may be more feasible and affordable compared to a trip to the operating room for an EA.

This study highlights the pros and cons of two commonly used management options for heavy menstrual bleeding. Both the LNG-IUS and EA are highly effective and minimally invasive alternatives to hysterectomy. The EA offers a quicker, more robust reduction in blood loss with lower chances of requiring surgical reintervention (with the exception of hysterectomy) compared to the LNG-IUS. In contrast, the LNG-IUS is a reversible, convenient option that can be placed immediately in the office without the need for anesthesia, and it provides endometrial protection. ■

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ABSTRACT & COMMENTARY

The Association Between SSRIs and Congenital Anomalies

By Ahizechukwu C. Eke, MD, PhD, MPH

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SYNOPSIS: In this synthesis involving 15 meta-analytic studies, four studies demonstrated an association between paroxetine use during pregnancy and increased risk of major congenital anomalies (relative risk [RR], 1.18 [95% confidence interval (CI), 1.05, 1.32] to 1.29 [95% CI, 1.11-1.49]). For all selective serotonin reuptake inhibitors (SSRIs), the RR for major anomalies (1.10 [95% CI, 1.03, 1.16] to 1.27 [95% CI, 1.09, 1.47]) and cardiac defects (1.06 [95% CI, 0.94, 1.18] to 1.36 [95% CI, 0.61, 3.04]) were increased. This meta-analysis suggests an increased risk of cardiac and major anomalies with SSRI use, but the results should be interpreted with caution, since all included studies were meta-analyses of retrospective cohort studies.

SOURCE: Uguz F. Selective serotonin reuptake inhibitors and the risk of congenital anomalies: A systematic review of current meta-analyses. *Expert Opin Drug Saf* 2020;19:1595-1604.

The use of selective serotonin reuptake inhibitors (SSRIs) in obstetrics continues to increase.[1] In the United States, approximately 8% to 13% of women take SSRIs during pregnancy and postpartum.[2] SSRIs (including sertraline, fluoxetine, fluvoxamine, citalopram, escitalopram, and paroxetine) are effective therapies for the treatment of moderate and severe depression. Although there is limited evidence from randomized clinical trials and prospective cohort studies regarding the safety and efficacy of SSRI use during pregnancy, data from several retrospective and case-control studies suggest short- and long-term adverse effects with SSRI use, including the potential for persistent pulmonary hypertension of the newborn and congenital anomalies.[3] However, because of challenges caused by confounding by indication and study design, data from retrospective cohort and case-control studies are difficult to interpret and compare across studies. Therefore, a systematic review and meta-analysis is a good way to summarize the evidence across studies.

This study was a synthesis of several meta-analytic studies that examined the association between SSRI use and congenital anomalies between 2010 and 2020.[4] All meta-analytic studies that examined SSRI use in pregnant women and reported a congenital malformation were included.[4] The outcomes evaluated included the prevalence of major anomalies involving any organ system, cardiac defects, and minor anomalies. Effect estimates were reported as pooled analyses of relative risks (RR) that measured the relationship between SSRIs (exposure) and outcomes (congenital anomalies).

Fifteen meta-analytic studies met the inclusion criteria and were included in the final synthesis of meta-analyses. Fourteen of these meta-analytic studies evaluated cardiovascular anomalies as their main outcome, while nine meta-analytic studies focused on major congenital anomalies involving all organ systems. Six, four, and two meta-analytic studies evaluated cardiac septal defects, anomalies in other systems, and minor anomalies,

respectively.[4] Paroxetine was the most frequently reported SSRI associated with major, cardiac, and minor congenital anomalies, and was evaluated in seven meta-analytic studies.[4] The effects of fluoxetine were evaluated in six meta-analytic studies, while escitalopram and fluvoxamine were evaluated only in one meta-analysis. For all SSRIs, the RR for major anomalies was 1.10 (95% confidence interval [CI], 1.03, 1.16) to 1.27 (95% CI, 1.09, 1.47), and the RR for cardiac defects was 1.06 (95% CI, 0.94, 1.18) to 1.36 (95% CI, 0.61, 3.04).

The association between paroxetine use during pregnancy and the risk of major congenital anomalies was found to be statistically significant in four out of five meta-analyses (RR, 1.18 [95% CI, 1.05, 1.32] to 1.29 [95% CI, 1.11-1.49]) and the risk of cardiovascular defects were found to be significant in six out of seven meta-analyses (RR, 0.97 [95% CI, 0.75, 1.19] to 1.46 [95% CI, 1.17, 1.82]).[4] Among specific cardiovascular anomalies, the risks of right ventricular outflow track defects (RR, 2.15 [95% CI, 1.04, 4.44] to 2.29 [95% CI, 1.06, 4.93]), bulbus cordis, and cardiac septal anomalies (RR, 1.42 [95% CI, 1.07-1.89]) were greatest. Four meta-analytic studies examined the association between sertraline use and the risk of congenital anomalies. Although two of these meta-analytic studies found an association between sertraline use and increased risk of cardiovascular anomalies (RR, 0.93 [95% CI, 0.70, 1.24] to 1.42 [95% CI, 1.12, 1.80]), the two other meta-analytic studies did not find any differences in cardiac anomalies between women who used sertraline while pregnant and those who did not. Four meta-analytic studies that evaluated the association between citalopram and congenital anomalies did not demonstrate any statistically significant differences with citalopram use and congenital cardiac anomalies (RR, 1.04 [95% CI, 0.92, 1.17] to 1.20 [95% CI, 1.09-1.31]).[4] Although patients who used escitalopram had infants with abdominal wall defects (RR, 3.52 [95% CI, 1.56-7.93]) and gastroschisis (RR, 3.95 [95% CI, 1.46-10.68]), no congenital anomalies were found to be associated with fluvoxamine use.[4]

■ COMMENTARY

Meta-analysis is a statistical method for combining data from different studies (cohort, randomized trials, or case-controlled) with the aim of investigating the effect of interventions using a large sample size.[5,6] Sometimes, synthesis of several meta-analyses can be conducted to understand the associations between an exposure and an outcome when data from an existing meta-analysis demonstrate conflicting results. The conclusions of such data synthesis from several meta-analytic studies can depend greatly on the quality of the included studies, the meta-analytic process (meta-evaluation), and the methods employed to synthesize data from the individual meta-analytic studies.[6] Data from this study by Uguz demonstrated potential associations between several SSRIs and congenital anomalies.[4] Previous data from meta-analyses suggest an association between SSRI use (paroxetine use specifically) during pregnancy and congenital heart defects. However, data from other systematic reviews/meta-analyses do not support this association. For example, a 2007 systematic review and meta-analysis of seven studies identified a summary odds ratio (OR) of 1.72 for cardiovascular malformations and first-trimester paroxetine exposure.[7] This study also demonstrated that women taking SSRIs were more likely to have fetal echocardiogram during pregnancy than women not taking SSRIs, and the children of the mothers exposed to SSRIs were more likely to have echocardiograms during the first year of life. This raises the possibility that children exposed to SSRIs with transient septal defects were more likely to be diagnosed than unexposed children.

Another meta-analysis funded by GlaxoSmithKline (the pharmaceutical company that markets paroxetine) identified a summary OR for congenital defects at 1.24 for congenital cardiac defects.[8] A 2016 meta-analytic study reported an increase in major fetal congenital malformations (OR, 1.23; 95% CI, 1.10, 1.38; n = 15 studies) and cardiac malformations (OR, 1.28; 95% CI, 1.11, 1.47; n = 18 studies) associated with paroxetine use during the first trimester. However, this finding lost statistical significance when the control group included women taking other SSRIs/antidepressant medications.[9] Mothertobaby.org (a pregnancy network consisting of 15 affiliates at acclaimed universities and hospitals across the United States and Canada that conduct observational research to better understand the effects of medications and vaccines when taken during pregnancy) has suggested a risk for cardiac defects of 2% in pregnancies exposed to paroxetine (compared to the general population risk of 1%).

The inconsistencies in these SSRI data also can be explained by confounding by indication — a major challenge in virtually all retrospective studies of the association between SSRI use and depression. Although it is difficult to control for confounding factors when confounding by indication is thought to be present, several pharmacoepidemiological studies have demonstrated that confounding by indication can benefit from other analytic methods, including propensity score matching/analysis, use of instrumental variables, sensitivity analysis for unmeasured confounders, and G-estimation. One efficient way to control for the risk factors for depression from population-based data is the use of a chronic disease scoring system in the statistical analytic model. The chronic disease score can provide a reasonable measure of acute vs. chronic depression disease status and help accurately predict the association between SSRIs and adverse outcomes. None of these methods were used to control for confounding in this synthesis of several meta-analysis studies by Uguz.

Because of inconsistencies across available data and lack of robust well-designed studies from prospective cohort studies and randomized clinical trials, women taking

SSRIs prior to pregnancy should discuss the risks vs. the benefits with their care providers. SSRIs can be continued during pregnancy when the benefit of their use to the pregnant women outweighs the risks, since untreated depression carries significant risks to the mother and the fetus. Paroxetine should not be used as a first-line therapy in women commencing antidepressant treatment during pregnancy. A fetal echocardiogram (in addition to the routine second trimester anomaly scan) is recommended for any pregnant woman exposed to paroxetine during pregnancy. ■

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ABSTRACT & COMMENTARY

When Is the Ideal Time in the Menstrual Cycle for IUD Insertion?

By Rebecca H. Allen, MD, MPH, Editor

SYNOPSIS: In this retrospective cohort study, women using the levonorgestrel intrauterine device for noncontraceptive indications had higher expulsion rates (38% vs. 17%, $P = 0.03$) when insertion occurred on day 1 to day 8 of the menstrual cycle compared to after day 8.

SOURCE: Harris S, Kaneshiro B, Ahn HJ, Saito-Tom L. Timing of insertion affects expulsion in patients using the levonorgestrel 52 mg intrauterine system for noncontraceptive indications. *Contraception* 2021;103:185-189.

In the past, intrauterine devices (IUDs) often were inserted during menses to ensure that the patient was not pregnant. Current guidelines allow for insertion at any time during the menstrual cycle as long as it is reasonably certain the patient is not pregnant.[1] The authors of this study wanted to determine if the timing of insertion related to the menstrual cycle made a difference in expulsion rates among women using the IUD for noncontraceptive indications.

In this retrospective cohort study, investigators studied women who underwent 52 mg levonorgestrel IUD (LNG-IUD) insertion for abnormal uterine bleeding, dysmenorrhea, or endometrial hyperplasia between Jan. 1, 2009, and Dec. 31, 2010, at all Kaiser-Permanente Hawaii locations. Patients who did not have a follow-up visit were excluded. The primary outcome was IUD expulsion, both complete and partial. Data collected included timing of insertion with respect to last menstrual period (LMP), uterine cavity length in centimeters, reason for insertion, presence of uterine pathology, and patient demographic factors. Patients undergoing IUD insertion after a procedure, such as endometrial biopsy, hysteroscopy, or suction aspiration, also were included.

A total of 176 women were included in the study. Expulsion occurred in 39 (22%) patients, with 82% occurring within the first year and 29% occurring in the first 60 days. Women with a known LMP were analyzed (n = 129). Insertions occurring during day 1 to day 8 of the menstrual cycle were associated with a greater number of expulsions (16/42, 38% vs. 8/47, 17%, $P = 0.03$) compared to after day 8. Additionally, women with a uterine cavity length of 8.5 cm or more had a higher rate of expulsion compared to patients with a cavity length of 8.5 cm or less based on uterine sounding (24/39, 61.5% vs. 15/39, 38.5%, $P = 0.01$).

After excluding women who underwent IUD insertion after a procedure (n = 51), insertion of the IUD during the first eight days of the menstrual cycle resulted in a 3.57 odds of expulsion (95% confidence interval, 1.13, 11.31) after adjusting for dysmenorrhea, uterine cavity length, and uterine pathology. There was no association

between IUD expulsion and age, parity, body mass index, or indication for insertion.

■ COMMENTARY

The question of the timing of IUD insertion is important and may differ between IUDs inserted for contraceptive purposes and those inserted to treat gynecologic disorders. The Centers for Disease Control and Prevention (CDC) has published guidelines on the use of IUDs, "Selected Practice Recommendations for Contraceptive Use."[1] According to the guidelines, the IUD may be inserted any time during the menstrual cycle as long as the woman is reasonably sure she is not pregnant, has no symptoms or signs of pregnancy, and meets any one of the following criteria:

- is ≤ 7 days after the start of normal menses;
- has not had sexual intercourse since the start of last normal menses;
- has been correctly and consistently using a reliable method of contraception;
- is ≤ 7 days after spontaneous or induced abortion;
- is within four weeks postpartum;
- is fully or nearly fully breastfeeding (exclusively breastfeeding or the vast majority [≥ 85%] of feeds are breastfeeds), amenorrheic, and < 6 months postpartum.

The CDC based this recommendation on a systematic review that included eight studies of the copper IUD. This review concluded that the timing of IUD insertion has little effect on longer term outcomes, such as rates of continuation, removal, expulsion, pregnancy, pain at insertion, and bleeding at insertion.[2] There were no studies of the LNG-IUD.

Whether insertion timing recommendations vary for women who are having the IUD placed for gynecologic purposes is unknown. Among contraceptive patients, the expulsion rate for the LNG-IUD is approximately 4% over six years of use.[3] However, there is a concern for a higher expulsion rate when IUDs are placed for abnormal uterine bleeding. This study showed an overall expulsion rate of 22% over the first year, which is very high. Certainly, it makes biologic sense that a patient with heavy menstrual bleeding and/or fibroids with an enlarged uterine cavity may have a higher risk of IUD expulsion. This study is intriguing because the expulsion rate was higher when the IUD was placed during menses, and the authors suggested that insertion during this time be avoided.

In our practice, we place IUDs at any time in the menstrual cycle, whether for contraception or gynecologic disorders. Logistically, it is difficult to schedule appointments during certain times of the menstrual cycle and may be a barrier to care. I do not think this one study of 176 women with a variety of different gynecologic conditions would change my practice. Nevertheless, we should counsel women who are having the LNG-IUD placed for gynecologic disorders that their risk of expulsion is higher than baseline. More research in this area would be welcome. ■

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ABSTRACT & COMMENTARY

Evaluation of an Inpatient Postpartum Human Papillomavirus Immunization Program

By Mitchell Linder, MD

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SYNOPSIS: In this cohort study, results from two years of an inpatient postpartum HPV vaccination program are presented. Overall, their results show an increased rate of immunization (hazard ratio of 2.51) and an increased proportion of women completing the vaccination series (35.8% of those receiving an inpatient dose completed the series compared to 9.3% of those who did not get the inpatient dose).

SOURCE: Avni-Singer L, Oliveira CR, Torres A, et al. Evaluation of an inpatient postpartum human papillomavirus immunization program. *Obstet Gynecol* 2020;136:1006-1015.

This cohort study looked at the time from delivery to discharge as a critical window of opportunity to provide either first or catch-up doses of the human papillomavirus (HPV) vaccine. Eligible women were younger than 27 years of age, received prenatal care from a single hospital-based OB/GYN clinic, and had not completed the HPV series at the time of delivery. The program began in April 2017, and data in this study were from the first two years, until April 2019. The HPV vaccine was provided from a drug-only grant from

Merck & Co. The protocol had the program coordinator identify eligible patients and the on-call provider place an electronic order for vaccination. Counseling and consenting prior to vaccination were done by the clinic team. Patients were scheduled for their next doses per Centers for Disease Control and Prevention (CDC) age-based guidelines.

From April 2017 to April 2019, 666 women delivered at the intervention site hospital. A total of 394 (59.2%) of the 666 women were eligible to receive a dose while they were inpatient and postpartum. The remainder were noted to have completed their series prior to delivery. Of the 394 eligible patients, 277 were Black or Hispanic, 297 had public insurance, and 82 had no insurance at all. One hundred four women identified Spanish as their preferred language and 316 of the patients had not received any prior doses of HPV vaccine. Of the 394 women who were eligible, 265 (67.3%) received their first dose during their hospitalization. For 36 (13.6%) of the 265, the inpatient dose marked the completion of their series. Of the 358 patients eligible for either their first or second shot while hospitalized, 177 (49.4%) had a dose in the hospital. The proportion of women who were eligible and went on to have a subsequent outpatient vaccine was 30.1% higher (95% confidence interval [CI], 19.6% to 40.4%) in the group who received the inpatient dose (60.3% vs. 30.2%). The overall proportion of women completing the series also was higher in the group that had received the inpatient dose (35.8% to 9.3%; odds ratio [OR], 5.45; 95% CI, 2.86-10.38).

Analysis showed Hispanic women (OR, 2.14; 95% CI, 1.07-4.30), those with Spanish as their preferred language (OR, 3.03; 95% CI, 1.41-5.67), and those who had already received two doses prior (OR, 2.72; 95% CI, 1.10-6.72) were significantly more likely to receive an inpatient dose. Married women were less likely to receive an inpatient dose (adjusted odds ratio [aOR], 0.59, 0.37-0.96). There was no significant difference when comparing public vs. private insurance. Women who received an inpatient dose had a higher probability of receiving subsequent outpatient doses (hazard ratio, 2.51; 95% CI, 1.76-3.58). The odds of receiving an outpatient dose of HPV in the first 12 months postpartum were higher in Hispanic women (OR, 2.60; 95% CI, 1.15-5.90) and those whose preferred language was Spanish (OR, 2.11; 95% CI, 1.22-3.64). For every additional outpatient visit attended, the odds of getting a dose increased almost threefold (aOR, 2.88; 95% CI, 2.08-3.99).

Looking at missed opportunities to receive the vaccine, the numbers were significantly lower in those patients getting an inpatient dose (23.4% lower; 95% CI, 9.4% to 23.3%). On average, there were 30.7 fewer missed opportunities (95% CI, 5.8-55.6; $P < 0.02$) for every 100 eligible visits in those who received an inpatient dose compared to those who did not.

■ COMMENTARY

Despite evidence that the HPV vaccine series is effective at preventing genital warts and HPV-related cervical cancer, only 39.9% of eligible adult patients (aged 18 to 26 years) in the United States had received at least one dose in 2018. The number of patients in that group who had completed the series was 21.5%.[1] Pregnancy is a time when many patients first interact with the healthcare system, especially in underserved populations. In fact, in many states, becoming pregnant is a health insurance-qualifying event, and as such, some patients only become insured during their pregnancy. Unfortunately, HPV vaccination is not recommended to be given during pregnancy. These three facts make the immediate postpartum time period an excellent intervention window.

Given that cervical cancer incidence is higher in Black and Hispanic women, the authors noted success in their project by finding that the odds that women whose preferred language was Spanish were nearly three times more likely to get a dose inpatient vs. women whose preferred language was English. The authors thought this likely is the result of historical gaps in opportunities for Hispanic Spanish-speaking women to have been offered the vaccine in the past. Barriers to successful implementation of a similar program are noted to be HPV vaccine supply (in this study, the vaccine was provided through a grant at no cost to the patient) and the need for a program coordinator for identifying eligible patients.

Limitations noted for this study were that it was a single-site study with patients from a single hospital-based clinic and the fact that the vaccines were supplied from an outside source. Other limitations included immunization history capture by the electronic health record (in both the eligibility evaluation phase and the data collection phase). Lastly, the researchers noted that almost 50% of eligible women did not receive subsequent vaccination doses after leaving the hospital.

This study seems to be an excellent intervention to help increase the number of patients receiving HPV vaccination. The fact that in 2019 the CDC's Advisory Committee on Immunization Practices recommended patients ages 27 to 45 years have a shared decision-making discussion with their providers about HPV vaccination makes even more patients eligible for this intervention and, therefore, shows an even larger need for programs such as this one. In addition, the American Rescue Plan Act of 2021 includes a provision for extending maternity-related insurance coverage to up to 12 months after delivery, again increasing opportunities for health-related interventions.[2]

At this time, I think it would be reasonable for most hospitals to look into making routine offering of HPV vaccine part of their regular postpartum care, similar to measles, mumps, and rubella and other vaccinations. ■

REFERENCES

1. Boersma P, Black LI. Human papillomavirus vaccination among adults aged 18-26, 2013-2018. *NCHS Data Brief* 2020; Jan:1-8.
2. Congress.gov. H.R. 1319– American Rescue Plan Act of 2021. https://www.congress.gov/bill/117th-congress/house-bill/1319

CME/CE OBJECTIVES

Upon completion of this educational activity, participants should be able to:

- Explain the latest data regarding diagnosis and treatment of various diseases affecting women;
- Discuss new data concerning prenatal care, neonatal health, and complications arising in pregnancy and the perinatal period; and
- Discuss the advantages, disadvantages, and cost-effectiveness of new testing procedures in women's health.

CME/CE INSTRUCTIONS

To earn credit for this activity, please follow these instructions:

1. Read and study the activity, using the provided references for further research.
2. Log on to ReliasMedia.com and click on My Account. First-time users must register on the site using the eight-digit subscriber number printed on your mailing label, invoice, or renewal notice.
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CME/CE QUESTIONS

1. **In the study by Beelen et al, when used to manage heavy menstrual bleeding, the levonorgestrel-releasing intrauterine system was found to have:**
   a. the same mean Pictorial Blood Loss Assessment Chart (PBAC) score compared to that of endometrial ablation (EA) at 24 months after insertion.
   b. higher improvements in patient quality of life compared to that of EA.
   c. lower rates of additional surgical intervention compared those of EA.
   d. a robust decline in mean PBAC score in the first three months after insertion.
2. **Which of the following is *not* a selective serotonin reuptake inhibitor?**
   a. Paroxetine
   b. Sertraline
   c. Citalopram
   d. Carbamazepine
3. **In the study by Harris et al, which of the following was associated with a higher risk of intrauterine device expulsion?**
   a. Use for contraception
   b. Placement during day 9 to 28 of the menstrual cycle
   c. Uterine cavity length 8.5 cm or more
   d. Parity
4. **When compared to patients whose preferred language was English, patients whose preferred language was Spanish were approximately how much more likely to receive an inpatient vaccination?**
   a. Sixfold
   b. Threefold
   c. Twofold
   d. None

[IN FUTURE ISSUES]

Perinatal Outcomes and Disease Severity in Pregnant Patients with COVID-19