Background: Centers for Medicare and Medicaid Services (CMS) and other federal agencies working with American Congress of Obstetrics and Gynecology (ACOG) to increase number women who attend postpartum visit and revise content of postpartum visit; national initiatives focusing on encouraging women to attend postpartum visit and using content of postpartum visit as quality metric; so far, few quality metrics established for women’s health care

Content of visit: currently emphasizes breastfeeding, screening for depression, follow-up of medical problems managed during pregnancy such as gestational diabetes or hypertension, and contraception; physical examination usually brief; cervical cytologic examination no longer performed routinely; ideally, obstetrician should use postpartum visit as bridge to care by primary care provider

Changes to postpartum visit: increased emphasis now placed on interpregnancy interval (IPI); women traditionally advised to wait 2 yr, but optimal IPI ≥ 27 mo (18 mo between delivery and conception); in United States, one-third of repeat pregnancies conceived within 18 mo of previous birth; if IPI suboptimal, mother may not have sufficient time to recover from metabolic demands of pregnancy; IPI may be inadequate to diagnose and stabilize chronic medical conditions; short IPI associated with preterm birth, low birth weight, and reduced quality of life for older siblings who may not receive adequate amount of focused attention from parents; goals of Healthy People 2020 include 10% reduction in proportion of pregnancies conceived within 18 mo of previous birth

Contraceptive methods: levels of effectiveness include top tier (implant, intrauterine device [IUD], and sterilization) and middle tier (contraceptive pill, patch, and ring and injectable medroxyprogesterone [Depo-Provera, Provera]); all other methods less effective and fall into lower tier; women using top-tier methods ovulate in 45 days, but some ovulate in as little as 25 days

Sterilization: study followed 1500 women who underwent post-partum tubal ligation (PPTL) and 133 women who requested PPTL but did not receive it because of scheduling, health, or other issues; women followed for 1 yr; women who delivered (not necessarily those who had PPTL) compared with women who requested PPTL but did not receive it; approximately same proportion of women in each group had postpartum visit, and same proportion received prescription for postpartum contraception; likelihood of another pregnancy within 12 mo 20% in control group and 50% in group of women who requested PPTL but did not receive it; study demonstrated need to reduce barriers to PPTL because many women do not return for interval sterilization

Improving attendance at postpartum visits: 45% to 50% of Medi-Cal recipients attend postpartum visit, but rates of return vary across regions of state and across health plans; rate of return being evaluated as quality metric

Quality of postpartum care: Every Woman California initiative sponsored by ACOG, March of Dimes, and other groups to improve quality of preconception care; group has also created guidelines for interconception care of ≤30 conditions in postpartum period, based on evidence or consensus; Centers for Disease Control Medical Eligibility Criteria (MEC) for Contraceptive Use address safety of postpartum contraceptive methods; Selected Practice Recommendations aimed at maximizing efficacy of postpartum contraception; new versions of these documents due in 2016; Every Woman California offers algorithms for management of several postpartum conditions, materials for patient education, and reminders about folic acid, breastfeeding, and contraception

Ovulation: after term delivery, nonlactating women typically ovulate in 45 days, but some ovulate in as little as 25 days

Lactational amenorrhea: ovulation difficult to predict in lactating women; reliability of lactational amenorrhea as contraceptive method depends on intensity, frequency, and duration of suckling, time since delivery, maternal nutritional status (women with good nutrition ovulate earlier than malnourished women), rate of weaning (rapid weaning more likely to trigger ovulation than gradual weaning), and introduction of oral feedings; in lactating women, pregnancy rate 1% to 2% at 6 mo postpartum; lactational amenorrhea reliable form of contraception only if woman breastfeeding for ≥65 min/day with at least 5 feeds/day; introduction of bottle feeding or other foods increases risk for ovulation; episode of bleeding within 56 days of delivery introduces risk for ovulation; lactational amenorrhea effective from

Educational Objectives
The goal of this program is to improve outcomes in postpartum women. After hearing and assimilating this program, the clinician will be better able to:

1. Counsel a pregnant woman about the optimal interpregnancy interval.
2. Explain the relationship between pregnancy rates and access to top-tier contraceptive methods in postpartum women.
4. Identify women at risk for thromboembolic events during or after pregnancy.
5. Create protocols for a clinic or practice striving to meet current and future quality metrics for care of postpartum women.

Faculty Disclosure
In adherence to ACCME Standards for Commercial Support, Audio Digest requires all faculty and members of the planning committee to disclose relevant financial relationships within the past 12 months that might create any personal conflicts of interest. Any identified conflicts were resolved to ensure that this educational activity promotes quality in health care and not a proprietary business or commercial interest. For this program, members of the faculty and planning committee reported nothing to disclose.
Hormonal contraception: methods include pill, patch, and ring

**Effect on breast milk:** important to consider whether any hormonal method affects quality or quantity of breast milk and growth of newborn; most research conducted in women using oral contraceptives, and findings extrapolated to patch and ring; fat, protein, and mineral content of breast milk not affected by type of hormonal method; pills containing >35 μg of estrogen more likely than pills containing ≤35 μg of estrogen to inhibit ovulation; oral contraception started after 28 to 42 days (when lactation well established) not associated with decrease in quantity of breast milk; progestin-only pills have no effect on quality or quantity of breast milk; initiation of oral contraceptives during postpartum period associated with decreased duration of breastfeeding

Exposure of infant to hormones: only small amount of estrogen enters breast milk, similar to amount observed in lactating women who do not use hormonal contraceptives; no developmental differences or effects on growth observed in studies of children whose mothers used oral contraceptives while breastfeeding

**Thromboembolic events:** most important issue risk for venous thrombosis and pulmonary embolism (PE); changes in clotting factors during pregnancy persist until 42 days postpartum; taking oral estrogen postpartum while in hypercoagulable state may produce additive effect and increase risk for thromboembolic phenomena; for this reason, women advised to avoid estrogen-containing products for 42 days after delivery; risk for postpartum deep venous thrombosis (DVT) greater postpartum than antepartum; absolute risk for DVT or PE (per 10,000 women/yr) 5 in general population, 9 to 10 in women using oral contraceptives, and 30 in pregnant women; risk may be increased 10-fold in postpartum women

**MEC guidelines for nonbreastfeeding women:** during first 21 days after delivery, use of hormonal contraceptives category 4 (health risk unacceptable); from 21 to 42 days postpartum, use of hormonal contraceptives category 3 (risks usually outweigh benefits) in women with other risk factors and category 2 (benefits usually outweigh risks) in women without other risk factors; use after 42 days postpartum category 1 (no restrictions); update to guidelines based on European studies showing that risk for thromboembolic events extends to 42 days postpartum

**MEC guidelines for breastfeeding women:** pill, patch, and ring should not be used within 21 days of delivery; from 21 to 29 days postpartum, use of hormonal contraception category 3; from 28 to 42 days postpartum, hormonal contraception category 3 in patients with risk factors for thromboembolic event and category 2 in patients without risk factors; after 42 days, use of hormonal contraception category 1; risk factors for thromboemboli include older age, previous DVT or PE, hereditary clotting problem, immobilization, and high body mass index

**Progestin-only methods:** some lactational specialists believe that using any hormone decreases quantity of breast milk; per 2011 revision of MEC, within 30 days of delivery oral progesterin, injectable medroxyprogesterone, and progesterone implants category 2 in breastfeeding women and category 1 in nonbreastfeeding women, primarily because of theoretical concerns about progestin and breast milk; injectable medroxyprogesterone may be mildly lactogenic; progestin implant safe and effective and does not affect breastfeeding; implants sometimes inserted early because of concerns about follow-up; review of 47 studies focused on use of progestin-only contraceptive methods in breastfeeding women failed to demonstrate any effects on breastfeeding or adverse outcomes in newborns; newer studies consistent with older studies

Shared decision making: physician must balance needs of woman with concerns about use of hormonal contraceptives; initiating contraceptive therapy allows women who may not follow up to avoid unplanned pregnancy; however, women who breastfeed exclusively unlikely to become pregnant within first 6 mo postpartum; updated guidelines to emphasize shared decision making; proposed addition to 2016 version of MEC states that discussions about contraception in breastfeeding women should cover risks, benefits, and alternatives while considering desire to breastfeed, risk for breastfeeding difficulties, and risk for unintended pregnancy

**Difficulties with breastfeeding:** women at risk for breastfeeding difficulties include those with history of breastfeeding problems, certain medical conditions and perinatal complications, and history of preterm delivery; nonhormonal methods may be better choices for such women; handbook written by American Academy of Pediatrics and ACOG covers newborn and maternal conditions that may lead to difficulties with breastfeeding; studies that have demonstrated safety of hormonal contraceptives in breastfeeding women conducted in large, public health populations; decisions should consider whether individual woman likely to succeed at breastfeeding

**Immediate postpartum contraception:** MEC guidelines address immediate placement of copper IUD or levonorgestrel intrauterine system (IUS) before discharge from hospital following delivery; these may be safely placed immediately after delivery; such use category 2 for levonorgestrel IUS because it contains hormones, and category 1 for copper IUD; from 10 min to 28 days postpartum, immediate postpartum contraception placed in category 2 because of 10% to 15% risk for expulsion; ≥28 days after delivery, use of these methods category 1; IUD should not be placed in woman with postpartum endometritis; IUD may be placed after vaginal delivery using ring forceps or at cesarean delivery before closure of uterus; after cesarean delivery, strings should be tucked through cervix; Medi-Cal now pays for such insertions, but Medicaid may not pay for postpartum insertions in some states

**Quality assessment**

**CMS initiatives:** include improving rate of attendance at postpartum visits and content of visits by July 2015; visit rate to be measured up to 56 days after delivery, as well as number of postpartum care visits with particular content bundle; postpartum visit should include counseling about family planning and contraception, breastfeeding support, screening for postpartum depression, arrangement for appropriate transition to primary care provider in women with medical conditions, and general health messages about smoking cessation, weight, and exercise; physicians to be tracked on content of postpartum visits

Metrics for women’s health care: set forth by Healthcare Effectiveness Data and Information Set (HEDIS) and National Committee on Quality Assurance; metrics include screening for breast cancer and cervical cancer, screening for chlamydia, vaccinations for human papillomavirus, management of urinary incontinence, testing for osteoporosis in older women, entry into prenatal care, and postpartum care; family-planning quality metrics under discussion and may be added to HEDIS measures

**Proposed family-planning metrics:** 1) new proposals include One Key Question initiative used in Oregon; on annual basis every provider expected to ask patient whether she wants to become pregnant in ensuing year; 2) second proposed metric mix of contraceptive methods; this metric to track percentage of patients in provider’s practice using top- and middle-tier methods of contraception and percentage of patients starting top-tier methods; 3) third proposal most likely to be implemented first and endorsed by ACOG; this metric to track use of postpartum contraception within 100 days of delivery; 100-day period takes into account women who use lactational amenorrhea as contraception after delivery

**Questions and Answers**

**Injectable medroxyprogesterone:** in women with gestational diabetes, study evaluated relationship between contraceptive
methods and subsequent development of type 2 diabetes; breastfeeding women who used progestin-only methods (including injectable medroxyprogesterone) significantly more likely to develop type 2 diabetes; this relationship not observed in women who used IUD or oral contraceptives; however, since then several studies have refuted this finding, and authors of original study acknowledged its methodologic flaws; both MEC and guidelines from American Diabetes Association state that use of progestin-only methods reasonable in postpartum lactating or nonlactating women and that such use does not increase risk for type 2 diabetes in women with history of gestational diabetes

**Advanced maternal age:** older women who desire more children may not wish to follow recommendation for 2-yr IPI; in such cases, physician should provide counseling about risks and benefits of longer IPI including aging of oocytes, low birth weight, and preterm birth

**Timing of postpartum visit:** ACOG recommends visit at 42 days postpartum; in high-risk, low-income population, physician may consider 2 postpartum visits, at 14 and 42 days; however, some experts argue that postpartum visits should be conducted at 21 days and 90 days after delivery (with nonlactating women starting contraception at 21 days postpartum and lactating women starting contraception at 90 days postpartum); this approach sensible but few institutions have adopted it

**Suggested Reading**


**Acknowledgments**

Dr. Policar was recorded at the 2015 Obstetrics and Gynecology Update: What Does the Evidence Tell Us?, held on October 14-16, 2015, in San Francisco, CA, presented by the Department of Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco, School of Medicine. For information about upcoming CME activities from the University of California, San Francisco, School of Medicine, please visit cme.ucsf.edu. The Audio Digest Foundation thanks Dr. Policar and University of California, San Francisco, School of Medicine for their cooperation in the production of this program.

**Accreditation:** The Audio Digest Foundation is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

**Designation:** The Audio Digest Foundation designates this enduring material for a maximum of 2 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Academy of Physician Assistants (AAPA) accepts certificates of participation for educational activities designated for AMA PRA Category 1 Credit™ from organizations accredited by ACCME or a recognized state medical society. Physician assistants may receive a maximum of 2 Category 1 CME credits for each Audio Digest activity completed successfully.

Audio Digest Foundation is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center’s (ANCC’s) Commission on Accreditation. Audio Digest designates each activity for 2.0 CE contact hours.

Audio Digest Foundation is approved as a provider of nurse practitioner continuing education by the American Academy of Nurse Practitioners (AANP Approved Provider number 030904). Audio Digest designates each activity for 2.0 CE contact hours, including 0.5 pharmacology CE contact hours.

The California State Board of Registered Nursing (CA BRN) accepts courses provided for AMA PRA Category 1 Credit™ as meeting the continuing education requirements for license renewal.

**Expiration:** This CME activity qualifies for AMA PRA Category 1 Credit™ for 3 years from the date of publication.

**Cultural and linguistic resources:** In compliance with California Assembly Bill 1195, Audio Digest Foundation offers selected cultural and linguistic resources on its website. Please visit this site: www.audiodigest.org/CulturalResources.

**Estimated time to complete the educational process:**

- Review Educational Objectives on page 1: 5 minutes
- Take pretest: 10 minutes
- Listen to audio program: 60 minutes
- Review written summary and suggested readings: 35 minutes
- Take posttest: 10 minutes
POSTPARTUM VISIT

To test online, go to www.audiodigest.org and sign in to online services.
To submit a test form by mail or fax, complete Pretest section before listening and Posttest section after listening.

1. The optimal interpregnancy interval (IPI) is at least:
   (A) 18 mo  (B) 21 mo  (C) 24 mo  (D) 27 mo

2. Women using top-tier methods of contraception are _______ as likely to have an optimal IPI as women using barrier methods.
   (A) 2 times  (B) 3 times  (C) 4 times  (D) 5 times

3. A study found that the rate of pregnancy within 12 mo postpartum in women who requested but did not receive a postpartum tubal ligation was:
   (A) 20%  (B) 30%  (C) 50%  (D) 75%

4. Nonlactating women typically ovulate _______ days after delivery.
   (A) 21  (B) 25  (C) 45  (D) 70

5. Which of the following statements about postpartum use of hormonal contraceptives is true?
   (A) Progestin-only oral contraceptives do not affect the quality or quantity of breast milk **
   (B) The fat content of breast milk is affected by type of hormonal contraception used
   (C) Oral contraception started 42 days postpartum is associated with a decrease in quantity of breast milk
   (D) Initiation of oral contraceptives during the postpartum period is associated with increased duration of breastfeeding

6. The absolute risk for deep venous thrombosis or pulmonary embolism during pregnancy is:
   (A) 2 per 10,000 women/yr  (C) 10 per 10,000 women/yr
   (B) 5 per 10,000 women/yr  (D) 30 per 10,000 women/yr **

7. According to Centers for Disease Control Medical Eligibility Criteria (MEC), the use of hormonal contraceptives in a breastfeeding woman who is 25 days postpartum is:
   (A) Category 4 (health risk unacceptable)  (C) Category 2 (benefits usually outweigh risks)
   (B) Category 3 (risks usually outweigh benefits)  (D) Category 1 (no restrictions)

8. According to Centers for Disease Control MEC, the use of oral progestin, injectable medroxyprogesterone, and progesterone implants in a nonbreastfeeding woman who is 25 days postpartum is:
   (A) Category 4 (health risk unacceptable)
   (B) Category 3 (risks usually outweigh benefits)
   (C) Category 2 (benefits usually outweigh risks)
   (D) Category 1 (no restrictions)

9. According to Centers for Disease Control MEC, the immediate placement of a levonorgestrel intrauterine system in a postpartum woman before discharge from the hospital is:
   (A) Category 4 (health risk unacceptable)
   (B) Category 3 (risks usually outweigh benefits)
   (C) Category 2 (benefits usually outweigh risks)
   (D) Category 1 (no restrictions)

10. Which of the following metrics is currently used by the Healthcare Effectiveness Data and Information Set and the National Committee on Quality Assurance to assess the performance of health care providers?
    (A) Provision of contraception within 100 days postpartum
    (B) Entry into prenatal care
    (C) Mix of contraceptive methods prescribed by physician
    (D) One Key Question about desire for pregnancy in the ensuing year

Answers to Audio Digest Obstetrics/Gynecology Volume 63, Issue 01: 1-A, 2-A, 3-B, 4-B, 5-D, 6-D, 7-A, 8-C, 9-B, 10-D