

Can we solve the problem of inadequate contraception for women at high risk for adverse pregnancy outcomes?

There's a nationwide gap in contraceptive services — many reproductive-aged women with serious medical problems are not receiving adequate contraception



Robert L. Barbieri, MD

Editor in Chief, OBG MANAGEMENT
Chair, Obstetrics and Gynecology
Brigham and Women's Hospital, Boston, Massachusetts
Kate Macy Ladd Professor of Obstetrics,
Gynecology and Reproductive Biology
Harvard Medical School, Boston

In the United States contraception practices are slowly improving, with robust evidence for the increased use of long-acting reversible contraceptives and preliminary data that the unintended pregnancy rate may be decreasing for the first time in many years.¹ There remains a major gap in contraception practice, however: US women with chronic disease who are at high risk for adverse pregnancy outcomes are not receiving adequate contraceptive counseling or adequate contraception.^{2,3} In one study, the majority of women with hypertension, diabetes, epilepsy, stroke, heart disease, lupus, or thrombophilia were not using a prescription contraceptive.³

Recently, I have seen women with major medical problems, who have had many visits with specialists and primary care clinicians, but who have not had their contraceptive needs prioritized. Here are but a few examples:

- We recently cared for a patient with heart disease and severe pulmonary hypertension, who had many procedures performed by cardiologists

and cardiac surgeons, but contraception had not been prioritized as one of her foremost medical needs.

- A young woman who had a pulmonary embolism 1-month postpartum reported that her primary care clinician said that she could never use any hormonal contraceptive, including the progestin-only pill, progestin-implant, and the progestin-releasing intrauterine device (IUD). She was not taking a contraceptive and had an unplanned pregnancy.
- A middle-aged woman with diabetes and a glycosylated hemoglobin A_{1c} (HbA_{1c}) value greater than 10% was regularly seeing her primary care clinician, but was not using an effective contraceptive. She became pregnant with a fetus that had a major congenital anomaly.

Clearly, there is a major gap between current and optimal contraceptive services for women with chronic medical problems. Women with diabetes and heart disease are affected substantially, as the evidence I present in this editorial indicates. Studies also show that women taking teratogenic

medications do not receive the vital counseling that they should regarding contraception. Given the potential detrimental adverse events to both mother and fetus, obstetrician-gynecologists are poised to offer solutions to this concerning inadequacy of care.

Diabetes

Women with diabetes and an abnormally elevated HbA_{1c} level are at high risk for many adverse pregnancy outcomes, including major congenital malformations and intrauterine fetal demise.⁴ Unfortunately, results of many studies indicate that women with diabetes are not receiving adequate contraceptive services.⁵⁻⁷ In one review of records at Kaiser Permanente Northern California, investigators reported that 62% of 122,921 healthy women, but only 48% of 8,182 women with diabetes, received contraceptive counseling, a contraceptive prescription, or contraceptive services.⁵

Why is it that so many women with diabetes do not receive contraceptive services? One possibility is that clinicians are reluctant to prescribe

CONTINUED ON PAGE 10

oral hormonal contraceptives that contain estrogen to their patients with diabetes because of a perceived increased risk of cardiovascular events.⁸ In the Kaiser study, 31% of the healthy women, and only 13% of the women with diabetes, were using a pill, patch, or ring (most of which contain estrogen).⁵ In this same study, the rate of utilization of an IUD was similar in the healthy (6.5%) and diabetic (5.6%) women. The IUD is known to be safe for use in women with diabetes.⁹

The low rate of utilization of intrauterine contraception by women with diabetes is a gap that gynecologists are well positioned to help solve.

Heart disease

In developed countries, a major cause of maternal mortality is pregnancy among women with congenital or acquired heart disease.¹⁰ Misinformation is a common problem in contraceptive counseling. In a recent study of 83 sexually active women with congenital heart disease, 6 women were told that they could not use an IUD or progestin-implant because they were unsafe for those with repaired congenital heart disease.¹¹ In this cohort of women, who were at high risk for adverse pregnancy outcomes, 45% of pregnancies were unplanned, similar to the rate among healthy women.

On a positive note, authors of a small study from Maryland found that, among women with heart disease, the self-reported use of a contraceptive increased from 60% pre-pregnancy to 93% following delivery.¹²

Clearly, patient interaction with qualified women's health clinicians can increase contraceptive use in those with high-risk medical issues.

Teratogenic medications

Should reproductive-age women taking long-term methotrexate for

treatment of rheumatoid conditions receive contraceptive counseling? The answer is clearly, "yes." Methotrexate can cause fetal death or major congenital malformations, such as absence of digits and oxycephaly (premature closure of the skull sutures). All women of reproductive age prescribed known teratogens should receive effective contraception. Unfortunately, data do not indicate this is occurring.

In one study of 1,694 adolescents and young women aged 14 to 25 years who were prescribed a teratogen, only 29% received documented contraception counseling, and only 11% received a contraceptive prescription or were documented to be actively using a contraceptive.¹³ The most commonly prescribed teratogens in this study were topiramate, methotrexate, and isotretinoin. Among the specialists who prescribed the medications, dermatologists documented contraceptive counseling in 47% of visits—likely because of the federally mandated risk mitigation system for prescribing isotretinoin. Neurologists and hematologists were least likely to document contraceptive counseling, at 16% and 28%, respectively.¹³

In a study of 488,175 women aged 15 to 44 years receiving care from clinicians at Kaiser Permanente Northern California, contraceptive counseling documentation was compared among women prescribed US Food and Drug Administration (FDA) category A or B medications (nonteratogenic) versus FDA category D or X medications (teratogenic).¹⁴ The rate at which women had no contraceptive counseling recorded was similar whether a teratogenic (47.6%) or nonteratogenic (46%) medication was prescribed. Clearly, there is a gap

between current and optimal practice when teratogens are prescribed to women of reproductive age.

What could improve contraceptive services for women with serious medical problems?

One promising approach is to **include contraception status as a vital sign** for all women and men of reproductive age. Most electronic medical records prioritize assessment of such health vital signs as allergies, smoking status, depression screening, falls prevention, blood pressure, temperature, heart rate, weight, and height. Contraception status is of equal importance to these vital signs in women and men of reproductive age and should be routinely documented.

Another intervention is to create a standard of care in which reproductive-age women with major medical problems are routinely referred to a clinician who has the time and skill to provide a comprehensive contraception visit. **Health systems could take greater responsibility for managing the contraception practices of their members.** For example, within a given accountable care organization the electronic health record could be used to identify adult women of reproductive age with diabetes and an HbA_{1c} level greater than 7%. These women could be contacted to ascertain their contraception status and their need for a contraception health visit. Electronic health records could be utilized to identify all reproductive-age women taking a teratogenic medication. A computer-generated alert could be sent to the responsible clinician recommending referral to an obstetrician-gynecologist for a contraceptive services visit.¹⁵

Pharmacists could be more proactive in highlighting the importance of contraception for women prescribed teratogens and in recommending a contraceptive visit. In some states pharmacists can offer an oral hormonal contraceptive to women who are prescribed a teratogen and at risk for becoming pregnant.

How do you propose to address lack of counseling?

As an experienced clinician, you likely have ideas about how to improve

contraceptive counseling for women with significant medical problems. Please let me know what interventions you think would best improve the use of contraception in this group of high-risk women by emailing me at OBG.MANAGEMENT.

RBARBIERI@FRONTLINEMEDCOM.COM

Dr. Barbieri reports no financial relationships relevant to this article.

References

1. Kavanaugh ML, Jerman J, Finer LB. Changes in use of long-acting reversible contraceptive methods among US women, 2009-2012. *Obstet Gynecol.* 2015;126(5):917-927.
2. DeNoble AE, Hall KS, Xu X, Zochowski MK, Piehl K, Dalton VK. Receipt of prescription contraception by commercially insured women with chronic medical conditions. *Obstet Gynecol.* 2014;123(6):1213-1220.
3. Champaloux SW, Tepper NK, Curtis KM, et al. Contraceptive use among women with medical conditions in a nationwide privately insured population. *Obstet Gynecol.* 2015;126(6):1151-1159.
4. Klingensmith GJ, Pyle L, Nadeau KJ, et al; TODAY Study Group. Pregnancy outcomes in youth with type 2 diabetes: the TODAY study experience. *Diabetes Care.* 2016;39(1):122-129.
5. Schwarz EB, Postlethwaite D, Hung YY, Lantzman E, Armstrong MA, Horberg MA. Provision of contraceptive services to women with diabetes mellitus. *J Gen Int Med.* 2011;27(2):196-201.
6. Schwarz EB, Maselli J, Gonzales R. Contraceptive counseling of diabetic women of reproductive age. *Obstet Gynecol.* 2006;107(5):1070-1074.
7. Chuang CH, Chase GA, Bensyl DM, Weisman CS. Contraceptive use by diabetic and obese women. *Womens Health Issues.* 2005;15(4):167-173.
8. Lidgaard O. Hormonal contraception, thrombosis and age. *Expert Opin Drug Saf.* 2014;13(10):1353-1360.
9. Goldstuck ND, Steyn PS. The intrauterine device in women with diabetes mellitus type I and II: a systematic review. *ISRN Obstet Gynecol.* 2013;814062. doi:10.1155/2013/814062.
10. Thompson JL, Kuklina EV, Bateman BT, Callaghan WM, James AH, Grotegut CA. Medical and obstetric outcomes among pregnant women with congenital heart disease. *Obstet Gynecol.* 2015;126(2):346-354.
11. Lindley KJ, Madden T, Cahill AG, Ludbrook PA, Billadello JJ. Contraceptive use and unintended pregnancy in women with congenital heart disease. *Obstet Gynecol.* 2015;126(2):363-369.
12. Perritt JB, Burke A, Jasmshidli R, Wang J, Fox M. Contraception counseling, pregnancy intention and contraception use in women with medical problems: an analysis of data from the Maryland Pregnancy Risk Assessment Monitoring System (PRAMS). *Contraception.* 2013;88(2):263-268.
13. Stancil SL, Miller M, Briggs H, Lynch D, Goggin K, Kearns G. Contraceptive provision to adolescent females prescribed teratogenic medications. *Pediatrics.* 2016;137(1):1-8.
14. Schwarz EB, Postlethwaite DA, Hung YY, Armstrong MA. Documentation of contraception and pregnancy when prescribing potentially teratogenic medications for reproductive-age women. *Ann Int Med.* 2007;147(6):370-376.
15. Mody SK, Wu J, Ormelas M, et al. Using the electronic medical record to refer women taking category D or X medications for teratogen and contraceptive counseling. *Birth Defects Res A Clin Mol Teratol.* 2015;103(7):644-647.



Could you answer posttest questions on this editorial?

Find out! To test yourself, visit obgmanagement.com/md-iq-quizzes.

Free registration required.

This space has purposely been left blank.