The Underutilization of Emergency Contraception

Examining the reasons underlying this clinical gap in health care.

OVERVIEW: Despite the availability of effective contraceptive methods, unintended pregnancy continues to be a significant health problem for women throughout the world. The reasons for unplanned pregnancy include failure to use contraception, incorrect use of contraception, unplanned consensual intercourse, and rape. Emergency contraception was once heralded as a means of reducing the rates of unintended pregnancy, elective abortion, and unwanted childbirth. But more than three decades after the first oral form was introduced, the use of emergency contraception remains suboptimal—even in the United States, where it is available to most women of childbearing age without a prescription. Nurses can help narrow this clinical gap in women's health care by increasing awareness of emergency contraception, correcting common misconceptions about its mechanism of action and potential adverse effects, and facilitating patient access.

Keywords: emergency contraception, postcoital intervention, unintended pregnancy

Between 1994 and 2001, nearly half of all U.S. pregnancies were unintended, with 48% occurring despite the use of contraception during the month preceding the pregnancy.[1] In 2001, 79% of pregnancies reported among 18-to-19-year-old U.S. women, and 60% of those reported among 20-to-24-year-old U.S. women, were unintended.[1] Low-income women may be particularly vulnerable to unplanned pregnancy. In 2006, the overall rate of unplanned pregnancy in the United States was 52 per 1,000 women between the ages of 15 and 44 years, but the rate among poor women was five times that of women in the highest income level.[2]

Unintended pregnancy is widely recognized as detrimental to the health and well-being of both the women who become pregnant and any children born as a result.[1,3] In 2004 nearly 20% (1.22 million) of the almost 6.4 million pregnancies in the United States ended in induced abortion.[4] A study of contraceptive use patterns between 2000 and 2001 found that, in a single year, emergency contraception could prevent approximately 51,000 abortions in this country. The study also estimated that the availability of emergency contraception was responsible for a 43% decline in total U.S. abortions between 1994 and 2000.[5]

Emergency contraception, also called postcoital contraception, refers to any birth control method that can be used to prevent pregnancy after intercourse has occurred.[6] The American Congress of Obstetricians and Gynecologists (ACOG; formerly the American College of Obstetricians and Gynecologists) has prioritized increased awareness of emergency contraception as a means of

Jennifer Lanza, RN (right), provides family planning counseling to Emilynn Villanueva at the Planned Parenthood Mar Monte North Highlands Health Clinic in North Highlands, California. Photo by Dick Schmidt / *Sacramento Bee* / Zuma Press.

preventing unintended pregnancy, and the U.S. Department of Health and Human Services' Healthy People 2020 initiative has established as a goal to increase both the proportion of pregnancies that are intended and the proportion of publicly funded family planning clinics that offer emergency contraception.[3, 7] In addition to ACOG, numerous other U.S. organizations concerned with women's reproductive health care support the use of emergency contraception, including the Association of Women's Health, Obstetric and Neonatal Nurses[8]; the American Medical Women's Association[9]; the National Association of Nurse Practitioners in Women's Health[10]; and the American Academy of Family Physicians.[11] Because nurses who have women patients of childbearing potential routinely provide counseling on a variety of health-promoting behaviors, they are ideally suited to raise awareness of emergency contraception, explain how it works, and help patients gain access to it.

THE MORNING AFTER: NOT TOO LATE

Oral emergency contraception, commonly called "the morning-after pill," has been available in Europe since the 1970s, and oral contraceptives were prescribed off-label for this purpose in the United States long before the U.S. Food and Drug Administration (FDA) approved a dedicated oral emergency contraceptive product in 1998.[12] Oral formulations are safe and highly effective in preventing unintended pregnancy.[13, 14]

When conventional oral contraceptive pills, containing both estrogen and progestin, were used for emergency contraception, it was necessary to take up to 20 at a time and often resulted in vomiting.[6, 12, 15] The first pills marketed specifically as emergency contraception also combined estrogen and progestin, but today the most commonly used oral form contains only the progestin levonorgestrel (Plan B One-Step, Next Choice), which is associated with fewer adverse effects than estrogen and progestin combined.[15] The dosage is either a single 1.5-mg pill

to be taken as soon as possible following unprotected intercourse[16] or two 0.75-mg pills, the first to be taken as soon as possible following unprotected intercourse and the second 12 hours later.[17]

In 2009 the FDA ruled that women ages 17 and older could purchase levonorgestrel without a prescription.[18] Like the estrogen–progestin emergency contraception that preceded it, levonorgestrel is typically priced between $40 and $50 in commercial pharmacies but is available at no charge from many family planning centers.

In August 2010 the FDA approved the single-dose pill ulipristal acetate (Ella), which prevents pregnancy for up to five days after intercourse. This 30-mg pill is available only by prescription, but it gives women a longer time frame within which to prevent unintended pregnancy than levonorgestrel.[19, 20] It is priced similarly to levonorgestrel, though it is available at family planning centers only when a licensed, prescribing provider at the site is available to distribute it.

With a pregnancy prevention rate of 99%, the copper IUD is considered the most effective form of emergency contraception.

Emergency contraceptive pills are highly effective if used within 72 hours of unprotected intercourse, and some studies have shown that even the earlier estrogen–progestin pills are 51% to 62% effective up to 120 hours following unprotected intercourse.[21] When used within 72 hours of unprotected intercourse, levonorgestrel is associated with pregnancy prevention rates ranging from 79% (two-dose form) to 84% (single-dose form).[22] Ulipristal acetate is equally effective when taken within 72 hours of unprotected intercourse but has the advantage of remaining effective up to 120 hours following intercourse. When taken between 96 and 120 hours after intercourse, ulipristal acetate has a pregnancy prevention rate of up to 75%.[23]

It's believed that all three forms of oral emergency contraception work primarily by preventing ovulation.[7, 20, 24] They may also prevent fertilization, much like traditional oral contraception.[24] Although it was once widely believed that these methods prevented implantation of a fertilized egg by reducing the receptivity of the endometrium, recent studies indicate that the endometrial changes they produce are insufficient to prevent implantation.[7]

All oral forms of emergency contraception are associated with the short-term adverse effects of headache, dysmenorrhea, and nausea.[6] But a multicenter, randomized study of 2,221 women who received either levonorgestrel or ulipristal acetate within 120 hours of unprotected intercourse found that fewer than 20% in either group experienced these effects.[19] Since oral emergency contraception is not effective as an abortifacient, pregnancy is a contraindication.[16, 20]

An alternative emergency contraceptive method is the copper intrauterine device (IUD), which may be inserted by the woman's health care provider up to one week following unprotected intercourse and left in place for up to 10 years thereafter.[6] Because the initial cost of IUD insertion is about $500, an IUD may best be used as emergency contraception in women who also intend to use it for long-term contraceptive purposes.[25] The cost of follow-up over a five-year period is estimated to be about $1,650.[25] With a pregnancy prevention rate of 99%, the copper IUD is considered the most effective form of emergency contraception.[6] Unlike the oral forms of emergency contraception, the IUD is believed to prevent pregnancy by interfering with implantation, either by altering the endometrium or through the copper ions' effects on the embryo.[6] Its use is not recommended in women at high risk for pelvic inflammatory disease or sexually transmitted diseases, or in women with compromised immune response, valvular heart disease, certain uterine irregularities, or a history of dysmenorrhea.[6]

TOO SAFE A SECRET

Despite the safety and efficacy of emergency contraception, its use remains low, owing in large part to a lack of awareness among women. Of 7,643 women of childbearing age who responded to a 2002 survey on contraceptive use, only 3% reported that a clinician had discussed emergency contraception with them in the preceding year, and among those who had seen a gynecologist for a Papanicolaou smear or pelvic exam within the previous year, the proportion was not much higher—only 4%.[26] A number of studies performed by nurses indicate that women's health care providers do not routinely discuss emergency contraception with them.[14, 27] As nurse midwives Brunton and Beal have noted, even when women are aware of emergency contraception, they're not often knowledgeable enough to use it effectively.[15]

There are many reasons for this lack of communication between providers and patients. Studies of gynecologists and family medicine practitioners have shown that physician knowledge of emergency contraception varies widely.[28, 29] Intention to educate also

plays a role. A survey of 96 faculty physicians from one Southern and three Midwestern universities found that providers with a low intention to educate were more likely to view discussions of emergency contraception during clinic visits as inconvenient and time consuming.[28]

promotes risky sexual behavior, though this is not supported by scientific evidence.[33] A related concern is that women, especially adolescent women, will be less likely to use regular contraception and more likely to repeat the use of emergency contraception if it's made easily available to them. These were not the findings, however, of two nurse researchers who conducted a chart review of 436 women between the ages of 12 and 50 who sought emergency contraceptive services at a Midwestern family planning clinic. They found that only 10.4% of their study sample returned for repeat emergency contraception within the same calendar year.[34]

Although providers may object to emergency contraception for a variety of reasons, their profession requires them to ensure that their patients receive comprehensive health care and patient education.

Few studies specifically address the practices of NPs and RNs regarding emergency contraception, but in 1997 the Henry J. Kaiser Family Foundation published a report summarizing the findings of a survey that looked at related attitudes, beliefs, and prescribing practices of obstetricians and gynecologists, family practice physicians, NPs, and physician assistants.[30] The survey included 229 NPs and found that NPs considered oral emergency contraception to be safe and effective but rarely discussed it with their patients and only when they perceived that the patient was in an emergency situation.

Perhaps some NPs don't realize that emergency contraceptive pills are "behind the counter" but accessible to all women ages 17 or older without a prescription. Others may falsely believe that most women know about emergency contraception and see no need to counsel them.

PROVIDER DISCOMFORT

Although the Kaiser Family Foundation found that a minority of health care providers had religious or moral objections to emergency contraception (11% of obstetrician–gynecologists, 27% of family practice physicians, and 16% of NPs and physician assistants),[30] such beliefs and concerns may interfere with patient teaching. For example, some providers misunderstand the mechanism of action underlying oral emergency contraception, falsely equating it with that of the abortifacient mifepristone (Mifeprex).[31] Others may oppose emergency contraception based on religious objection to any form of birth control.

Some providers have safety concerns. Yet at least one study has found no reported increase in birth defects in pregnancies that continued despite the use of emergency contraceptive pills.[32] Others believe that emergency contraception, particularly if provided in advance of unprotected intercourse,

Although providers may object to emergency contraception for a variety of reasons, their profession requires them to ensure that their patients receive comprehensive health care and patient education. If a nurse or other clinician is unwilling to counsel patients about emergency contraception and their practice is funded by Title X, they are required to refer female patients to another provider who possesses both the expertise and the willingness to provide that component of contraceptive education.[35] Providers are required, in visits specific to family planning, to discuss all forms of contraception, including emergency contraception.

PROVIDER REFUSAL AND THE CONSCIENCE CLAUSE

At least 14 states have policies allowing health care providers to refuse to provide contraceptive services. And, even in states without explicit refusal laws, decisions to not provide these services on religious grounds may be protected by antidiscrimination statutes.[36] The position statement of the American College of Clinical Pharmacy, *Prerogative of a Pharmacist to Decline to Provide Professional Services Based on Conscience*, supports the right of pharmacists to refuse to fill any prescription they feel is in conflict with their personal, moral, religious, or ethical beliefs.[37] Although a 2009 FDA ruling makes most emergency contraceptive pills available over the counter to women ages 17 and older, pharmacists may still refuse to sell emergency contraceptives to women. In the event of such a refusal, the "conscience clause"

directs the pharmacist to refer the woman to another pharmacist or health care provider in an "effective and timely manner." The vague language of this directive, however, could significantly delay the administration of emergency contraception, reducing its efficacy.

NPs who prescribe emergency contraception, especially in rural areas where there's a limited number of pharmacies, might call ahead to ensure that there's a pharmacist on the premises willing to dispense the medication to the patient. In addition, NPs might consider prescribing emergency contraception to patients in advance of emergencies. Both ACOG and the American Medical Association endorse advance provision of emergency contraception to expand access.[38, 39]

OTHER ACCESS BARRIERS

Since the late 1990s, state legislatures have taken steps to expand or restrict women's access to emergency contraception (see *Access to Emergency Contraception in the United States*).[36] Illinois and Washington State stipulate that pharmacies that stock any form of birth control must sell emergency contraceptive pills. Other states specifically discourage pharmacists from refusing to fill prescriptions or sell emergency contraception. Several states require health care facilities to offer emergency contraception to all women who present and report sexual assault. Others, however, have excluded emergency contraception from state Medicaid family planning eligibility expansions or contraceptive coverage mandates.

Access to Emergency Contraception in the United States

The Guttmacher Institute has compiled the following list, highlighting the ways in which access to emergency contraception has been expanded in some states and restricted in others.

Expanding access.

- 17 states and the District of Columbia require hospital EDs to provide emergency contraception–related services to sexual assault victims.
- 16 states and the District of Columbia require EDs to provide information about emergency contraception.
- 12 states and the District of Columbia require EDs to dispense emergency contraception on request to assault victims.
- 9 states allow pharmacists to dispense emergency contraception without a prescription under certain conditions.
- 7 states allow pharmacists to distribute emergency contraception when acting under a collaborative practice agreement with a physician.
- 3 states, including 1 that also gives pharmacists the collaborative-practice option, allow pharmacists to distribute emergency contraception in accordance with a state-approved protocol.
- 4 states direct pharmacies to fill all valid prescriptions.
- 1 state directs pharmacists to fill all valid prescriptions.

Restricting access.

- 10 states have adopted restrictions on emergency contraception.
- 1 state legislature, in directing the state to apply for federal approval (known as a waiver) to expand eligibility for Medicaid-covered family planning services, added language aimed at excluding emergency contraception from covered services.
- 2 states exclude emergency contraception from their contraceptive coverage mandate.
- 6 states explicitly allow pharmacists to refuse to dispense contraceptives, including emergency contraception.
- 2 states explicitly allow pharmacies to refuse to dispense contraceptives, including emergency contraception.

Adapted from Guttmacher Institute, Emergency contraception, *In Brief*, New York: Guttmacher Institute, 2012, http://www.guttmacher.org/statecenter/spibs/spib_EC.pdf, accessed February 14, 2012.

The restriction of funding creates cost barriers for women who are disadvantaged. Although the cost of providing emergency contraception to a woman who wants to prevent a pregnancy is minimal compared with the costs of prenatal care, hospitalization for childbirth (and subsequent hospitalizations if complications arise), and ongoing pediatric health care, 16 states and the District of Columbia do not provide Medicaid coverage for emergency contraception (data are unavailable for another eight states).[40]

When private institutions merge with public health care facilities, religious and moral objections can create insurmountable access barriers to emergency contraception. But occasionally, creative compromises can be reached. Nursing historian Barbra Mann Wall has detailed the experience of hospital administrators and religious leaders in Austin, Texas, who in 1995 worked through very contentious issues related to women's reproductive rights when a large Catholic health care system merged with a local tax-supported hospital that had provided the bulk of family planning services in the area.[41] Because the Catholic Church opposes all forms of contraception other than fertility awareness, compromise required much negotiation and education. Finally, an agreement was reached in which a "hospital within the hospital" was established to provide both regular care and emergency contraception to women who had been sexually assaulted. The agreement stipulated that women who wanted emergency contraception for reasons unrelated to assault would be referred to a public hospital. This was a compelling example of the passion with which people on both sides of this reproductive issue defend their positions and the compromises that are possible when each side is willing to be educated by the other.

HOW NURSES CAN IMPROVE ACCESS

State practice acts may specify the roles RNs play in providing care, counseling, and health education to patients. But now that several oral forms of emergency contraception are available to women ages 17 or older without a prescription, RNs in all states are licensed to counsel women and facilitate their access to them.

Advanced practice nurses, particularly those who care for adolescents (the population that may be most negatively affected by unintended pregnancy), can improve patient understanding of and access to emergency contraceptive methods by explaining to both male and female patients, at every visit, how emergency contraception works and how to obtain it.[42] Having this conversation reinforces that the nurse is open to discussing sexual activity and any related concerns, and sharing the information with patients of both sexes increases the likelihood that at least one partner will be aware of emergency contraceptive options if unprotected sex occurs.

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NEED FOR RESEARCH AND EDUCATION

Although physicians are inconsistent in providing patients with information about emergency contraception, there's no evidence that NPs and RNs are doing any better in this area. Even in government-subsidized health care clinics that function under mandated emergency contraception protocols, emergency contraceptive services are not always delivered optimally. Rates of unintended pregnancy continue to be unacceptably high in a country in which many effective methods of contraception are available.

It's important that research specific to the knowledge, attitudes, and counseling practices of nurses regarding emergency contraception be conducted with the goal of developing evidence-based recommendations for improving nursing practices and, in turn, patient outcomes. Developing continuing education programs on emergency contraception specifically geared toward NPs, certified nurse midwives, and RNs, as well as printed materials for providers to share with patients, may also be effective.

Nurses need to be knowledgeable to help make women of childbearing age aware of their options and of access to emergency contraception. ▼

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REFERENCES

1. Finer LB, Henshaw SK. Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. *Perspect Sex Reprod Health* 2006;38(2):90-6.
2. Finer LB, Zolna MR. Unintended pregnancy in the United States: incidence and disparities, 2006. *Contraception* 2011; 84(5):478-85.
3. HealthyPeople.gov. *HealthyPeople 2020. Family planning: overview*. U.S. Department of Health and Human Services. 2011. http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicId=13.
4. Ventura SJ, et al. Estimated pregnancy rates by outcome for the United States, 1990-2004. *Natl Vital Stat Rep* 2008;56 (15):1-25, 28.
5. Jones RK, et al. Contraceptive use among U.S. women having abortions in 2000-2001. *Perspect Sex Reprod Health* 2002;34(6):294-303.
6. Lindberg CE. Emergency contraception: the nurse's role in providing postcoital options. *J Obstet Gynecol Neonatal Nurs* 1997;26(2):145-52.
7. American College of Obstetricians and Gynecologists. ACOG Practice Bulletin No. 112: Emergency contraception. *Obstet Gynecol* 2010;115(5):1100-9.
8. Association of Women's Health, Obstetric and Neonatal Nurses. *AWHONN submits testimony on making Plan B an OTC drug*. Washington, DC; 2003.
9. Devi G, et al. AMWA position statement on emergency contraception. *J Womens Health (Larchmt)* 2009;18(10):1539-40.
10. National Association of Nurse Practitioners in Women's Health. Statement of the National Association of Nurse Practitioners in Women's Health: FDA's decision about emergency contraception [press release]. 2004 May 13. www.npwh.org/files/public/plan%20b%20press.doc.
11. Cerel-Suhl SL, Yeager BF. Update on oral contraceptive pills. *Am Fam Physician* 1999;60(7):2073-84.
12. Boonstra H. Emergency contraception: the need to increase public awareness. *Guttmacher Rep Public Policy* 2002;5 (4):3-6.
13. Cheng L, et al. Interventions for emergency contraception. *Cochrane Database Syst Rev* 2008(2):CD001324.
14. Cunnane MS, et al. Women's experiences with emergency contraception in an internal medicine practice. *J Womens Health (Larchmt)* 2006;15(9):1080-9.
15. Brunton J, Beal MW. Current issues in emergency contraception: an overview for providers. *J Midwifery Womens Health* 2006;51(6):457-63.
16. Duramed Pharmaceuticals. *Highlights of prescribing information: Plan B One-Step (levonorgestrel) tablet, 1.5 mg for oral use*. Pomona, NY; 2009. http://www.accessdata.fda.gov/drugsatfda_docs/label/2009/021998lbl.pdf.
17. Watson Pharma. *Physician labeling: Next Choice (levonorgestrel) tablets, 0.75 mg*. Corona, CA; 2009 Jun. http://dailymed.nlm.nih.gov/dailymed/lookup.cfm?setid=14052755-0ffd-4191-9140-9577c6f420ac.
18. Teva Pharmaceutical Industries. FDA approves Plan B One-Step, a new one-pill emergency contraceptive [press release]. 2009 Jul 13. http://www.tevapharm.com/en-US/Media/News/Pages/2009/1555757.aspx.
19. Glasier AF, et al. Ulipristal acetate versus levonorgestrel for emergency contraception: a randomised non-inferiority trial and meta-analysis. *Lancet* 2010;375(9714):555-62.
20. Watson Pharma. *Highlights of prescribing information: ella (ulipristal acetate) tablet, 30 mg*. Morristown, NJ; 2010. http://www.accessdata.fda.gov/drugsatfda_docs/label/2010/022474s000lbl.pdf.
21. Trussell J, et al. Estimating the effectiveness of emergency contraceptive pills. *Contraception* 2003;67(4):259-65.
22. von Hertzen H, et al. Low dose mifepristone and two regimens of levonorgestrel for emergency contraception: a WHO multicentre randomised trial. *Lancet* 2002;360 (9348):1803-10.
23. Fine P, et al. Ulipristal acetate taken 48-120 hours after intercourse for emergency contraception. *Obstet Gynecol* 2010;115(2 Pt 1):257-63.
24. Aschenbrenner DS. Over-the-counter access to emergency contraception. *Am J Nurs* 2006;106(11):34-6.
25. Kirchheimer S. IUDs most cost-effective birth control. Best long-range option for effectiveness and wallet, says study. *WebMD Health News* 2003 Jul 29. http://www.webmd.com/sex/birth-control/news/20030729/iuds-most-cost-effective-birth-control.
26. Kavanaugh ML, Schwarz EB. Counseling about and use of emergency contraception in the United States. *Perspect Sex Reprod Health* 2008;40(2):81-6.
27. Corbett PO, et al. Emergency contraception: knowledge and perceptions in a university population. *J Am Acad Nurse Pract* 2006;18(4):161-8.
28. Kelly PJ, et al. Physicians' intention to educate about emergency contraception. *Fam Med* 2008;40(1):40-5.
29. Wallace JL, et al. Emergency contraception: knowledge and attitudes of family medicine providers. *Fam Med* 2004;36 (6):417-22.
30. Kaiser Family Foundation. *Survey of health care providers on emergency contraception*. Menlo Park, CA; 1997 Dec 1. http://www.kff.org/womenshealth/1352-contraception_3.cfm.
31. Chung-Park M. Emergency contraception knowledge, attitudes, practices, and barriers among providers at a military treatment facility. *Mil Med* 2008;173(3):305-12.
32. Zhang L, et al. Pregnancy outcome after levonorgestrel-only emergency contraception failure: a prospective cohort study. *Hum Reprod* 2009;24(7):1605-11.
33. Polis CB, et al. Advance provision of emergency contraception for pregnancy prevention: a meta-analysis. *Obstet Gynecol* 2007;110(6):1379-88.
34. Ahonen KA, Buchman D. Emergency contraception: profiles of women using Plan B in a small Midwestern U.S. community. *J Am Acad Nurse Pract* 2008;20(1):35-9.
35. Electronic Code of Federal Regulations. Title 42: Public health. Subchapter D—grants. Part 59—grants for family planning services. Section 59.5. Washington, DC; 2000.
36. Guttmacher Institute. *Emergency contraception*. New York; 2012 Jan 1. State policies in brief; http://www.guttmacher.org/statecenter/spibs/spib_EC.pdf.
37. American College of Clinical Pharmacy. *Position statement: prerogative of a pharmacist to decline to provide professional services based on conscience*. Washington, DC; 2005. http://www.accp.com/docs/positions/positionStatements/pos31_200508.pdf.
38. American College of Obstetricians and Gynecologists. ACOG steps up to get emergency contraception to women [press release]. 2006 May 8. http://classic.acog.org/from_home/publications/press_releases/nr05-08-06-1.cfm.
39. American Medical Association. *Access to emergency contraceptive. Policy of the House of Delegates H-75.985*; 2002.
40. Statehealthfacts.org. Over the counter emergency contraceptive pill coverage under Medicaid, 2009. Kaiser Family Foundation 2009.
41. Wall BM. Conflict and compromise: Catholic and public hospital partnerships. *Nurs Hist Rev* 2010;18:100-17.
42. Clements AL, Daley AM. Emergency contraception: a primer for pediatric providers. *Pediatr Nurs* 2006;32(2): 147-53.