Association of Reproductive Health Professionals

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Update on Emergency Contraception

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Learning Objectives:

At the conclusion of this activity, participants should be able to:

- Describe emergency contraception (EC) products, regimens, and access issues to ensure more consistent usage by patients.
- Outline and discuss mechanism of action of EC with patients as a means of dispelling myths surrounding these products.
- Respond to patients' concerns about the safety and efficacy of EC products using FDA guidelines.
- Provide evidence-based EC information and appropriate counseling and care to patients to ensure improved patient health care outcomes.

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Introduction

Unintended pregnancy continues to be a major public health issue in the United States. About one-half of the 6-million pregnancies in the United States each year are unintended (Figure 1).[1] The majority of women in their childbearing years (aged 15–44 years) use some form of contraception, but more than one-half of all unintended pregnancies occur when these women experience contraceptive failure. The remaining pregnancies occur in women not using any contraceptive method;[2] therefore, efforts to increase use of the most effective contraceptives would decrease the rate of unintended pregnancy.

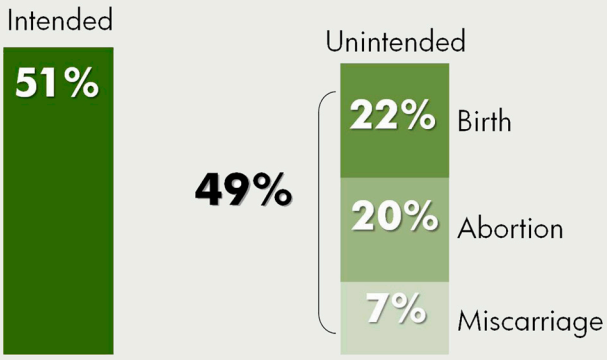

Figure 1. Annual Pattern of Pregnancies in the United States: Intended versus unintended pregnancies (6.3 million pregnancy totals).[1]

Emergency contraception (EC) has the potential to reduce women's risk of unintended pregnancy, and EC medications are the only contraceptive method that can easily be used postcoitally to prevent pregnancy.[3] EC is a therapy for women who have had unprotected sexual intercourse, including sexual assault and known or suspected contraceptive failure, and want to avoid pregnancy. The two most common reasons for seeking EC are failure of a barrier method (usually condoms) and failure to use any contraceptive method.[4]

Even women who do not desire pregnancy may practice contraception poorly or not use a birth control method. This contradiction can be explained by a number of factors, including women's ambivalence about potential pregnancy; experiences with contraceptive methods; partner influences; lifestyle factors such as travel, work, and relationships; and interactions with contraceptive care providers. These factors influence gaps in contraceptive use, which heighten the risk of unintended pregnancy.[5]

The need for EC, and ready access to it, may be more critical when women and families are faced with financial hardship. In the best of economic times, the poorest women are more likely to face unintended pregnancy. The Guttmacher Institute recently collected data on the effect of recession on women's family-planning decisions. In the current recession environment of increasing unemployment, lower incomes, and concerns about health insurance and access to care, one in four women have delayed a gynecologic or birth control visit to save money and one in four women are having a harder time paying for birth control. Many are stretching their monthly medication supply, changing to a less expensive (and perhaps less effective) method, or not using a contraceptive.[6]

Progestin-only emergency contraception pills (ECPs) are available without a prescription behind pharmacy counters for purchase by women and men 17 years of age or older in the United States. In the previous decade, the regulatory status for progestin-only ECPs has evolved from prescription-only to over-the-counter (OTC) for those 18 years or older and now to OTC for those 17 years or older. Although the changes and dual status (prescription-only or OTC based on age) have certainly improved access to progestin-only EC, they have also created confusion among patients, clinicians, and pharmacists. Recently, a new ECP was approved by the Food and Drug Administration (FDA), ella®. This prescription-only product gives women another option to prevent pregnancy after unprotected intercourse.

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EC Methods

Emergency contraceptives available in the United States include emergency contraception pills (ECPs) and the Copper T intrauterine device.[1,2,3]

ECPs

Three types of ECPs are available in the United States: combined ECPs containing both estrogen and progestin (Yuzpe method), progestin-only ECPs (Table 1), and an ECP containing ulipristal acetate (UPA).

Combined ECPs contain the hormones estrogen and progestin. The specific agents that have been studied extensively in clinical trials of ECPs are the estrogen ethinyl estradiol and the progestin levonorgestrel or norgestrel. A specially packaged combined ECP (Preven®) was approved by the Food and Drug Administration (FDA) in 1998 but withdrawn from the market in 2004 based on data showing that progestin-only EC was more effective. Combining estrogen and progestin hormones in this manner is also called the Yuzpe method, after the Canadian physician who first described the regimen.

Progestin-only ECPs have largely replaced the combined ECPs because they are more effective and cause fewer adverse effects. Although ECPs are commonly known as "morning-after pills," the term is misleading; ECPs may be initiated sooner than the name implies or much later than the morning after. Progestin-only ECPs are most effective when taken immediately after unprotected intercourse. Efficacy declines as time elapses between sex and drug administration. Progestin-only ECPs are approved by FDA for use up to 72 hours after intercourse. They are reasonably effective for up to 120 hours and perhaps longer.[4] However, patients should remember that progestin-only ECPs are more effective the sooner they are taken after unprotected sex.[5-8] While the effectiveness of progestin-only ECPs declines with delay in treatment, the effectiveness of the UPA ECP does not (up to 120 hours).

They're Really Not "Morning-after" Pills

Confusion persists about emergency contraceptives.

They are often called "morning-after" pills, but this is a misnomer for several reasons:

- They do not need to be taken the morning after unprotected intercourse.
- They may be taken up to 120 hours (5 days) after unprotected sex.

The progestin-only products currently approved by FDA for use in the United States contain levonorgestrel. Two progestin-only products are currently available in the United States:

- Next Choice® (two 0.75-mg tablets), approved by FDA in June 2009, is the branded generic of its two-tablet predecessor, Plan B® (first approved by FDA in July 1999).
- Plan B One-Step® (single 1.5-mg tablet), approved by FDA in July 2009.

The original treatment schedule was one 0.75-mg dose within 72 hours after unprotected intercourse and a second 0.75-mg dose 12 hours later. The 72-hour marker is listed on the label for both of the currently marketed progestin-only ECPs. However, subsequent studies have shown that a single dose of 1.5 mg is as effective as two 0.75-mg doses 12 hours apart.[5,6] A single 1.5-mg dose is now considered the evidence-based standard, and it can be effective up to 120 hours after unprotected intercourse. Also, this dosing regimen is easier for women and enhances adherence.

Recently, a second-generation anti-progestin, UPA, was FDA approved for use as EC in the US:

- ella® (one 30 mg tablet), approved by FDA August 13, 2010, marketed in Europe as ellaOne since October 2009.

A single 30 mg dose can be effective up to 120 hours after unprotected intercourse.

Table 1: Oral Contraceptives approved for EC in the United States[9]

Brand[a]	Manufacturer	Pills per Dose	Ethinyl Estradiol per Dose (mcg)	Levonorgestrel per Dose (mg)[b]
Dedicated emergency contraception (take one dose)				
Plan B One-Step™	Teva	1 white pill	0	1.5
Next Choice®	Watson	2 peach pills	0	1.5
ella®	Watson	1 white pill	0	0[c]
Combined progestin and estrogen pills (take two doses 12 hours apart)[d]				
Aviane™	Teva	5 orange pills	100	0.50
Cryselle™	Teva	4 white pills	120	0.60
Enpresse™	Teva	4 orange pills	120	0.50
Jolessa™	Teva	4 pink pills	120	0.60
Lessina®	Teva	5 pink pills	100	0.50
Levora™	Watson	4 white pills	120	0.60
Lo/Ovral®	Akrimax	4 white pills	120	0.60
LoSeasonique®	Teva	5 orange pills	100	0.50
Low-Ogestrel®	Watson	4 white pills	120	0.60
Lutera™	Watson	5 white pills	100	0.50
Lybrel®	Wyeth	6 yellow pills	120	0.54
Nordette®	Teva	4 light-orange pills	120	0.60
Ogestrel®	Watcon	2 white pills	100	0.50
Portia®	Teva	4 pink pills	120	0.60
Quasense®	Watson	4 white pills	120	0.60
Seasonale®	Teva	4 pink pills	120	0.60
Seasonique®	Teva	4 light-blue-green pills	120	0.60
Sronyx™	Watson	5 white pills	100	0.50
Trivora®	Watson	4 pink pills	120	0.50

Notes:

a Plan B One-Step, Next Choice, and ella are the only dedicated products specifically marketed for emergency contraception in the United States. Aviane, Cryselle, Enpresse, Jolessa, Lessina, Levora, Lo/Ovral, LoSeasonique, Low-Ogestrel, Lutera, Lybrel, Nordette, Ogestrel, Portia, Quasense, Seasonale, Seasonique, Sronyx and Trivora have been declared safe and effective for use as ECPs by the United States Food and Drug Administration. Outside the United States, more than 100 emergency contraceptive products are specifically packaged, labeled, and marketed. Levonorgestrel-only ECPs are available either over-the-counter or from a pharmacist without having to see a clinician in 60 countries. Plan B One-Step and Next Choice are available over-the counter to women and men aged 17 and older in the United States. A prescription is required for ella for women of all ages.

b The label for Plan B One-Step indicates to take the pill within 72 hours after unprotected intercourse. Research has shown that that all of the brands listed here are effective when used within 120 hours after unprotected sex. The label for Next Choice says to take one pill within 72 hours after unprotected intercourse and another pill 12 hours later. Research has shown that both pills can be taken at the same time with no decrease in efficacy or increase in side effects and that they are effective when used within 120 hours after unprotected sex.

c 30 mg ulipristal acetate within 120 hours after unprotected sex.

d The progestin in Cryselle, Lo/Ovral, Low-Ogestrel and Ogestrel is norgestrel, which contains two isomers, only one of which (levonorgestrel) is bioactive; the amount of norgestrel in each tablet is twice the amount of levonorgestrel.

When ECPs specifically indicated for EC are not available, certain other oral contraceptives can be used in specified combinations for EC. The regimen is one dose followed by a second dose 12 hours later, where each dose consists of up to six tablets depending on the brand. Currently, 19 brands of combined oral contraceptives are approved in the United States for use as EC (Table 1).

Copper T IUD

Copper T IUDs can be inserted up to the time of implantation—six to 12 days after ovulation[9]—to prevent pregnancy. Because of the difficulty in determining the day of ovulation, however, many protocols allow insertion up to only five days after unprotected intercourse. The latest WHO guidelines allow IUDs to be inserted up to day 12 of the cycle with no restrictions and at any other time in the cycle if it is reasonably certain that she is not pregnant.[10] A copper IUD can also be left in place to provide effective ongoing contraception for up to 12 years.

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Effectiveness

The published literature on progestin-only emergency contraception pills (ECPs) (Next Choice® and Plan B One-Step®) estimates a range of effectiveness between 52% and 94% in reducing pregnancy risk based on nine studies of nearly 10,500 women.[1-9] The package inserts for Next Choice and Plan B state that the expected pregnancy rate of 8% (with no contraceptive use) was reduced to approximately 1% in clinical trials; for every eight expected pregnancies, seven are prevented with the use of progestin-only ECPs.

Two randomized trials compared the efficacy of levonorgestrel with the second-generation antiprogestin ulipristal acetate (UPA), one up to 72 hours after unprotected intercourse[10] and the second up to 120 hours after.[11] When these two studies were combined, UPA was found to have a pregnancy rate 42% lower than levonorgestrel up to 72 hours and 65% lower in the first 24 hours.[11] In the second randomized study, 30 mg UPA prevented significantly more pregnancies than did levonorgestrel in the 72-120 hour subgroup.

Data clearly show that the progestin-only EC and UPA regimens are more effective than the Yuzpe method. All EC regimens are more effective than using no method of contraception.[12]

The published literature on combined progestin–estrogen ECPs estimates a range of effectiveness between 56% and 89% in reducing pregnancy risk. A meta-analysis of eight studies concluded that the effectiveness of the combined regimen is 74%.[13]

The Copper T IUD used as EC is more than 99% effective in reducing pregnancy risk.[14,15]

Most published efficacy data likely overestimate the effectiveness of progestin-only ECPs. For progestin-only ECPs, efficacy was demonstrated initially in noncomparative observational studies; thereafter, use of a placebo was believed to be unethical. Therefore, the chance that pregnancy would occur in the absence of EC is estimated indirectly using published data on the probability of pregnancy on each day of the menstrual cycle.[16,17] This estimate is compared with the actual number of pregnancies observed after treatment in observational treatment trials. Effectiveness is calculated as 1 – (O/E), where O and E are the observed and expected number of pregnancies, respectively.[18]

Calculation of effectiveness involves many assumptions that are difficult to validate. Accurate estimates of efficacy depend on accurate recording of timing of intercourse and cycle day (to estimate timing of ovulation).[18] One study comparing self-report of cycle day with urinary pregnanediol concentrations demonstrated that more than 30% of women presenting for progestin-only ECPs had inaccurately dated their menstrual cycles, believing themselves to be in the fertile phase of their cycle when they were not. In the same study, 60% reported more than one act of intercourse in the cycle, indicating that pregnancies attributed to progestin-only ECP failure might actually be the result of unprotected intercourse earlier in the cycle.[19] Another study found that 99 women were between days –5 and +1 when the day of ovulation (day 0) was estimated as usual cycle length minus 13 days. However, hormonal data indicated that only 51 of these 99 (56%) were between days –5 and +1.[20] In another study, cervical smears showed that more than one-third of women requesting progestin-only ECPs had no sperm present in the vagina and that those with sperm present had fewer sperm than women attempting to become pregnant.[21] For a variety of reasons, many women do not accurately understand when they are at risk for pregnancy.

The efficacy of progestin-only EC may be enhanced by adding a nonsteroidal anti-inflammatory agent that is specific for a cyclooxygenase-2 (COX-2) inhibitor. A pilot study of 41 women found that adding a COX-2 inhibitor (meloxicam 15 mg) to levonorgestrel 1.5 mg significantly increased the proportion of cycles with no follicular rupture or ovulatory dysfunction (88% versus 66%, P = 0.012). Adding a COX-2 inhibitor can disturb the ovulatory process after the onset of the luteinizing hormone surge.[22] Generic meloxicam is covered by many community pharmacy generic plans. A trial regarding optimal dosing is under way.

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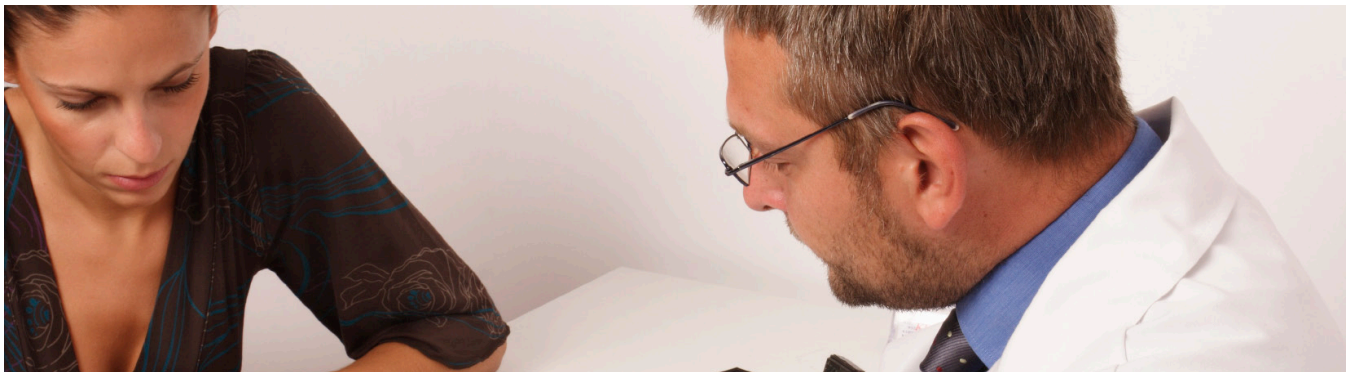

Mechanism of Action

Emergency contraception pills (ECPs) may theoretically prevent pregnancy through several mechanisms. The most likely mechanism of action is the inhibition or delay of ovulation.

Several clinical studies have shown that combined ECPs containing the estrogen ethinyl estradiol and the progestin levonorgestrel can inhibit or delay ovulation.[1-4] Although early studies indicated that alterations in the endometrium after treatment with the regimen might impair receptivity to implantation of a fertilized egg, more recent studies have found no such effects on the endometrium.[5,6] Additional possible mechanisms include interference with corpus luteum function; thickening of the cervical mucus resulting in trapping of sperm; alterations in the tubal transport of sperm, egg, or embryo; and direct inhibition of fertilization.[7-10] No clinical data exist regarding the last three possibilities.

Treatment with levonorgestrel-only ECPs as soon as possible after unprotected sex has been shown to impair the ovulatory process and luteal function. Levonorgestrel-only ECPs can inhibit ovulation but do not always do so even when given before ovulation.[11-16] Inhibiting ovulation may be the only mechanism of action for levonorgestrel-only ECPs. Recent studies have found no effect on the endometrium.[16-18] In one study, levonorgestrel 1.5 mg had no effect on the quality of cervical mucus or on the penetration of spermatozoa in the uterine cavity.[17]

Animal studies demonstrated that levonorgestrel administered in doses that inhibited ovulation had no postfertilization effect that impaired fertility.[10,19,20] Whether these results can be extrapolated to humans is unknown. Based on those animal studies and their own studies in women, Novikova et al.[21] argued that most, if not all, of the contraceptive effect of both combined and progestin-only ECPs can be explained by inhibited or dysfunctional ovulation. This question of postfertilization effect may never be answered unequivocally because no test exists for fertilization; however, the best available evidence indicates that levonorgestrel does not interfere with any postfertilization events.[22]

When levonorgestrel EC is taken too close to ovulation, it is ineffective. In contrast, when ulipristal acetate (UPA) is taken at the same time, it can delay ovulation. By the time the leading follicle reaches 15-17 mm, follicular rupture is prevented within 5 days no more often after levonorgestrel administration than after placebo administration.[15] In contrast, when taken when the leading follicle reaches 18-20 mm (and ovulation should occur within 48 hours) and the probability of conception exceeds 30%, UPA prevents follicular rupture within 5 days of administration in 59% of cycles, compared with 0% in placebo cycles.[22] Follicular rupture failed to occur within 5 days after treatment with UPA in all women treated before onset of the LH surge, in 79% of women treated after the onset of the LH surge but before the LH peak, and in 8% of women treated after the LH peak. Another study found that ulipristal acetate altered the endometrium, but whether this change would inhibit implantation is unknown.[23]

As medical authorities such as the National Institutes of Health,[24] the American College of Obstetricians and Gynecologists[25] and the US FDA define pregnancy as beginning with implantation, ECPs do not interrupt an established pregnancy, they are not abortifacients.[22]

What should women be told about how EC works?[22,26]

ECPs:

- Prevent pregnancy primarily, or perhaps exclusively, by delaying or inhibiting ovulation and inhibiting fertilization
- Will not work if a woman is already pregnant; ECPs will not cause an abortion

Copper-T IUD (used after a pregnancy test has confirmed a woman is not already pregnant):

- Does not affect ovulation, but it can prevent sperm from fertilizing an egg
- May also prevent implantation of a fertilized egg

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Safety

Millions of women have used emergency contraception (EC) safely and effectively. The benefits of using emergency contraception pills (ECPs) outweigh the risks in all situations.[1] ECPs can be safely used by women who have contraindications to routine use of combined hormonal contraception. Women with previous ectopic pregnancy, cardiovascular disease, migraines, and liver disease may use ECPs. In fact, research has shown that pregnancy poses a greater threat to women with medical problems such as thromboembolic and liver disease than a 1-day dose of estrogen and/or progestin.[2]

Women who are breastfeeding may safely use progestin-only ECPs, although they may experience a transient change in their milk supply. Use of ulipristal acetate (UPA) EC is not recommended for breastfeeding women.

No risk of serious harm for moderate repeat use of progestin-only ECPs appears to exist.[3] UPA EC is not recommended for repeated use within the same menstrual cycle, as safety and efficacy have not been evaluated. The risk of birth defects does not increase if pregnancies occur after use of progestin-only ECPs. The evidence to date suggests that UPA EC does not cause birth defects, but the data is extremely limited. Postmarketing surveillance of since 1999 has shown no reports of overdose, overuse, or abuse.[4] Levonorgestrel ECPs do not increase the risk of ectopic pregnancy.[5] A history of ectopic pregnancy is not a contraindication for use of UPA EC.

Possible ECP adverse effects include nausea and vomiting, abdominal pain, breast tenderness, headache, dizziness, and fatigue. These effects usually do not occur for more than a few days after treatment, and they generally resolve within 24 hours.[3] Considerably fewer adverse effects occur with progestin-only ECPs compared with combination products. Combination ECPs can cause nausea in up to 50% of women and vomiting in up to 20%.[6,7] Women may experience a shorter or longer menstrual cycle depending on when ECPs are taken.[8,9]

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Case Study: *Lara*

Lara, a 37-year-old woman with a history of deep venous thrombosis, requiring treatment with Coumadin (a potential teratogen), presents to clinic. She has been using condoms because she has been told in the past that "birth control is not safe for her."

Health professionals should:

- Discuss EC as an option if/when condom use is not possible
- Let her know that since dedicated ECPs contain no estrogen, they are safe for her to take
- Encourage her to purchase an ECP pack today to keep at home just in case
- Clarify that progestin-only methods, including highly-effective reversible options such as IUDs and implants, are safe for her and do not preclude any form of imaging (such as MRI) for women with chronic medical conditions

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Impact of EC on Risk Taking

One of the concerns expressed about making emergency contraception (EC) available over-the-counter (OTC) was that easy access would encourage women, particularly adolescents, to increase risky sexual behavior and reduce their routine use of regular methods of contraception. Reported evidence from studies conducted around the world demonstrated that making emergency contraception pills (ECPs) more widely available does not increase risk taking or adversely affect regular contraceptive use.[1–13] In studies of ECP use and risk taking, women were randomized to receive either counseling and ECPs on demand or ECPs in advance for later use. Reanalysis of one of the randomized trials suggested that easier access to ECPs may have increased the frequency of coital acts with the potential to lead to pregnancy.[14] Women in the increased-access group were significantly more likely to report that they had ever used ECPs because they did not want to use condoms or another contraceptive method.[15]

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Impact of EC on Unintended Pregnancy: Population Level

No published study has demonstrated that increasing access to emergency contraception pills (ECPs) reduces pregnancy or abortion rates at the population level,[1-3] although one demonstration project[4] and three clinical trials[2,5,6] were specifically designed to address this issue. One explanation for this result is that even when provided with ECPs in advance of need, most women use ECPs too rarely after risky incidents to result in a substantial population effect.

In a trial conducted in San Francisco, 45% of women in the advance-provision group who had unprotected intercourse during the study period did not use ECPs.[5] In a Chinese trial, 30 women in the advance-provision group (n = 746) did not use ECPs in the cycle in which they became pregnant.[6] In a Nevada/North Carolina trial, 33% of women in the advance-provision group had unprotected intercourse at least once without using ECPs and 57 did not use ECPs in the cycle in which they became pregnant.[2]

In a demonstration project, 27 women with advance supplies of emergency contraception (EC) who became pregnant never used ECPs.[4] In a Nevada/North Carolina trial, increased access to EC had a greater impact on use of ECPs among women who were at lower baseline risk of pregnancy.[7] This may explain in part why increased access to EC has increased use of EC without a measurable effect on pregnancy rates in clinical trials.

Thus, although considerable evidence shows that ECPs are effective, several lessons can be learned from the lack of reduction in pregnancies. Women often underestimate their risk of pregnancy, and education is needed to encourage women to use ECPs every time they are needed. Over-the-counter (OTC) access is necessary but probably will not reduce unintended pregnancies sufficiently. Unless ECPs are used more frequently, and when needed, a major public health impact is unlikely.[1]

Although the effect of EC on unintended pregnancy rates for the overall population remains to be shown, EC is most certainly of benefit to individual women seeking to prevent an unintended pregnancy after unprotected intercourse has occurred. Women who recognize their pregnancy risk are likely to seek EC if they are aware of it, and if EC is easily accessible.

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Barriers to EC Access and Use

Timely access to emergency contraception (EC) is essential. Access has improved considerably since the Food and Drug Administration (FDA) approved over-the-counter (OTC) status for progestin-only emergency contraceptives for anyone aged 17 years or older. However, barriers to EC access and use continue to exist and are brought about by politics, lack of awareness, lack of clinician discussion of EC and its availability, and other issues.

Political barriers

The fact that many emergency departments do not provide EC services to women who have been raped is a tragic example of neglected preventive health care.[1,2] One 2005 survey found that 55% of Catholic and 42% of non-Catholic U.S. hospitals did not dispense EC in emergency departments.[1] The Department of Justice makes no mention of EC in a 130-page document titled A National Protocol for Sexual Assault Medical Forensic Examinations that was published in September 2004.[2,3] Despite these obstacles, efforts are under way to reduce barriers to EC access in emergency departments. As of 2009, 15 states and the District of Columbia had laws requiring emergency departments to provide information about or access to EC to sexual assault survivors.[5]

Additionally, the Department of Defense Pharmacy & Therapeutics Committee removed the levonorgestrel emergency contraception pill (ECP) from the Basic Core Formulary (BCF; medications that must be stocked at every full-service Military Treatment Facility [MTF]) in May 2002, only 1 month after the drug had been added to the BCF,[6] because of complaints from conservative members of Congress.[7] Whether the drug was stocked was left to the discretion of each MTF. Levonorgestrel ECPs were not available to all American soldiers serving overseas, which was of particular concern for women who were raped or faced an unintended pregnancy, until Next Choice® was added to the BCF on February 3, 2010.[8]

Lack of marketing and awareness

Direct-to-patient advertising for ECPs is scarce.[9] Consequently, many women do not know that ECPs are effective, safe, and readily available in pharmacies.[9]

Lack of discussion with a health care provider

According to data from the 2002 National Survey of Family Growth, only 3% of women reported that a health care provider had discussed EC with them in the previous year.[9,10] Lack of information from a trusted health care provider further limits women's awareness and knowledge of EC and its availability.

Other barriers

Access to EC remains limited for certain patient populations, such as female patients younger than 17 years, women with low income, and women without proper identification, including undocumented residents.[11,12] Most Medicaid beneficiaries and others seeking insurance coverage for EC still require a prescription. At a price ranging from $45 to $77, the cost of ECPs is prohibitive for many individuals, including college students. Health care providers can help women in these difficult situations by keeping a referral list of other family planning clinics that use a sliding scale to determine charges for those who are low-income or do not have insurance coverage. ECPs can often be obtained from these clinics for a reduced rate or for free.

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Over-the-counter Availability and Regulatory Status

Progestin-only emergency contraception

Both Plan B One-Step® and Next Choice® are approved by the Food and Drug Administration (FDA) for sale without a prescription to women and men aged 17 years or older in the United States. A government-issued identification is required for proof of age to purchase Plan B One-Step and Next Choice without a prescription.[1,2] Some women who are 17 and older need a prescription for progestin-only EC for insurance coverage (private or public) or because they do not have proper identification (i.e., undocumented immigrant status). Insurance coverage and immigration status are important access issues in some underserved communities.

Although most women can obtain progestin-only ECPs without a prescription, female patients aged 16 years or younger still need a prescription from a health care professional. The progestin-only EC over-the-counter (OTC) status for patients 17 years or older and prescription-only status for female patients younger than 17 years or women without proper identification (so-called dual-label status of these products) necessitates keeping progestin-only ECPs behind the counter in pharmacies. The FDA wanted patients to have access to a knowledgeable health care provider who could answer questions patients might have when purchasing ECPs. Therefore, the products may be shipped to and stocked only by pharmacies or clinics. They are not available at general retail locations that do not employ a licensed health care provider.

In pharmacy-access states, specially trained pharmacists can prescribe progestin-only ECPs when medically appropriate to female patients of any age, including those who do not have government-issued identification for proof of age. Currently, the pharmacy-access states include Alaska, California, Hawaii, New Hampshire, New Mexico, Massachusetts, Maine, Vermont, and Washington.[3]

The American Academy of Pediatrics, American College of Obstetricians and Gynecologists, and Society for Adolescent Medicine have all supported the availability and use of EC in teens.[4] Studies show that adolescents are capable of using ECPs correctly and safely and that access to EC is not associated with increased rates of unprotected intercourse, decreased use of condoms, or higher rates of pregnancy or sexually transmitted infections.[4-6] If not in a pharmacy access state, pharmacists can help female patients younger than 17 years old obtain ECPs by offering a list of local clinicians and clinics that provide prescriptions for ECPs.

Patients can go to the Emergency Contraception Web Site for a list of health providers offering ECP:

www.not-2-late.org

Because most adult patients now have unfettered access to progestin-only ECPs through OTC availability, access to these products has increased. Pharmacies also lower access barriers by not requiring appointments; being open evenings, weekends, and holidays; and offering progestin-only OTC EC to both women and men who meet the age requirement.

Of important note, patients seeking EC are not subject to the same requirements as patients seeking pseudoephedrine and other potential methamphetamine precursors; purchasers of EC do not need to sign a registry in the pharmacy, and no limits exist for the maximum quantity that can be purchased. Similar to the sale of OTC nicotine products, the sale of progestin-only EC is limited only by the age of the purchaser, with no requirement for record keeping of purchases.

Ulipristal acetate emergency contraception

In contrast with progestin-only emergency contraception, ulipristal acetate (ella®) does not have OTC availability; all women, regardless of their age, require a prescription to obtain the product. Of the nine pharmacy access states, only Washington State has current legislation that allows pharmacists to prescribe ulipristal acetate (UPA) EC. The relevant legislation in the other eight pharmacy access states requires expansion or rewording to include the prescribing of ulipristal acetate.

Pharmacists in all direct access states should review their state laws with regard to restriction of EC prescribing to determine whether they can prescribe UPA. Based on the wording of the state's legislation, UPA may or may not be included under the

term "emergency contraception." If pharmacists determine that their state allows them to prescribe UPA, they should consult their state board of pharmacy regarding any changes that might be required, such as updating collaborative agreements, obtaining special certification, or filing a new protocol with the board.

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Clinical Consultation

Even with progestin-only emergency contraception pills (ECPs) available over-the-counter for those aged 17 years and older, there is still a role for clinicians to counsel patients about emergency contraception and increase awareness and possibly use.

ECP Counseling Points for Clinicians

- How to obtain them – Progestin-only ECPs are available behind the pharmacy counter or at family planning clinics without a prescription for those 17 and older, sometimes for a reduced cost. Those 16 years old and younger must obtain a prescription for progestin-only ECPs from their clinician or from their pharmacist in pharmacy-access states. Women of all ages need a prescription for ulipristal acetate (UPA) emergency contraception (EC).
- Why it is a good idea to keep them on hand – Advance provision is recommended so that EC can be taken as soon as possible after unprotected sex.
- How they work – ECPs most likely prevent pregnancy by stopping or delaying ovulation.
- They are safe and benefits outweigh risks – ECPs are proven safe for all women.
- There are more effective long-term and reversible methods of contraception – Women should be counseled on other more effective reversible contraceptive methods.

Case study: *Marisa*

Marisa is a 22-year-old woman who presents for a primary care visit with a chief complaint of vaginal discharge.

While encouraging future attempts at condom use, health professionals should also remember to:

- Discuss emergency contraception (EC) as an option if/when condom use is not possible
- Encourage her to purchase EC today to keep at home just in case
- Discuss use of a highly-effective reversible form of contraception in addition to condoms

Case study: *Heather*

Heather is a 25-year-old woman who presents for a primary care visit expressing her desire to start on a birth control pill to prevent pregnancy.

Health professionals should:

- Discuss EC as an option if/when she takes longer than she expected to pick up a refill Rx, or she misses 2 or more pills
- Encourage her to purchase EC today to keep at home just in case
- Clarify that highly-effective reversible options such as IUDs and the implant are typically more effective than an oral contraceptive
- Encourage condom use to prevent sexually transmitted infections

Pharmacist Consultation

Because of their dual-label status, over-the-counter (OTC) progestin-only emergency contraception pills (ECPs) are kept behind pharmacy counters. This placement provides pharmacists with an opportunity to play a crucial role in providing advice and information to patients about emergency contraception (EC). OTC sale to patients 17 years of age or older improves access to progestin-only EC by removing the delay associated with obtaining a prescription for this time-sensitive medication, thereby increasing use of this safe and reliable method for preventing an unplanned pregnancy. Pharmacists have become a critical link between EC and women who need it.

Dispensing and selling EC

Practices may vary by pharmacy and state; however, pharmacists are only required to verify the age of the OTC progestin-only EC purchaser. If the individual is age 17 years or older, progestin-only ECPs can be sold, and no other screening or counseling is required. If a woman has public or private insurance coverage of prescription ECPs, then pharmacists in pharmacy-access states can prescribe progestin-only ECPs to ensure insurance coverage even though the woman is eligible for OTC progestin-only EC based on her age. In some instances, counseling may be viewed as intrusive or an additional barrier to access to OTC EC. The pharmacist must determine whether such services are desired by the purchaser. Prescription EC counseling is mandated by federal and state laws.

In contrast with progestin-only EC, ulipristol acetate (UPA) requires a prescription for all women, regardless of age. In direct access states, pharmacists should review their state laws to determine whether UPA falls under the definition of EC within the current legislation. If the pharmacist cannot prescribe UPA, he or she should refer the patient to a practice site at which she can access UPA.

If the patient is interested, has the time, and the pharmacist has a private area in which to counsel, the pharmacist may provide the patient with a short summary of key issues, including ongoing contraceptive options, and offer further counseling. Pharmacists should be aware that some patients may feel stressed or embarrassed when inquiring about EC.

Additional considerations for pharmacists

In pharmacy-access states, pharmacists provide patient assessment, consultation, and EC prescribing.[1] Policies about paying pharmacists for this type of service vary among states and insurance companies. As EC has evolved, pharmacists in many states have been actively engaged in making it available to more women (Table 2). In pharmacy-access states, this often has been achieved through the development of collaborative practice agreements permitting pharmacists to prescribe ECPs.[2] Experts in pharmacy provision of EC urge all pharmacists to join their colleagues in providing this important component of women's health care.

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Table 2. Action items for pharmacists regarding EC

- Stock and dispense ECPs.
- Make sure all of your pharmacy's employees, particularly those who answer the telephones, know that you provide ECPs.
- Routinely discuss EC with appropriate patients (e.g., new users of oral contraceptives, condom users).
- Provide ECPs in advance to patients when possible.
- Determine your state's requirements for prescribing progestin-only ECPs to patients 16 years of age or younger.
  - In pharmacy access states, prescribe progestin-only ECPs for women younger than 17 years.
  - In other states, suggest that patients younger than 17 years obtain a prescription from their primary health care provider for use if ECPs are needed.
- In pharmacy access states, determine your state's requirements for pharmacist prescribing of UPA and contact your state's board of pharmacy regarding any related changes required.
- Advertise the availability of ECPs in your pharmacy.
- List your pharmacy in directories of pharmacies carrying ECPs.
- Have an area available where you can discuss EC with patients confidentially.

EC, emergency contraception; ECP, emergency contraception pill; UPA, ulipristal acetate

Case study: *Bethany*

A woman comes to the pharmacy counter and tells you that she has missed the first three doses of her birth control medication and wonders if she needs emergency contraception (EC).

- Ask the woman if she has a few moments to talk privately.
- Ask her whether she has had unprotected sex within the previous 120 hours. If she has, offer to provide her with emergency contraception pills (ECPs). If she has had sex without using a condom, you might inform her to consider a follow-up visit with her primary provider for an examination for sexually transmitted diseases/infections.
- If she has insurance coverage and you practice in one of nine states that allow pharmacist-initiated prescription of ECPs, you can prescribe progestin-only EC and generate an insurance claim. Pharmacists in all direct access states should review their state laws with regard to restriction of EC prescribing to determine whether they can prescribe ulipristal acetate (UPA).
- If the woman has time, ask her if she's satisfied with her current form of ongoing contraception and if she commonly misses doses. Suggest other forms of ongoing contraception, provide her with information about other methods, and make a referral if needed.

Case study: *Dave*

A man comes to the pharmacy counter and wants to know if you will sell him ECPs for his girlfriend.

- Tell him that you would be happy to provide him with EC if he is eligible.
- Ask for his identification to verify that he is old enough to buy OTC EC.
- If he is old enough, sell him the EC.
- If he is not old enough but his girlfriend is, let him know that she can purchase the EC herself. Alternatively, someone else who is old enough to purchase EC without a prescription may purchase the products.

Case study: *Marie*

A young-looking female tells you that she needs EC. In talking with her, she tells you that she's been raped and that she is 15 years of age.

- You can prescribe EC if you practice in one of nine states that allow pharmacist-initiated prescription of EC. If she doesn't have money to purchase EC, check your pharmacy's policy about "charity care" for these kinds of situations.
- If you can provide her with EC, then talk with her and coordinate a referral to a local Title X clinic/Planned Parenthood clinic or emergency department to provide her with postrape care. Consider having a pharmacy staff person escort the girl to the referral site.
- If not able to directly provide her with EC, you should consider contacting a local Title X clinic/Planned Parenthood clinic or emergency department for EC and postrape care.
- In most states, this situation would mandate a report to a child protection service.

Conclusion

Emergency contraception (EC) is a safe and effective method of preventing unintended pregnancy after unprotected intercourse. The EC environment has changed considerably during the previous decade with the regulatory status for progestin-only emergency contraception pills (ECPs) in the United States shifting from prescription-only to over-the-counter (OTC) for those 18 years of age or older and now to OTC for those 17 years or older. Three dedicated ECPs are now available in the United States, giving women more options to prevent pregnancy after unprotected intercourse.

Although the changes have improved access and removed some barriers to the use of EC, they have also created confusion for patients and health care providers. Health care providers play a crucial role in educating themselves and patients about EC. They must be reliable sources of information on EC and its proper use.

Pharmacists are in a particularly unique position to assist patients in need of EC. As frontline providers, they are in a position to offer support on many levels, including counseling patients, helping inform the community, and becoming advocates for improved access.

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