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“I don't know what I would have done.” Women's experiences acquiring ulipristal acetate emergency contraception online from 2011 to 2015

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Abstract

Objectives—This study describes women's reasons for seeking ulipristal acetate (UPA) for emergency contraception (EC) through the only authorized online retailer for UPA EC in the US.

Study design—Women aged 14 to 59 years, living in states that allow prescription medications to be shipped from out-of-state, accessed the KwikMed online pharmacy between January 2011 and December 2015. After completing a medical eligibility screener, women answered optional multiple-choice questions. To obtain UPA through KwikMed, individuals must be female, 50 years of age or younger, not currently pregnant or breastfeeding and not attempting to order UPA more than once within 30 days or more than four times per year.

Results—Over the five-year period, KwikMed provided 8,019 prescriptions for UPA, and the number of women using this service more than tripled over time. Among women who responded to the survey questions (n=7,133; response rate = 89%), most sought EC because of a condom failure (45.3%) or because they did not use regular contraception (41.2%). More than half (53.5%) of women reported that they chose UPA because of its effectiveness compared to levonorgestrel EC pills, and 58.9% preferred ordering UPA online because they found it easier than getting it from a doctor, clinic, or pharmacy.

Conclusions—This study documents the importance of providing confidential services for acquiring EC online. Benefits of online access include convenience, less embarrassment, avoiding situations in which a provider might refuse to provide EC because of their own ideological belief, and more reliable availability for this time-sensitive contraceptive.

Keywords

Emergency contraception; ulipristal acetate; online pharmacy

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1. Introduction

Emergency contraception (EC) provides a last chance to prevent pregnancy after contraceptive failure, unprotected sex, or sexual assault. EC options include the copper IUD (the most effective method) [1] and different pill formulations. Levonorgestrel (LNG) EC is the most commonly-used dedicated EC pill, but a newer compound, the antiprogesterin ulipristal acetate (UPA, trade name ella[®]), was approved for sale in the United States in 2010 [2]. UPA is more effective than LNG because it works closer to the time of ovulation and can prevent ovulation even after the luteinizing hormone (LH) surge has begun, as long as it is taken before the LH peak [3-8]. Like LNG, UPA has an excellent side-effect and safety profile for all women [9-11]. Post-marketing surveillance from Europe has demonstrated that after widespread use, no safety concerns have emerged for women using UPA EC or for ongoing pregnancies carried to term after exposure to UPA [12].

There are several reasons why, despite its benefits, UPA usage has not become common in the US in the six years since its approval. First, while LNG EC is approved for unrestricted sale over-the-counter, UPA is available by prescription only [13]. Individuals seeking EC often go directly to the pharmacy to purchase LNG EC without consulting a provider [14], and may not be aware of other options. Although there are persistent challenges to accessing LNG EC [15], it is possible for individuals to access it without a clinical encounter. Even women who do go to a healthcare provider for EC may not be offered UPA; a recent study found that only 29% of healthcare providers across specialties who treat women of reproductive age had heard of UPA EC, and only 7% recommended or provided it. Among reproductive health specialists, 52% were aware of UPA EC and 14% offered it [16]. A compounding obstacle is that pharmacies may not routinely stock UPA EC; a study in Hawaii found that while 82.4% of pharmacies stocked LNG, the over-the-counter (OTC) option for EC, only 2.6% had UPA immediately available [17]. In addition, a change in distributor in 2014 caused a significant supply chain disruption that made UPA EC difficult to get [17]. Internet availability may help some women overcome barriers to accessing contraceptive care [18]. KwikMed is an online service that prescribes and dispenses several medications, including UPA EC. This study describes women's reasons for seeking UPA EC through this online service.

2. Methods

The Institutional Review Board at Princeton University issued an exemption for this study.

2.1. Study Design

Women seeking UPA EC through KwikMed answer required medical eligibility questions, and then may choose to answer four optional multiple-choice survey questions. Once a customer completes the medical screener and submits payment, a physician reviews the order and determines medical eligibility. Women may be considered ineligible for several reasons, including: 1) age greater than 50; 2) current pregnancy; 3) current breastfeeding; or 4) too-frequent use of the system (which includes ordering more than one pill at a time, more than one order within 30 days, or four orders in a year). The approving physician can make exceptions to these guidelines when medically appropriate. This service is not

available in all states: current state regulations prohibit KwikMed from shipping prescription medications to North Carolina, Louisiana, Arkansas, and Missouri. Additionally, women in Oregon and Texas must get the approval of a local doctor. Women who are deemed eligible can have their medication shipped to them overnight or have a prescription transferred to a local pharmacy. Our data include only those whose prescription request was approved.

Demographic questions include age, state of residence, height and weight. Optional survey questions asked women's reasons for needing EC, why they chose UPA instead of LNG, why they decided to get UPA online rather than from a doctor or clinic, and what they would have done if this service had not been available (see Tables 2 through 5 for a list of response options). Participants selected each multiple-choice response that applied, and had the option of providing more detailed open-ended responses. Illustrative quotes from the open-ended responses are incorporated throughout the paper. Quotes appear exactly as they were written by the respondent, reflecting the syntax, spelling, grammar, and typographical errors exactly as they appear in the de-identified dataset provided by KwikMed.

2.2. Analyses

Here, we present descriptive statistics and qualitative responses to open-ended questions. Chi-square and t-tests analyzed differences in demographic characteristics between survey responders and non-responders. We did not formally analyze qualitative responses for this paper, but examples are included throughout to provide context and detail. We used Stata/SE 13.1 (StataCorp, College Station, TX) to analyze the data.

3. Results

Between January 2011 and December 2015, KwikMed filled 8,019 orders for UPA EC. Since KwikMed began providing UPA online five years ago, the number of women accessing this service has more than tripled. In 2011, KwikMed filled 653 orders for UPA EC, but through the end of 2015, orders increased to 2,390 (Table 1). Sales rose steadily for most years between 2011 and 2015. The exception was a decline in sales in 2014, when a supply chain disruption (because of a change in distributor) led to limited availability of UPA EC (personal communication, Brian Ackley, KwikMed Chief Technology Officer, July 8, 2016). Among 8,019 orders, 7,133 (89%) customers answered the survey questions. Depending on the question, a range of 63 to 641 women included an open-ended response to each of the four survey questions. The first and second authors reviewed and coded the open-ended responses using Excel. The most illustrative quotes were selected to add additional depth and context to the close-ended survey questions.

3.1. Participants

Among all women who received UPA EC from KwikMed during the study period, approximately one-third were aged 14 to 24 (33.5%) and one-third were aged 25 to 29 (30.1%) (Table 1). The sample included women from all U.S. census regions: nearly one-third of users lived in the South, and 20 to 25% resided in the Northeast, Midwest and West. The distribution of body mass index (BMI, calculated from self-reported height and weight) is described in detail elsewhere [Cleland 2016; under review].

A comparison of survey responders *versus* non-responders is presented in Table 1. The mean age of responders was lower than that of non-responders (28.4 *vs* 29.4; $p=0.000$). There was a notable difference by year in whether women participated in the survey ($p=0.000$), but much of this difference is due to the fact that the survey was inadvertently dropped from some versions of the KwikMed website during 2015; in 2015, 65% of users participated in the survey, while for other years 96% to 99% of users participated.

3.2. Reasons for seeking emergency contraception

The most frequent reason women gave for why they needed EC, reported by 45.3% of respondents, was *I used a condom but it broke or slipped*, followed closely by *I wasn't using any birth control* (41.2%) (Table 2). In open-ended responses, several participants noted that they were also using another form of hormonal contraception, but were worried that their primary method wasn't fully effective. As one woman described: "Using birth control but it is new and doctor said to use back up method for the entire first month but our condom broke" (age 22, Washington). Some women stated concern that concurrent use of antibiotics might compromise the efficacy of their ongoing hormonal method; one participant needed EC because she and her partner: "used expired spermicide and birth control pill while on antibiotics (making pill less effective)" (age 29, Rhode Island). Several women were seeking EC because they had been raped, sexually assaulted, or were the victims of reproductive coercion. For example, a 35-year-old woman from Colorado reported that: "He told me he had a Vasectomy only to learn that he had it reversed."

3.3. Reasons for choosing UPA EC

Over half (53.5%) of women were seeking UPA because they thought it was more effective than LNG, while nearly one-third responded that they didn't want to go to a doctor, clinic, or pharmacy (and therefore preferred this option which is available online with expedited shipping) (Table 3). Having had unprotected sex more than 72 hours before seeking EC (19.6%) and ease of access (19.9%) were also common reasons for choosing UPA. A substantial number of women reported that their weight was a factor in choosing UPA EC; these results are described in greater detail elsewhere [Cleland 2016; under review].

Other participants noted concerns about the chemical composition of LNG EC. Some users had specific medical issues, such as porphyria (a condition for which levonorgestrel is contraindicated), while others voiced general concerns about what they perceived to be an overly high dose of hormones in LNG EC. As one participant described: "I don't want to megadose with hormone like Plan B would do" (age 24, New Jersey).

3.4. Reasons for purchasing UPA EC online rather than at a doctor's office or clinic

Table 4 outlines the reasons women reported for obtaining UPA EC online instead of from a doctor or clinic. Almost 60% of women indicated that ease of online access was a factor in their decision-making process. Nearly 30% described difficulties getting an appointment with a doctor in time for EC to be effective, and about one-fifth of women did not have a regular doctor or felt embarrassed about getting an EC prescription filled at a pharmacy.

Among the 424 women who wrote in another reason for seeking UPA EC online, the most common theme (reported by 142 women, 33.4%) was that that UPA was unavailable or out of stock in their local pharmacies. As one participant wrote: “NO PHARMACY in NJ has ella IN STOCK... not a single pharmacy has it in stock OR could get it” (age 28, New Jersey, January 2015).

Another barrier reported was the imposition of a healthcare provider's ideological belief; only 2% of participants checked *My doctor probably wouldn't prescribe it to me*, but this is a potentially powerful barrier for women with limited options. One participant experienced compound barriers of lack of availability and her healthcare provider's unwillingness to prescribe EC: “when i asked planned parenthood they did not have it. when i asked my obyn they said they were a “Christian” practice that did not believe in EC” (age 28, Alabama, June 2015).

Others noted reasons related to logistics or psychological comfort that would make purchasing LNG from pharmacies impossible or unpleasant. One participant simply cited “mobility issues” as a factor that made purchasing online preferable (age 23, Michigan, February 2014). Another participant noted that buying UPA online allowed her to avoid experiences of racial discrimination: “Purchasing ella online is a lot less intimidating. I do not experience some of the racism I get when going to the pharmacy for simple medications such as birth control” (age 25, Ohio, July 2013).

3.5. Alternate course of action if this service had not been available

Over half (52.8%) of women reported that they would have used LNG EC if this service had not been available, though 20.8% stated that they would have tried to get UPA a different way (Table 5). Over 1,200 women (17.3%) responded that they “really have no idea” what they would have done, and about 10% reported that they probably would not have used EC at all.

Several women expressed feelings of anxiety and desperation. One respondent replied that she would have “Hoped and prayed” (age 32, Connecticut, September 2013) if this service had not been available, while another said that she would have “Ended up pregnant” (age 22, New York, November 2012). Another woman stated: “i would have used drastic alternatives” (age 23, Florida, December 2012).

4. Discussion

Emergency contraception has unique features among reproductive health technologies; its time-sensitivity, unusual regulatory history (including multiple, complicated changes to regulatory status for LNG EC) and social stigma contribute to particular access challenges, many of which can be addressed through use of online pharmacies. Acquiring EC online is private, convenient, and typically reliably available; this last benefit is particularly salient given UPA's history of inconsistent stocking in “brick and mortar” pharmacies. Timely access to EC is essential; it must be used within 5 days of unprotected sex, and is more likely to be effective the sooner it is taken. Therefore, the ability to order EC online with expedited shipping mitigates some factors that may cause delays in a woman getting

prescription EC, including needing EC when a doctor's office or pharmacy is closed or not being able to travel to a clinic to obtain a prescription in time. Purchasing EC online may eliminate embarrassment or stigma that some women experience during face-to-face encounters with pharmacy or clinic staff. Because UPA EC is more effective than LNG (and may be particularly more so for overweight and obese women), improving access to this method of EC is important for women who have experienced unprotected or under-protected sex. UPA EC is extremely safe (its only contraindication is known or suspected pregnancy) and is now available without prescription in Europe; OTC status would be a substantial benefit to women in the US as well.

Although KwikMed's online service reduces barriers to accessing UPA EC for some women, not all women can benefit from this or similar online services. The cost of the product (\$67, including shipping) may put it out of reach for many women, as may the fact that a credit card is required for purchase. In addition, insurance cannot be directly billed for this purchase through the KwikMed site.

4.1. Limitations

Limitations to our data include sparse demographic information (for example, we do not have data about education, income, or race/ethnicity); we are unable to provide a robust description of user characteristics and how they may be related to specific reasons for using this service. National sales figures for pharmaceutical products are not publicly available, so we cannot comment on the proportion of overall UPA sales comprised by KwikMed sales. Finally, our findings apply only to women purchasing UPA EC through KwikMed, and may not represent the experiences of other users of UPA EC.

5. Conclusion

Online access is an important way for women to obtain EC in a timely manner, offering unparalleled convenience, confidentiality, and privacy. New online and mobile services for providing contraception (including UPA EC) have recently been introduced, such as NURX, Lemonaid, Planned Parenthood Care, and PRJKT RUBY (from the same company behind KwikMed). The online model decreases logistical barriers related to transportation, weather emergencies, and clinics hours, which is crucial given the time-sensitive nature of EC. Importantly, online availability reduces barriers that are sometimes created by store personnel, which may include inconsistent stocking of EC, discrimination or intimidation, refusal to dispense EC because of moral objections, and imposing outdated age restrictions (in the case of LNG EC). Enabling online acquisition of EC empowers women to meet their own reproductive healthcare needs on their own terms.

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Implications

Though physical, logistical, and societal barriers can restrict women's access to emergency contraception, this study demonstrates that providing access to UPA online empowers women to attain EC when they need it.

Table 1

Demographic Information

	All Orders	Survey Responders	Non-responders	p-value
	n (%)	n (%)	n (%)	
Age				0.008 *
14-24	2,679 (33.5)	2,412 (33.9)	267 (30.2)	
25-29	2,406 (30.1)	2,142 (30.1)	264 (29.9)	
30-34	1,293 (16.2)	1,149 (16.1)	144 (16.3)	
35-39	894 (11.2)	795 (11.2)	99 (11.2)	
40+	735 (9.2)	626 (8.8)	109 (12.3)	
Geographic Area				0.050 †
South	2,601 (32.5)	2,328 (32.7)	273 (30.9)	
West	1,985 (24.8)	1,732 (24.3)	253 (28.6)	
Northeast	1,780 (22.2)	1,596 (22.4)	184 (20.8)	
Midwest	1,644 (20.5)	1,469 (20.6)	175 (19.8)	
Order year *				0.000 †
2011	653 (8.1)	628 (8.8)	25 (2.8)	
2012	1,206 (15.0)	1,205 (16.9)	1 (0.1)	
2013	1,923 (24.0)	1,914 (26.8)	9 (1.0)	
2014	1,847 (23.0)	1,830 (25.7)	17 (1.9)	
2015	2,390 (29.8)	1,556 (21.8)	834 (94.1)	

* p-value from t-test of continuous age variable, by survey participation

† p-value from chi-square test of association between variable and survey participation

Table 2

Reasons for needing emergency contraception (n=7,133)

Why did you need emergency contraception? (<i>Check all that apply</i>)	n (% [*])
I used a condom but it broke or slipped	3,234 (45.3)
I wasn't using any birth control	2,942 (41.2)
I'm using the birth control pill or shot, but I missed a dose	764 (10.7)
I used another birth control method but I was worried that it didn't work well	598 (8.4)
I don't need emergency contraception now; I want it in case I need it later	469 (6.6)
I don't need it myself; I'm getting it for someone else	25 (0.4)
Other reason	228 (3.2)

* Participants checked all that apply; percentages sum to more than 100%

Table 3

Reasons for using UPA EC (n=7,133)

Why did you decide to use ella [®] instead of another kind of EC, like Next Choice [®] or Plan B One-Step [®] (<i>Check all that apply</i>)	n (% [*])
I think ella [®] is more effective	3,818 (53.5)
I didn't want to go to a doctor or clinic or to a pharmacy	2,145 (30.1)
Getting ella [®] was easier and/or cheaper for me than getting another kind of EC	1,417 (19.9)
It has been longer than 72 hours since I had unprotected sex	1,396 (19.6)
I don't know how or where to get another kind of EC	326 (4.6)
I didn't consider using another kind of EC	313 (4.4)
ella [®] is the only type of emergency contraceptive pill that I've heard of	162 (2.3)
My insurance will cover ella [®] but not other kinds of EC	56 (0.8)
Other reason	740 (10.3)

* Participants checked all that apply; percentages sum to more than 100%

Table 4

Reasons for purchasing UPA EC online instead of from a doctor or clinic (n=7,132)

Why did you decide to get your ella® prescription online instead of from a doctor or clinic? (<i>Check all that apply</i>)	n (%) [*]
It's easier to go online	4,202 (58.9)
I couldn't get an appointment with a doctor or clinic in time	2,076 (29.1)
I don't have a regular doctor	1,568 (22.0)
I felt embarrassed about getting an EC prescription filled at the pharmacy	1,519 (21.3)
I felt embarrassed about talking to a doctor about having unprotected sex	894 (12.5)
I don't want my parents to know	634 (8.9)
I don't want my partner to know	293 (4.1)
My doctor probably wouldn't prescribe it to me	143 (2.0)
Other reason	391 (5.5)

* Participants checked all that apply; percentages sum to more than 100%

Table 5

Alternate course of action if this service had not been available (n=7,132)

If this ella[®] online service had not been available to you, what would you most likely have done? (Check all that apply)	n (%[*])
I probably would have used another kind of EC like Next Choice [®] or Plan B One-Step [®]	3,769 (52.8)
I probably would have tried to get ella [®] another way	1,486 (20.8)
I really have no idea	1,236 (17.3)
I probably would have contacted my doctor or clinic for advice	1,232 (17.3)
I probably would not have used emergency contraception	709 (9.9)
Other	99 (1.4)

* Participants checked all that apply; percentages sum to more than 100%