What do Family Planning Clients and University Students in Nairobi, Kenya, Know and Think about Emergency Contraception?

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ABSTRACT

Currently, emergency contraception is seldom used in Kenya. As part of a larger study designed to provide insight into the possible roles for the method in Kenya, we assessed the knowledge of and attitudes towards emergency contraception in two groups of potential users, and we focus on these data specifically in this paper. We interviewed clustered samples of clients at ten family planning clinics in Nairobi (n = 282) and conducted four focus group discussions with students at two universities in Kenya (n = 42). Results show that despite relatively low levels of awareness and widespread misinformation, when the method was explained, both clients and students expressed considerable interest, but also expressed some health and other concerns. (Afr J Reprod Health 2000; 4[1]:77-87)

RÉSUMÉ

Que savent et que pensent les clientes du planning familial et les étudiants universitaires à Nairobi, Kenya, de la contraception d'urgence? Au Kenya, à l'heure actuelle, on ne se sert guère de la contraception d'urgence. Cette étude, qui fait partie d'une plus grande étude conçue pour fournir un aperçu des rôles éventuels pour la méthode au Kenya, a évalué la connaissance et les attitudes par rapport à la contraception d'urgence auprès de deux groupes d'usagers potentiels. L'étude est basée précisément sur les données recueillies. Nous avons interviewé des groupes d'échantillons de clientes auprès de dix cliniques de planning familial à Nairobi (n = 282) et nous avons mené des discussions dans quatre groupes cibles avec des étudiants dans deux universités au Kenya (n = 42). Les résultats montrent que malgré les niveaux de conscience qui sont relativement bas, et que malgré les mauvais renseignements bien repandus, quand la méthode a été expliquée, les clientes et les étudiants, ont exprimé beaucoup d'intérêt, mais avec quelque réticence à l'égard de la santé surtout. (Rev Afr Santé Reprod 2000; 4[1]:77-87)

KEY WORDS: Emergency contraception, Kenya, family planning clients, students, knowledge, attitudes

Introduction

Contraceptive awareness in Kenya has grown steadily, as reflected in a fall in the total fertility rate from nearly 8 children in 1979 to 5.4 children in 1989. Levels of contraceptive use have nearly doubled, from 17% of married women in 1984 to 33% in 1993.1 Nearly all currently married men and women know at least one modern method of contraception. Although induced abortion is legal only to save a woman's life, the incidence of unwanted pregnancies and, consequently, the desire for abortion services is widespread, particularly among adolescents.² As a result, unsafe abortion is a major problem contributing significantly to the high number of maternal deaths and significant maternal morbidity in Kenya, a country in which women have a one in twenty chance of dying from pregnancy related causes in their lifetime.3

Emergency contraception refers to methods that women can use to prevent pregnancy after unprotected sex has already occurred. The methods may have a role in improving women's reproductive health in Kenya. Although research on the use of emergency contraception in developing countries is scant, the methods could potentially play an important role in reducing unwanted pregnancy in several countries, including Kenya.4 Emergency contraception could fill an important gap for women who have had unplanned intercourse (including women who are raped or have coerced sex), have experienced a contraceptive accident, or have neglected to use an ongoing, precoital contraceptive method.5

The most common methods of emergency contraception include two hormonal regimens and one device.6 The Yuzpe regimen consists of two doses each of 100mcg ethinyl estradiol plus 0.5mg levonorgestrel. The doses are taken twelve hours apart, and should be started as soon as possible after unprotected intercourse, but typically within 72 hours. These ingredients are found in the tablets sold as part of specially packaged emergency contraceptive regimens such as Preven in the United States or PC-4 in the United Kingdom (although not available in Kenya), but the regimen can also be easily made by taking several pills (the exact number depends on the brand) of those ordinary combined oral contraceptives that contain the

same hormones. Similarly, the levonorgestrel-only regimen consists of two doses of 0.75mg levonorgestrel, as found either in the specially packaged emergency contraceptives, Postinor-2 or Plan B, or made from progestin-only oral contraceptives. Although not addressed further in this paper, copperbearing IUDs also can be inserted to prevent pregnancy after unprotected intercourse.

Postinor levonorgestrel tablets, manufactured by Gedeon Richter in Hungary, have been registered in Kenya for some years, but before our study had not been marketed actively, and indeed had not been explicitly labeled for emergency contraception. As a preliminary step in a planned project by the International Consortium for Emergency Contraception (see acknowledgements) to introduce Postinor-2 emergency contraceptive pills more widely in Kenya, we conducted a multi-part study to understand the role the method might play. In the main publication resulting from that larger study,7 however, we could not focus in any detail on the knowledge and attitudes that two important groups of potential users, family planning clients and university students from the capital city, Nairobi, might hold. In this paper, we analyse and present these data in depth. Current knowledge among family planning clients will help determine the best ways to approach client education, as one potential mechanism for introducing this method is through family planning clinics. In addition, since use of emergency contraception is popular at college health centres in other countries such as the United States.8 and student health services are often among the first to offer the methods and the most liberal about advertising it, we wanted to learn about student attitudes towards and knowledge of the method.

Methods

During September 1996, we surveyed 282 family planning clients at ten clinics (all slated to be part of the consortium's model introduction project), chosen in a stratified fashion to represent a range of socioeconomic clientele, and to cover a mix of public and private clinics. At each site, trained interviewers, who approached every second client while the clients were waiting for or completing appointments, recruited the clients. Recruitment

continued until sample size (n = 25) was reached for the site. In some instances, this process took several consecutive days, although ultimately we ended up with a slightly larger sample than planned at some clinics. The pre-tested questionnaire (available upon request) typically took about ten minutes to administer. Clients could opt to be interviewed in English or Swahili.

After gaining informed consent orally (with a response rate of 100 per cent) interviewers collected demographic information, including the respondent's age, educational level, and current contraceptive status, and then assessed the respondent's knowledge of emergency contraception. First, the survey questioned women about the timing for the initiation of an emergency contraception regimen, its effectiveness, and the ingredients of emergency contraceptive pills. Then basic factual information about emergency contraception regarding when the method should be used, how it works, its side effects, and efficacy was presented before the respondents' attitudes about this method and its distribution were assessed. Before concluding, interviewers noted and responded to any questions the participants raised. Using standard statistical software (SPSS), differences in participants' close-ended responses were analysed using chi-squared tests and logistic regression.

In the same month, we also conducted four focus groups with male and female students in the humanities and sciences at two universities in the Nairobi area. A uniform moderator's guide (available upon request) was used in each case, and discussions were taped and transcribed for analysis. Each group began with the moderator asking participants to write a short paragraph on emergency contraception. Participants then swapped and read these descriptions aloud to start discussion. Next, the moderator asked questions regarding general knowledge about contraception. After collecting data on prior general knowledge, the moderator gave a short description of emergency contraception. Discussions then progressed to cover emergency contraception specifically, students' opinions about its availability, acceptability, cost, and provision.

In order to minimise selection bias, the topic of the focus group was not advertised during the recruitment. Students were simply told the topic was related to health. Students received a little sum

of money to compensate them for their time. Although we had intended that two groups be for men, and two for women, the students requested that the groups be combined into four mixed-sex groups, and promised that they would not feel inhibited about discussing their views in the presence of members of the opposite sex. We agreed to the modification in the protocol, and agreed that the students seemed to speak candidly during the discussions. Altogether, 42 students participated, including 18 from Egerton University and 24 from Kenyatta University.

Results

Interviews with Family Planning Clients

Some information from the client portion of our study appears elsewhere, but we repeat it here for the sake of completeness and to inform our later discussion. We also add information reflecting additional analysis to elaborate on several points.

The mean age of respondents was 26 years, and over half of the women had completed more than eight years of school. Nearly all (92 per cent) had given birth, and 80 per cent were currently on contraception, as might be expected among clients recruited in a family planning clinic. Over 50 per cent of the women were oral contraceptive users, with a further 26 per cent using injectables and 17 per cent using IUDs.

Only 11 per cent of the respondents had heard of emergency contraception by name. When asked what women can do to avoid pregnancy after unprotected intercourse, nearly two-thirds (61 per cent) believed that women had no recourse. Another 20 per cent were uncertain. Several women specifically mentioned emergency contraception and few more had heard of the concept that women could take oral contraceptive pills in cases of unprotected intercourse. A minority (10 per cent) reported that women could receive "cleanings" or "dirt removals" at hospitals or clinics to avoid pregnancy, particularly after rape.

Among the subset of clients (n = 30) who had heard of the method, the majority learned of emergency contraception through their friends or family members (47 per cent), or through the media (23 per cent), including international television programs such as CNN. Clinics, family planning providers, and pharmacists were scarcely men-

tioned. Consequently, it is not surprising that very few women had accurate and detailed information regarding emergency contraception. In fact, many of those reporting familiarity with emergency contraception had abundant misinformation. Most were confused about the period of effectiveness of emergency contraception. When asked if emergency contraception works if a woman's menstrual period is late, only 23 per cent of the 11 per cent claiming some knowledge of the method responded correctly that emergency contraception is ineffective at this time; 60 per cent were not sure and 17 per cent believed that it was effective. Similarly, when questioned in more detail about the timing of initiating emergency contraception, only two women knew that the correct time for its initiation is within 72 hours of unprotected intercourse. Most respondents incorrectly thought that emergency contraception would not work if started later than "immediately" after unprotected sex (47 per cent) or 24 hours afterwards (10 per cent).

Only one of the 30 participants who had heard of the method responded correctly that emergency contraception reduces the chance of pregnancy by 75 per cent. Among these same women who had heard of emergency contraception, 63 per cent were not sure of its effectiveness, whereas 13 per cent overestimated it, believing that emergency contraception was nearly 100 per cent effective. Seventeen per cent incorrectly believed that it reduces the chance of pregnancy by only 50 per cent. Just over one quarter (28 per cent) of respondents claiming familiarity with emergency contraception reported having no idea whether the ingredients in the method were the same or different from those in ordinary oral contraceptives. An additional 38 per cent mistakenly believed that the ingredients were completely different. Only 17 per cent knew that emergency contraceptive pills can be simply oral contraceptives taken in a higher dose.

After being informed about emergency contraception and clarifying any misperceptions, women were typically enthusiastic about the idea of emergency contraception. Eighty per cent of the family planning clients reported thinking that emergency contraception is generally suitable for women in Kenya, with only 8 per cent disapproving A large majority (84 per cent) said they would use emer-

gency contraception or recommend it to a friend if needed. Ten per cent said they would not, while the rest were unsure.

Interestingly, education was inversely related to a woman's willingness to use or recommend emergency contraception. The most educated family planning clients - women who had attended university - were most likely to say they were either unsure or would not recommend or use this method. Only 68 per cent of women who attended university would recommend or use emergency contraception. In contrast, almost all women (90 per cent) who never attended high school and 81 per cent of women who attended high school stated that they would either use or recommend this method (p = 0.008). Education, however, was not significantly associated with whether the respondent felt that emergency contraception was suitable for Kenyan women generally. Neither measure of support of emergency contraception was significantly associated with the respondent's current use of contraception or to the method of contraception used (if any).

Although most family planning clients surveyed did express support generally for emergency contraception as noted, nearly half (45 per cent) of the respondents nevertheless expressed concerns about the method. The main concerns voiced were that the women had not heard enough about the method, that it might entail health risks, and that it might harm a fetus if it failed to prevent pregnancy. Some respondents worried about the effects on their future fertility. Others expressed concern that emergency contraception would be "misused" by Kenyan women, who might substitute it for more reliable ongoing methods of family planning. A few women reported ethical concerns, or were worried that emergency contraception may be illegal or may act as an abortificent.

As with measures of support of emergency contraception, education correlated with suspicion about the method. Regression analysis revealed that educated women were more likely to express concerns about the method. This association was particularly striking for women who had attended university. About 77 per cent of women who attended university, compared with only 33 per cent of women who had never attended high school, voiced concerns about this method (p < 0.001). Moreover,

older women (aged 25 years or above) were also significantly more likely to have concerns (over 50 per cent) about the method than women who were younger than 25 years (34 per cent) (p = 0.003).

Women's opinions varied about the desirability of restricting emergency contraception to certain groups of women. Over half of the respondents thought that emergency contraception should be widely available to everyone who needs it, while a third (32 per cent) advocated more limited access. Nearly one-fifth (18 per cent) thought that young girls should be denied access to emergency contraception, typically arguing that this population would abuse emergency contraception and that the method would lead them to behave "promiscuously." Other respondents, however, considered the method well suited to the needs of today's young girls.

Kenyan family planning clients typically held liberal views about the ideal distribution channels for hormonal emergency contraception. Almost without exception, the clients (98 per cent) agreed that doctors should be able to offer the method. Most women also supported alternative distribution sources, including non-physicians at health facilities (two-thirds), pharmacists (one half), community health workers (one half), and medicine shops (12 per cent). Surprisingly, opinions about sources for the method were not correlated with level of education or with support for the method as measured by whether it is suitable for Kenyan women. Respondents shared several suggestions of channels for informing Kenyan women about emergency contraception. Fifty-three per cent thought that group lectures and individual counselling at clinics and hospitals would best educate women. Nearly 30 per cent suggested that a media campaign be launched, while the remainder offered a variety of sources, including sex education in schools to educate adolescents, house-to-house visits by community health workers, and meetings and talks in public places such as markets and churches.

Nearly two-thirds (61 per cent) felt Kenyan women would be willing to pay for emergency contraception. Suggested amounts ranged from 5 to 500 Kenyan shillings,* with most women (64 per cent) suggesting that 50 shillings or less would be an acceptable price. A significant minority, however, (40 per cent) argued that any price at all could be prohibitive. Not surprisingly, willingness to pay for the method was positively associated with higher levels of education.

At the end of the survey, clients were encouraged to ask any questions they had. These questions were noted and then answered on the spot if possible. Table 1 presents the main groups of questions respondents raised. The questions demonstrate a thirst for detailed and accurate information on emergency contraception and also reveal a reluctance to adopt any family planning method without minimum understanding of side effects, contraindications and in some cases, mechanisms of action.

Focus Groups with University Students

Adolescents' use of emergency contraception generates considerable controversy among health care providers and family planning clients. However, use of the method among university students, who typically seek to postpone childbearing and yet often are sexually active, may be among the first socially sanctioned uses. We, therefore, solicited views on emergency contraception from forty-two male and female students ranging from 21 to 24 years old, who attended Kenyatta and Egerton Universities; two technical universities in the Nairobi area. Four focus groups probed students' knowledge of emergency contraception, attitudes towards its use, and ideas about its distribution.

At the time of the survey (in August 1996) the exchange rate was approximately KSh50 = US\$1.00.

Table 1 Examples of Questions asked by Family Planning Clients

Effectiveness

Since EC is not 100% effective, can you still get pregnant?

Can EC help if a woman is already pregnant?

Will EC work for a second episode of unprotected intercourse 2 days later?

Compatibility with current FP method

Can EC be used with other methods or instead of other methods?

Can those using the coil use EC?

Contraindications

Is EC okay for those who can't use OC?

Side effects

Will EC lead to weekly bleeding?

What happens to the baby if EC fails?

Can EC cause infertility if used over a long time?

Distribution and access

When will EC be available in our clinic?

How can one get EC when in need?

Will EC be given to us to take home?

Ethical concerns

Did you talk to Catholic leaders about EC?

Isn't EC a way of killing a young fetus?

Appropriateness for subgroups of women

Is EC suitable for older women, younger women or couples that live apart?

Is EC only for married women?

Dosage

Is EC given weekly or monthly?

How many pills can be taken in one month?

Can you take it before sex?

General curiosity

How can we get more information about this method?

Is EC the only way to prevent unwanted pregnancy after unprotected sex?

Table 2 Students' Knowledge of Emergency Contraception as Reported in their Written **Paragraphs**

	%	N
Previous knowledge of EC	n = 42	
Could adequately describe EC	50	21
Some understanding of EC	7	3
No previous knowledge	43	18
Detailed knowledge*	n = 24	
Taken after intercourse	63	15
Inaccurate timing (the next morning or day)	17	4
Correct timing (within 72 hours)	13	3
Oral contraceptive pills, hormonal pills	13	3
Inhibits ovulation and prevents implantation/conception	25	6
Source of knowledge*	n = 24	
No response	29	7
Friends	17	4
Doctor, medical center	13	3
Family life education	13	3
In school or college, biology class	17	4
Peer counselling training	13	3
In other cities or villages	13	3
Media: TV, books, magazines	13	3

^{*} Respondents could give more than one response.

Knowledge of emergency contraception was assessed at the beginning of the focus groups by asking each student to write down everything he or she knew about the method including how they heard about emergency contraception, how it works, and how it should be taken. A summary of the results from these paragraphs appears in Table 2. Students' individual descriptions revealed that compared with family planning clients, the students were surprisingly well informed. Half of the students (21 participants) had heard of emergency contraception and could provide an adequate description of it, while another 7 per cent had a vague understanding of emergency contraception. Only 43 per cent of the students (18 students) were completely unaware of the method.

Among students reporting to be familiar with emergency contraception, several of them possessed highly accurate information, while a handful expressed common misperceptions. Over half of the students with some familiarity, voluntarily mentioned in their paragraphs that it could be taken after unprotected intercourse. A few students (n = 4)believed that emergency contraception can be taken no later than the morning or day after intercourse and one student thought that emergency contraception acted primarily as a spermicide, stating "they are family planning pills taken the morning after a night of sexual intercourse. I guess it kills sperms in one way or another." However, other students were clearly well informed. Several students mentioned that it is a form of contraception taken after intercourse to "inhibit ovulation and prevent implantation." Three students said that it must be taken within 72 hours after intercourse. One student explained:

From the information I have come across, I gather that the morning-after pill is a hormone or a combination of hormones, which are taken after unprotected intercourse to avoid unwanted pregnancy. The pill acts either by interfering with the movement of the ovum to the uterus or making implantation difficult."

Most of the well-informed students had heard of the method through peer counsellor training or from a university course on family life education. Two students had learned of the method in a secondary school biology course, while other participants mentioned friends and the media as their primary source of information.

Following a short description of the method by the moderator, most students reacted positively to the concept of emergency contraception. The participants immediately perceived a potential benefit of the method for students. They welcomed an alternative to unplanned childbearing or abortion that could result from unprotected sex, and they noted that emergency contraception would be ideal for college students, playing a key role in decreasing both pregnancies and abortions on university campuses. The students talked freely about the risk of unprotected sex in college, especially during the college dances, or "campus nights." They also noted the need for emergency contraception, even among students who do not attend these "campus nights." Many students have steady partners who see each other only twice in a semester, for instance. Students also agreed that this method would be highly beneficial to many married students who do not want children while they are focused on their studies. As one male student stressed, emergency contraception would help prevent not only unwanted pregnancies, but also other dire consequences:

It would give girls who [otherwise would] have to drop out of school a second chance in life. (Male undergraduate)

Another student added:

[It is] better to give the pill than let the children go through the trauma [of facing an unwanted pregnancy]. (Female undergraduate)

While most participants voiced enthusiasm generally for emergency contraception in the college population, some participants expressed concerns about unfettered access, particularly by

younger women. These students raised two specific concerns about the use of emergency contraception among young people. First, a few students feared potential long-term side effects. They stated that young women should not use any form of hormonal contraception, as they believed it could jeopardise their fecundity.

If it affects my system, then I do not want to use it. (Female undergraduate)

However, they ageed that emergency methods would be suitable for married couples and couples with children.

Second, one student felt that the availability of emergency contraception would encourage promiscuity among girls in secondary schools.

Some of the youths will not engage in sex because they fear getting pregnant; so they find that there is a way to prevent whatever is giving them this fear. Then they will say, I'm free' because they have got something which can prevent pregnancy and so they will go on having sex.

Yet another student quickly countered that since other forms of contraception are readily available, emergency contraception would not increase promiscuity.

If it is a matter of increasing immorality, the availability of condoms is enough to increase it.

Other students expressed concerns regarding the use of emergency contraception in any age group. They worried that the availability of emergency contraception might undermine the use of other regular methods, including the condom. Participants were concerned that people would use it so often that it would cease to be an "emergency" method. One student noted that there is a "thin line between necessity and abuse of the pill."

Some students also felt that emergency contraception might encourage unprotected sex and consequently lead to increased exposure to STDs, including HIV. They stressed that all women should be encouraged to use a more regular method of contraception and to rely on emergency contraception only when the regular method fails.

One participant wondered whether this method was a form of abortion. Even after the moderator's explanation of current understanding about the mode of action, she remained concerned that the method may be perceived as abortificent.

Having considered the pros and cons of emergency contraception, participants agreed that a comprehensive educational campaign conducted through posters, radio and television must precede the introduction of emergency contraception to prevent abuse of the method as well as to dispel misconceptions. Other students noted that village chiefs may serve as an invaluable mechanism of distributing this information in rural areas. The students identified several key points that should be communicated. First, they made education about emergency contraception, as well as other forms of contraception, a priority. Participants suggested offering emergency contraceptives alongside other methods such as the condom, so that it is viewed as a supplementary method to be used only in emergency situations and not as an alternative method of contraception. They also insisted that whether there was a dedicated product specifically for emergency contraception or there was only a higher dose of regular oral contraceptives, there should be clear directions about the proper dosage on the label. Finally, they stressed the need to correct misinformation about when this contraceptive should be taken and to clarify that it is not equivalent to abortion. The students' emphasis on the need for responsible use of emergency contraception belies concerns that youths are most likely to abuse this new technology. Instead, their comments echo many of the concerns voiced by health providers and family planning clients. These interviews indicate that students, contrary to stereotype, might be among the more informed and cautious users.

When queried about how this method should be marketed and distributed, a heated discussion over the best name for this method arose. One student felt that the term "emergency contraception" gave the impression that it can only be used in times of crisis such as rape, but not after something as banal as a condom breaking. Other participants noted that the phrase "morning after pill" was misleading since in fact the pill can be taken up to three days after intercourse. These students suggested that marketers should either find a new word in Swahili or use the brand name such as Microgynon, Eugynon, or Postinor. However, supporters of the terms argued that "emergency contraception" connoted that this was not a regular method but one to be used only after the failure of

another method and that "morning after pill" indicated that this method could be used after intercourse. Indeed, several of the students who said they had never heard of "emergency contraception" or "the morning after pill" were able to make reasonable inferences about the method from these names.

Students agreed that family planning clinics are the best place to provide information on emergency contraception as well as distribute the actual pills. However, they suggested that all possible distribution channels be used in order to reach the largest possible audience. In particular, they noted several obstacles to youths having access to emergency contraception as well as other forms of contraception. As one student stated:

In Kenya we have a problem because the society is still grappling with the problem of youth and contraception.

Another female participant in Kenyatta stated:

People in high school are sexually active and we try to hide that in this country.

Some health care providers reportedly were uncomfortable with dispensing contraception to college students. Students felt these health care workers frequently act paternalistically and treat the students as their own children, reprimanding them for their "promiscuity." In the words of one student:

Some providers are very old and treat clients as their children. There is need for attitude change.

Moreover, several students did not believe that these services would remain confidential. This attitude acts as a major barrier to access to contraception. In fact, several students claimed that they preferred to buy their contraception at a pharmacy rather than face disapproval at the university health clinic, where contraception is free. Yet, despite these obstacles students insisted on the need to have access to emergency contraception and they suggested that alternative distribution routes be used, including college wardens and peers. One student from Egerton commented that "people have always been shy about sexual things but this should not stop it from being introduced into the market."

When discussing whether emergency contraception should be made available to adolescents, one student observed that "young is relative." Most participants agreed that the very young should not be given emergency contraceptive. They suggested, however, that these groups be provided with information on regular contraception, perhaps through sex education courses at secondary schools or even at lower levels. They unanimously supported the introduction of emergency methods at the college level, and also identified women living in rural areas as an important population in need of the method.

A majority of the participants supported advance provision of emergency contraception, although one student cautioned that the prescription should be very clear so that no confusion about the proper dosage arises. Advance provision was particularly sanctioned for married couples who reside separately and therefore have no need for continuous contraceptive protection. In these long distance relationships, visits are often sporadic and unpredictable. Moreover, many of these women live in rural areas with limited access to family planning; thus, advance provision of emergency contraception could play a practical role in meeting these women's contraceptive needs. Yet, students also advised caution in advance distribution arguing that the method should be given "to people who have respect for drugs - to use them appropriately".

Students debated at length about whether clients should pay for emergency contraception, and if so, what was an appropriate cost. They noted that the university generally provides family planning methods at no cost, but that in the open market oral contraception costs KSh30 and condoms were more expensive. Some students suggested that the different character of emergency contraception warranted a nominal fee, others thought that the methods should be free, at least initially. On the whole, students anticipated that once emergency contraception became available and people got to know about it, they would pay whatever the cost if only to avoid abortion, which students in one group estimated to cost between KSh3000 and 4000.

Discussion

Our study of emergency contraception represents one of the first from Africa to reach published literature, and yet it contains a number of limitations that prevent generalisations outside its particular

setting. Data collection took place in or near one capital city only, and the study populations represented in some senses the "best case scenarios" of potential clients most likely to support the introduction of emergency contraception. Nevertheless, since the model introduction of Postinor-2 being planned was scheduled to begin in Nairobi, and with these same populations, the information we collected was helpful to us in formulating our client materials, as well as other aspects of our introduction strategy. In addition, our study was a snapshot of contemporary knowledge and attitudes, rather than a more thorough investigation into the actual effects of one introduction strategy or another. Clearly, however, there is a need for the method in developing countries generally,4 and a snapshot is a reasonable place to start in a setting where adequate information does not yet exist even to formulate an introductory strategy.

The client interviews and the student focus groups indicate that knowledge of the method in Kenya is limited, and accurate knowledge among these potential users is still scarcer. For this reason, it will be important to focus first on popularising the concept that there is something a woman can do to prevent pregnancy after unprotected sex has already occurred. After that most basic message, the most important things to communicate are that a woman must act quickly, and that the methods in question are simply larger doses of ordinary oral contraceptives, although they may be packaged for convenience in specially marked boxes.

Our study seems to indicate that a commercial market for specially packaged emergency contraceptives is viable in Nairobi. Further empirical evidence on this point will be necessary, however, to determine what price the market will bear, and whether investment in this method of family planning will be cost-effective to the public sector in the light of many other demands on its scarce family planning resources.

On the whole, however, both groups of potential users investigated in our study were generally enthusiastic about emergency contraception, although at least some members of each group expressed reservations about side effects and potential long-term effects on the user, as well as about effects the method might have at the community level, in raising the risks of HIV or encouraging "promiscuity."

Students, in particular, cautioned that the method could become a "non-emergency" or routine method, and argued that emergency contraception was more appropriate as a supplement than as a substitute for long-term methods of contraception. Nonetheless, students who participated in the focus groups specifically stressed the important role emergency contraception could play in reducing pregnancies from unprotected sex in the college population. In their concluding comments, they admonished the moderator: "when you are training people, you need to pick on the youth to spread the gospel - don't forget about us."

Conclusion

Emergency contraception is an untapped method in Kenya. Levels of knowledge are low and the method is not part of the family planning mainstream. Nevertheless, study participants were generally supportive of the method and considered it suitable for Kenya. Introductory efforts should place adequate emphasis on provider training and on making accurate information on the method available. The information should include accurate messages on the health effects of emergency contraception, the time limits for use, and the nature of the active ingredients involved, whether women opt to use existing oral contraceptive supplies or specially packaged emergency contraceptives. Although many potential users were concerned about access for the very young, college students at least want to be included in promotional efforts and felt the methods have a role to play in their population.

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REFERENCES

- Kenya Demographic and Health Survey 1993. Calverton, MD: Macro International, 1994.
- Rogo K. Unsafe Abortion in Kenya: Findings from Eight Studies. Nairobi, Kenya: The Population Council, 1996.
- World Health Organization and World Bank. Maternal Health Around the World. Geneva, 1997.
- Ellertson C, Winikoff B, Armstrong E, Camp S and Senanayake P. Expanding access to emergency contraception in developing countries. Studies in Family Planning 1995; 26 (5): 251-263.
- Westley E. Emergency contraception: a global overview. Journal of the American Medical Women's Association 1998; 3 (5): 215-218.
- Hatcher RA, Trussell J, Stewart F, Cates W, Stewart GK, Guest F and Kowal D. Contraceptive Technology. 17th Revised Edition. Ardent Media: New York, 1998; 679-700.
- Muia E, Ellertson C, Lukhando M, Elul B, Clark S and Olenja J. Emergency contraception in Nairobi, Kenya: knowledge, attitudes and practices among policy makers, family planning providers and clients, and university students. Contraception 1999; 60: 223-232.
- Harper C and Ellertson C. Knowledge and perceptions of emergency contraceptive pills among a college-age population: a qualitative approach. Family Planning Perspectives 1995; 27 (4): 149-54.