

## PROVIDER KNOWLEDGE ABOUT EMERGENCY CONTRACEPTION IN GHANA

MARKUS J. STEINER\*, ELIZABETH RAYMOND\*, JOHN D. ATTAFUAH†  
AND MELISSA HAYS\*

\**Family Health International, PO Box 13950, Research Triangle Park, NC 27709, USA*  
and †*Research International, Ghana, PO Box 0 1960, Osu-Accra, Ghana*

**Summary.** In 1996, the Ministry of Health in Ghana included emergency contraception (EC) in its newly issued National Reproductive Health Service Policy and Standards. A short survey was conducted in the summer of 1997 to evaluate health providers' knowledge of EC. Of the 325 providers interviewed, about one-third (34%) had heard of EC. No provider had sufficient knowledge to prescribe EC correctly. A well-coordinated training programme for providers will have to precede successful introduction of EC in Ghana. Moreover, a dedicated product may be critical for the successful introduction of EC in a country like Ghana, where provider knowledge is low.

### Introduction

Emergency contraception (EC) is a safe and effective method of decreasing the probability of pregnancy following unprotected intercourse, or when a contraceptive method fails to work properly (e.g. condom breakage). The three main methods of EC are: (1) combined oral contraceptive; (2) progestin-only oral contraceptives; and (3) the Copper-T intrauterine device (IUD) (Trussell *et al.*, 1998). While the first two methods are estimated to reduce the probability of pregnancy by about 75% (Trussell, Ellertson & Stewart, 1996; Ho & Kwan, 1993) the IUD's effectiveness is near-perfect with an estimated reduction of over 99% (Trussell & Ellertson, 1995).

Even though EC has been available for over 30 years, many advocates call it 'the best kept secret' because of the low level of awareness among both providers and clients and even lower level of use. Only about 1% of women in the United States (US) report ever having used EC (Delbanco, Mauldon & Smith, 1997). But awareness in the US is rapidly changing with well organized media campaigns, including a 24-hour telephone hotline, a website, placards on buses and television spots (Grimes, 1997). A recent survey demonstrated that after an intensive educational effort at a college, nearly all students interviewed knew that EC was available at the college health centre (Harper & Ellertson, 1995). Although no trend data are yet available for the US, EC awareness and use is expected to increase in the next few years. This expectation would mirror the experience of countries like the United Kingdom and the Netherlands where EC

has been promoted for years and where there is now a sizeable demand (Glasier *et al.*, 1996).

In many developing countries, the prospect for rapid acceptance of EC appears to be far less certain. A survey conducted by the International Planned Parenthood Federation (IPPF) affiliates in late 1994 and early 1995 showed that few family planning associations in developing countries offered EC (Ellertson *et al.*, 1995). The seven associations in Africa and South Asia who said they offered EC reported that they only treated a combined total of 100 patients annually. In a series of focus groups and in-depth interviews in Vietnam, most family planning providers were aware of EC, although many lacked accurate knowledge (Ngoc *et al.*, 1997). A key to the design of a successful introduction is an understanding of the level of knowledge and perception towards EC among providers (Robinson, Metcalf-Whittaker & Rivera, 1996).

In 1996, the Ministry of Health in Ghana included EC in its newly issued National Reproductive Health Service Policy and Standards (Republic of Ghana, Ministry of Health, 1996). Moreover, the Planned Parenthood Association of Ghana (PPAG) issued a directive in December 1996 to all their Area Managers instructing PPAG staff to make EC available to their clients (Internal Memo dated 17 December 1996). This paper reports the results of a short survey conducted to evaluate the success of these early efforts to introduce EC into Ghana.

### Methods

Short structured interviews were conducted with health care providers at a sample of family planning outlets in two regions of Ghana (Greater Accra and Ashanti) in the summer of 1997. Interviews were limited to these two regions because they are the most urban and most likely to have provider knowledge of EC. The sample was drawn from two sources. First, the 93 service delivery points that had been drawn by the Ghana Statistical Service (GSS) for the 1996 Situation Analysis in Greater Accra and Ashanti were used. The Ghana Statistical Service sampled 100% of the nation's 44 PPAG clinics, 50% of the 114 hospitals, and 25% of the 707 clinics and 313 maternity units (personal communication: Dr Twum-Baah, 7/97). In addition, a random sample of 50 pharmacies was drawn from a comprehensive list of 207 pharmacies in the two regions' capitals, Kumasi and Accra, compiled by Research International (RI) for a merchandizing study in 1996 (Research International, 1996). The protocol was reviewed by members of the Family Health International Protection of Human Subjects Committee and was deemed to be exempt from a formal review.

Trained study staff visited the selected sites and interviewed a convenience sample of up to ten providers per site. All data forms were double entered, data were cleaned, and preliminary output was generated by RI staff in Ghana using SPSS-PC. The final analysis was done by FHI staff using SAS/WINDOWS (Version 6.12). Multivariable logistic regression was used to determine factors associated with knowledge of and attitude towards EC. The two models exploring the association between knowledge and attitude contained the same six covariates: (1) profession (doctor/other); (2) family planning training (yes/no); (3) religion (Catholic/other); (4) age (>median/≤median); (5) work experience (>median/≤median); and (6) gender (female/male). Odds ratios (OR) and 95% confidence intervals (CI) were calculated for each covariate.

## Results

A total of 325 providers at 133 of the original 143 outlets sampled were interviewed. Five sites had gone out of business; providers at four sites refused to be interviewed; and one pharmacy was sampled twice because the pharmacies were sampled with replacement. The most widely available contraceptives at the sites were condoms (92%), followed by combined oral contraceptives (COC) (89%), spermicides (86%) and injectables (68%). Less than half (40%) of the providers said they offered clients IUDs.

Respondents were evenly split between Greater Accra and Ashanti (47% vs 53%) and had a median age of 41 (range 22–79). The majority were female (69%) and most were mid-level clinicians (nurses, physician's assistants, midwives) or pharmacists; only 8% were doctors (Table 1). Most reported a high level of experience; only 5% had worked for 1 year or less. Three-quarters (75%) had received specialized training in family planning.

One-third (34%) said they had heard of emergency contraception, morning-after pills or any other method to prevent pregnancy after sex had occurred. Multivariable regression modelling was used to control for possible confounding and found that doctors were five times more likely than other professionals to have heard of EC (OR 5.0; 95% CI 1.9–13.2). Providers having received previous family planning training were almost four times as likely to have heard of EC compared with those without training (OR 3.6; 95% CI 1.8–7.0). Female providers and younger providers were about twice as likely to have heard of EC (OR 2.1; 95% CI 1.1–4.0 and OR 1.8; 95% CI 1.0–3.4, respectively).

Of the 112 respondents who reported being familiar with EC, 94 (84%) mentioned that oral contraceptive pills (OCPs) could be used for EC, and 31 (28%) mentioned the use of the IUD for EC. Sizeable proportions mentioned unproven or ineffective methods (douching 20%; spermicides 16%), three respondents (3%) mentioned sitting in hot water, and two respondents each (2%) mentioned saccharine and medroxyprogesterone. Traditional enema, low waist dancing, and jumping after sex were mentioned by one provider each (1%).

Of the 94 providers who stated that they knew about using OCPs for EC, 23 (24%) reported having prescribed EC in the past year; of these, 65% had prescribed OCPs for EC fewer than ten times in the past year. Over two-thirds (70%) said that they had learned about this method either in school or in formal training after completing school. Most (92%) said it was either very effective or moderately effective, and a similar proportion said it was very safe or moderately safe. Of the 81 providers who thought there were side-effects to the use of OCPs for EC, about three-quarters (76%) mentioned nausea or vomiting, which is the most common side-effect mentioned in the literature. Providers mentioned contra-indications for which there is no medical evidence (heart disease/hypertension 38%; chronic illnesses like diabetes and liver disease 30%).

Those 94 providers who were familiar with the use of OCPs for EC had inadequate knowledge about this regimen (Table 2). About half the participants knew the correct brands that could be used (58%) and the correct number of doses (47%), but only a fifth (21%) knew that the treatment should be initiated within 72 hours. A similar proportion (30%) knew to wait 12 hours between doses. Only four providers knew the correct number of pills per dose for the brand of OCPs they had mentioned.

Of the 31 providers who stated that they knew about using IUDs for EC,

**Table 1.** Background characteristics of providers  $n=325$ 

	<i>n</i>	%
Gender		
Female	225	69
Male	100	31
Religion		
Protestant	245	75
Catholic	74	23
Moslem	5	2
Hindu	1	<1
Highest professional degree		
Nurse	137	42
Midwife	54	17
Pharmacist	52	16
Physician's assistant	29	9
Doctor	26	8
Other	27	8
Years practising		
≤1	18	5
2–10	123	38
>10	184	57
Received specialized training in FP	245	75
Ever heard of emergency contraception	112	34
Known types of EC <sup>a</sup>		
Oral Contraceptive Pills (OCP)	94	84
IUD	31	28
Douching	22	20
Spermicides	18	16
Sitting in hot water	3	3
Medroxyprogesterone acetate	2	2
Saccharine	2	2
Traditional enema	1	1
Low waist dancing	1	1
Washing w/soap; jumping after sex	1	1
Withdrawal	1	1

<sup>a</sup>Multiple responses were allowed. A total of 176 responses were provided. Percentages are based on the total number of persons who reported having heard of ECs ( $n=112$ ).

knowledge of the proven treatment was similarly poor. Over half of providers (55%) did not know that only copper IUDs are currently recommended for this purpose, and almost all (90%) were unaware that it is effective in preventing pregnancy if inserted within 5 days of unprotected intercourse.

Once given a brief overview of EC, most providers (76%) favoured its use (Table 3). Possible confounding was controlled for with multivariable regression modelling, and it was found that Catholics were almost twice as likely to oppose EC than those

**Table 2.** OCP knowledge: brands and dosage ( $n=94$ )

	<i>n</i>	%
Brand of OCPs most often used for EC		
Correct products		
Lofemenal	19	20
Secure	18	19
Microgynon	10	11
Nordette	3	3
Eugynon	3	3
Schering PC4	1	1
Neogynon	1	1
Total correct	<b>55</b>	<b>58</b>
Incorrect/unspecified product	32	34
Do not know	7	7
Correct number of pills per dose ( $n=55$ ) <sup>a</sup>	4	7
Recommended maximum number of hours after unprotected intercourse that OCPs should be taken for EC		
Correct no. hours (72)	<b>20</b>	<b>21</b>
Incorrect no. hours		
< 12	15	16
12–48	31	33
> 72	13	14
Don't know	15	16
Recommended number of doses for EC		
Correct no. doses (2)	<b>44</b>	<b>47</b>
Incorrect no. doses		
1	15	16
4–30	25	27
Don't know	10	11
Recommended number of hours doses should be taken apart <sup>b</sup>		
Correct no. hours (12)	<b>21</b>	<b>30</b>
Incorrect no. hours		
2–8	10	14
24–72	33	48
Don't know/missing	5	7
Answered type, dose, initiation of EC, and timing of doses correctly (all five correct)	0	—

<sup>a</sup>Only providers who specified correct brand could give a valid response for number of pills per dose.

<sup>b</sup>Only providers who said that two or more doses should be used could give a valid response.

of other faiths (OR 1.8; 95% CI 1.0–3.4). The two most common reasons for opposition to EC were the belief that it is a form of abortion (39%) and concerns about its safety/effectiveness (32%). Providers were less positive about EC use by adolescents with slightly more than half (51%) favouring its use in this population. Most providers (82%) thought the reason EC was not being used more often was the lack of public

**Table 3.** Provider attitudes about emergency contraception ( $n=325$ )

	<i>n</i>	%
Attitude towards EC		
Favour	247	76
Oppose	69	21
No opinion	9	3
Reason for above <sup>a</sup>		
Favour		
Prevents unplanned/unwanted pregnancy	179	72
Avoids abortion	39	16
EC is a good/safe/effective method	35	14
In an emergency	10	4
Yes, but question effectiveness/side-effects	9	4
But should use preventive method	3	1
Depends on client's condition	2	1
But should not encourage routine use	1	<1
To prevent unprotected sex	2	1
Other	2	1
Oppose		
Against religion/It's a form of abortion	27	39
Concern over safety/effectiveness	22	32
Should use preventive method	4	6
Promotes casual unprotected sex	8	12
It is not a barrier method	6	9
Insufficient local education	4	6
Should not encourage routine use of it	3	4
Other	3	4
Considered EC useful for adolescents	166	51
Why is EC not used more often in Ghana? (multiple responses) <sup>b</sup>		
Public not aware	267	82
Not available	37	11
Clients use other methods	8	2
Religious objections	6	2
Other	7	2
Don't know	9	3
Opinion of MOH policy letting pharmacies distribute EC		
Agree	223	69
No opinion	9	3
Disagree	93	29
Considered a special package for EC would be beneficial	276	85

<sup>a</sup>Multiple reasons were allowed. Total reasons provided are: 282 in favour, 77 opposed, 10 with no opinion. Percentages are based on the total number of people within each category (247 in favour, 69 opposed, 9 with no opinion).

<sup>b</sup>Multiple reasons were allowed. Percentages are based on the total number of people surveyed.

awareness. Only six providers (2%) believed that religious objection was the reason for the low level of EC use in Ghana. Over two-thirds (69%) of providers, and 90% of pharmacists (data not shown), agreed with the Ministry of Health's recent policy to allow pharmacists to distribute OCPs for EC (Republic of Ghana Ministry of Health, 1996). Almost half of providers (42%) thought that OCPs should be dispensed in advance to women, rather than only at the time when EC is needed. In Ghana, no pills specifically packaged for EC are currently available, but most providers (85%) agreed that such a dedicated product would be beneficial. Nearly two-thirds of providers (66%) thought clients would be willing to pay at least 200 Cedis (about US\$ 0.10) for specially packaged EC.

### **Discussion**

Provider knowledge about EC is low in Ghana. Out of 325 health care providers interviewed, two-thirds were unaware of any method that can be used after intercourse to reduce the risk of pregnancy. Moreover, none of the 94 providers with reported knowledge of OCPs for EC could accurately describe the correct regimen for their use. While over half correctly identified a specific brand of OCPs that could be used for EC, only one-fifth knew that the regimen should be initiated within 72 hours after unprotected intercourse. Knowledge that the two doses should be taken 12 hours apart was equally poor. This study was limited to the two most urban areas of Ghana, and it is suspected that provider knowledge in the more rural areas may be poorer still.

The policy implications of this research are two-fold. First, a well-coordinated training of providers will have to precede a successful introduction of EC in Ghana. Written directives to providers do not suffice. In the first year following the PPAG memo informing all Area Managers about the need to provide EC, only ten clients had received OCPs for EC (personal communication: Dr Nerquaye-Tetteh, PPAG Executive Director, 2/98). The wide network of pharmacies across Ghana may have the potential to increase women's access to EC. This study demonstrated support for this type of distribution with a majority of providers agreeing with the recent MOH guideline allowing pharmacists to provide OCPs for EC (Republic of Ghana Ministry of Health, 1996). Pharmacists must be included in any comprehensive training effort. Because sales clerks and other staff with less formal training than the pharmacists may be the first contact for women seeking EC services, special efforts should be made to include all pharmacy staff in EC training.

Second, most providers believed that specially packaged OCPs for EC would help promote EC use. A dedicated product would eliminate the need to teach providers about: (1) the brand of OCPs that can be used for EC; and (2) the exact dosing. In addition, the package could contain instructions on the timing of product use. A dedicated product may be critical for the successful introduction of EC in a country like Ghana, where provider knowledge is low. In addition, the introduction of a dedicated product could be linked to a comprehensive training programme which would ensure that providers pass on accurate information to their clients and promote correct use of the product.

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