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International Journal of Gynecology and Obstetrics

journal homepage: www.elsevier.com/locate/ijgo



CLINICAL ARTICLE

Knowledge and use of and opportunities for emergency contraception in Northern Haiti

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ARTICLE INFO

Article history:

Received 8 July 2012

Received in revised form 2 November 2012

Accepted 21 December 2012

Keywords:

Emergency contraception

Haiti

Mixed methodology

ABSTRACT

Objective: To evaluate the knowledge and experience of, and desire for, emergency contraception (EC) in postpartum women in Haiti, and to determine the knowledge and practices of EC providers. **Methods:** As part of a larger postpartum family planning study, 6 focus groups were conducted with postpartum women (n = 33), 3 were conducted with providers (n = 22), and a questionnaire was given to postpartum women (n = 250). **Results:** Of the 249 women who completed the survey, 145 (58.2%) were aware of the concept of EC as an emergency measure in the postcoital period. Of these, 130 (89.7%) had knowledge of traditional methods only. Twenty-eight (11.2%) women had used some form of EC in the past, but only 2 (0.8%) reported ever using a modern form of EC. Providers reported that EC was offered to women only in cases of sexual assault. Their impression was that there was no demand for EC. **Conclusion:** Awareness and use of EC is low in the context of high unmet need. The results demonstrate a need for improved education and provision of modern effective EC as part of the constellation of family planning choices.

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1. Introduction

Emergency contraception (EC) has been available globally for decades and is a potentially valuable resource for women at risk of unintended pregnancy; however, it has been chronically underused by both women and providers. Awareness of modern contraception in Haiti is high, but use of modern methods remains low at 25%. Awareness of modern EC is low and use is lower at 13.2% and 0.3%, respectively [1]. This low contraceptive use results in high rates of unintended pregnancy and unsafe abortion practices, contributing to the highest maternal mortality ratio in the region: 670 per 100 000 [1]. Increased awareness and use of EC is one potential strategy to prevent unintended pregnancies and the complications that can ensue.

While increased access to EC has not been shown to reduce unintended pregnancy rates at the population level, EC can reduce the risk of unintended pregnancy for individual women who can access and use it [2], especially groups of women whose healthcare use patterns are responsive rather than preventative [3]. EC is rarely offered in Haiti, except to women who have been sexually assaulted. Special populations in Haiti—such as postpartum women who are

often not considered eligible for modern contraceptive methods, or those displaced by the devastating earthquake without access to previous family planning care—are particularly vulnerable to unintended pregnancies and may benefit most from an expanded eligibility framework for EC.

EC has been studied extensively in high-resource countries, Africa, and Asia. However, data available from the Latin America–Caribbean region are limited, with no studies addressing the topic of EC in Haiti. The provision of EC may help Haitian women avoid unintended pregnancies in this setting where continuous access to contraceptive methods is often limited, especially in the wake of the January 2010 earthquake, subsequent massive displacement of people, interruption of health services, and increased unintended pregnancies [4]. The present study is a secondary analysis of a published, mixed-methods postpartum family planning study [5]. The aim of the present study was to evaluate the knowledge and experience of, and desire for, EC in postpartum women in Haiti, and to determine the knowledge and practices of EC providers.

2. Materials and methods

The methods of the Post Partum Family Planning Needs Assessment in Northern Haiti have been reported previously [5]. The study was conducted at the Justinian University Hospital in Cap Haitien, Haiti, in collaboration with Emory University, Atlanta, USA. Institutional Review Board approval was obtained by both sites and written

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informed consent was obtained from all participants. The methods of the primary study are briefly described.

The Post Partum Family Planning Needs Assessment in Northern Haiti was conducted in a large public hospital in northern Haiti. The aim of the study was to assess both the potential providers and recipients of a planned postpartum family planning program, focusing on the knowledge base and previous experiences with using or providing family planning. This was a mixed-methods assessment.

Patient focus groups were designed to evaluate the reproductive goals, and knowledge and acceptance of and desire for contraception in postpartum Haitian women who delivered in a public hospital setting. Questions addressing the general concept of EC were included in the discussion guide. Six patient focus groups were conducted with 4–6 participants per group ($n=33$). The criteria for selection of participants were immediate postpartum status (defined as any time from delivery to hospital discharge) in women 18 years or older and more than 20 weeks at the time of delivery. Provider focus groups were conducted among providers at the same hospital and assessed knowledge, attitudes, and contraceptive practices, and included questions addressing perceived demand for EC and provision patterns regarding EC. Twenty-two providers participated in 3 provider focus groups: one group each of faculty, residents, and nurses. All providers were invited to participate in the study ($n=36$). All focus groups were conducted in Haitian Creole in March 2008.

Focus group data were analyzed using MAXQDA software (VERBI, Berlin, Germany) after translation into English. A content analysis approach was used to determine common themes related to the categories addressed in the discussion guides. Codes were developed based on themes and applied to the text by the primary analyst. An EC theme was applied to the text in both patient and provider focus groups when the discussion addressed any aspect of EC. Selected transcripts were coded by a second analyst to assess for intercoder reliability. The data from the EC theme are presented as both synthesized text and verbatim quotations to support the analysis.

The focus group findings were used to generate survey questions. Questions addressing EC were included in the survey and were designed to understand knowledge and use patterns of traditional EC and modern methods of EC. Traditional methods were defined as all methods mentioned that were not consistent with the Yuzpe method, progestin only method, or a copper IUD. The survey was written in English and translated into Haitian Creole. The final survey was given to a convenience sample of 250 patients between August and October 2008. The sample size was chosen as an estimate of how many women could be surveyed in the available time frame. There were 377 eligible postpartum patients during that time period, of whom 276 were invited to participate and 249 completed the survey and are included in this manuscript. One survey was incomplete and not included in the analysis.

SPSS software version 17.0 (IBM, Armonk, NY, USA) was used for statistical analysis. Descriptive statistics were generated for all survey questions pertaining to EC use. Univariate associations between dichotomous and categorical variables and outcomes were determined using χ^2 or Fisher exact tests (for cases where fewer than 5 individuals were in any cell of a 2×2 table). Logistic regression was used to determine odds ratios for potential factors associated with EC knowledge. Multivariate logistic regression models contained all variables in the univariate analyses. No interaction terms were evaluated in the models. Associations are reported as odds ratios (ORs) with 95% confidence intervals (CIs). $P < 0.05$ was considered significant.

3. Results

The majority of the patient focus group participants was aware of the concept of pregnancy prevention after unprotected intercourse and largely cited traditional methods of EC. The traditional methods most commonly mentioned included drinking a cold drink or salt

Box 1

Selected patient focus group data.

“After I had 4 kids, I told him [husband] I won't have kids anymore, so every time we have sex, he gives me a pill of Paracetamol with ice water.” *Participant 6, Focus Group 3* “I have a neighbor and when she's just had sex, her husband gives something icy like salty water, beer, coca cola, and 2 pills of amoxicillin.” *Participant 5, Focus Group 4* “I used to do it [EC]. I would drink salty water and do a belly massage, and the sperm would come out.” *Participant 2, Focus Group 6*

water, rubbing lemon on the abdomen, swallowing castor beans, or taking amoxicillin. All of these methods appeared to be common beliefs among participants. All of these were described as performed immediately after unprotected sex and often initiated by male partners (Box 1).

Providers reported uniformly that EC was offered to women in cases of sexual assault, but not as routine family planning care. The perception among providers was that there was no demand for EC among women in the community (Box 2).

The majority ($n=203$) of women surveyed formed the 18–34 years age group and most had at least some primary school education ($n=230$; 92.4%). A total of 104 (41.8%) participants were having their first child and 180/248 (72.6%) women surveyed either did not want more children or were unsure. A total of 174 (69.9%) women reported having ever used any form of contraception in the past. The most common contraceptive used was the progestin injection ($n=77$; 44%), followed by the male condom ($n=63$; 36.0%), fertility awareness ($n=52$; 29.7%), and combined pills ($n=24$; 13.7%).

Of the 249 women who completed the survey, 145 (58.2%) were aware of the concept of EC as an emergency measure in the postcoital period. A total of 130 (52.2%) women had knowledge of traditional methods only, with only 15 (6.0%) having knowledge of modern EC. Overall, 28 (11.2%) women had used some form of EC in the past, but only 2 (0.8%) of the respondents reported using a modern form of EC (Table 1).

With the exception of age and desire for more children, there were no differences between those who were aware or unaware of the concept of EC ($P > 0.05$). Women aged 35–44 years were more likely to be aware of EC compared with a younger group of women aged 18–24 years (71.1% vs 50%, $P=0.02$) (Table 2). Women who desired more children were less likely to be aware of EC compared with those who did not desire more children (45.6% vs 63.3%, $P=0.012$) (Table 2). When all potential covariates were controlled for, not desiring children continued to be a significant predictor of EC knowledge (OR 2.02; 95% CI, 1.01–4.03; $P=0.045$).

Among those who were aware of EC, the most commonly cited methods of traditional or modern EC included drinking cold water with salt or lemon ($n=47$; 32.4%) or taking an unknown pill ($n=33$; 22.8%) (Table 3). Other methods mentioned included parsley tea, taking castor beans, and drinking bleach. No groups were more likely than any other to have used any form of EC. Women who had ever used any modern or traditional method of EC most frequently cited “3

Box 2

Selected provider focus group data.

“The [community] is not informed about it [EC]. If they are, they don't get educated from us about it [EC]. And most of the time, we just give it in rape cases.” *Participant 2, Resident, Provider Focus Group* “We use it in rape cases, but otherwise it is not often used.” *Participant 3, Faculty, Provider Focus Group*

Table 1
Knowledge of emergency contraception among participants (n = 249).

Variable	No. (%)
Aware of EC (any)	
Yes	145 (58.2)
No	104 (41.8)
Knowledge of modern method	
Yes	15 (6.0)
No	234 (94.0)
Knowledge of traditional method	
Yes	130 (52.2)
No	119 (47.8)
Ever used EC (any)	
Yes	28 (11.2)
No	221 (88.8)
Ever used EC (modern method)	
Yes	2 (0.8)
No	247 (99.2)

Abbreviation: EC, emergency contraception.

gulps of salty water” as their chosen method (14/28, 50.0%). Other methods mentioned by women who had used EC included rubbing the abdomen with lemon, drinking parsley tea and ingesting castor beans or a tablet they could not identify.

4. Discussion

Unmet need for family planning remains high in Haiti, and use of modern methods of contraception remains low [5]. Awareness and use of effective EC are also low; however, in this study population, there is great awareness of the concept of postcoital pregnancy prevention, but an equally great dearth of accurate information regarding methods known to be highly efficacious and safe. This is likely because

Table 2
Awareness of emergency contraception among participants by demographic characteristics.

Variable	Aware of EC (n = 145)	Not aware of EC (n = 104)	Unadjusted OR (95% CI)	P value
Age, y ^a				
18–24	48 (50.0)	48 (50.0)	1	
25–34	64 (59.8)	43 (40.2)	1.49 (0.85–2.60)	0.161
35–44	32 (71.1)	13 (28.9)	2.46 (1.15–5.26)	0.020
Education				
None	13 (68.4)	6 (31.6)	1	
Some primary	45 (57.7)	33 (42.3)	0.63 (0.22–1.83)	0.395
Some secondary	79 (56.0)	62 (44.0)	0.59 (0.21–1.64)	0.309
Some higher	8 (72.7)	3 (27.3)	1.23 (0.24–6.36)	0.813
People in household ^a				
≤4	47 (56.6)	36 (43.4)	1	
5–8	78 (57.4)	58 (42.6)	1.03 (0.59–1.79)	0.916
>8	20 (69.0)	9 (31.0)	1.70 (0.69–4.18)	0.246
Parity				
1	58 (55.8)	46 (44.2)	1	
2–3	52 (54.7)	43 (45.3)	0.96 (0.59–1.68)	0.884
≥4	35 (70.0)	15 (30.0)	1.85 (0.90–3.79)	0.093
Ideal child spacing, y ^a				
≤2	23 (62.2)	14 (37.8)	1	
>2	107 (56.0)	84 (44.0)	0.78 (0.38–1.60)	0.491
Planned pregnancy (current)				
Yes	70 (56.0)	55 (44.0)	1	0.473
No	75 (60.5)	49 (39.5)	1.20 (0.73–1.99)	
Desire for more children ^a				
Yes	31 (45.6)	37 (54.4)	1	
No/unsure	114 (63.3)	66 (36.7)	2.06 (1.17–3.63)	0.012
Previous use of family planning				
Yes	108 (62.1)	66 (37.9)	1	
No	37 (49.3)	38 (50.7)	0.60 (0.34–1.03)	0.063

^a Sample size less than 145 or 104 owing to missing data.**Table 3**
Types of methods reported as emergency contraception among women who were aware of any method (n = 145).^a

Method known	No. (%)
3 gulps of water (with salt and/or lemon, cold)	47 (32.4)
“A pill” – type unknown	33 (22.8)
Aware of concept of EC but can't name a specific method	20 (13.8)
Rub abdomen with lemon after sex	13 (9.0)
Oral contraceptives	9 (6.2)
Other ^b	33 (22.8)

^a Percentage total > 100 due to participants able to choose more than one answer.^b Methods were placed in the “Other” category if they were mentioned by fewer than 5% of participants.

of myriad reasons, including intermittent availability of EC and other modern contraceptive methods in facilities and pharmacies, and demonstrates a need in the community for education and provision of effective modern EC.

Most women surveyed were aware of EC (58.0%), as were most of the patient focus group participants; however, among those surveyed, awareness of a modern method of EC was quite low (6.0%). Of those who used postcoital methods, most were traditional methods (26 out of 28; 92.9%) and all are ineffective in terms of pregnancy prevention. The other methods mentioned have been used as traditional abortifacients, such as parsley tea, indicating a high desire to avoid or interrupt unintended pregnancy but an impasse between the knowledge of contraception and abortifacient methods and a gap in knowledge of safe use [6].

The study population showed strong interest in learning more about family planning in the postpartum period (97.9%) and most women desired to choose a method prior to hospital discharge [5]. Lactation amenorrhea (LAM) was the method of choice cited for most women in the immediate postpartum time frame [5]; however, only 24% of Haitian women continue to breastfeed beyond 4 months and only 23% use a contraceptive method in the first year after delivery [7]. Given this, including education on modern EC and provision of EC for use as a backup method if LAM criteria expire before accessing a longer acting method may help postpartum women achieve their ideal child spacing and fertility limiting goals [8].

In the present study, the use of traditional EC appeared to be partner driven, indicating that men are aware of postcoital protection from pregnancy and highly desire to avoid unintended pregnancy, but are not aware of, are not promoting efficacious methods within their unions, or do not have access to these methods. The qualitative data also suggest a pattern of EC use within unions that is repetitive rather than reserved for method failure or an isolated act of unprotected intercourse. In a society that more often demonstrates crisis-oriented healthcare seeking behavior rather than preventative care, the cultural context may lend itself more to sporadic, responsive use of contraception rather than preventative regular use [3]. Accurate education messaging around safety and efficacy of modern EC, aimed at both women and men, may be highly successful in increasing uptake of EC while simultaneously promoting and increasing uptake of longer-acting contraceptives [8].

Haiti suffered a massive earthquake in January 2010, displacing hundreds of thousands of reproductive age women. Many lost access to once fragile and suddenly non-existent family planning services. There has been a tripling of the birth rate in Haiti since the earthquake, in part due to the lack of reliable contraceptive services and supply, and resulting in a rise in the unplanned pregnancy rate [4]. In a country with a low baseline prevalence of contraceptive use, a desired fertility level that is remote from the total fertility level [1], and a maternal mortality ratio that rivals many Sub-Saharan African countries, the added pressure of a complex emergency to the strained health system worsens affected women's risk of an unintended pregnancy and the subsequent complications [9]. The provision of EC is

part of the accepted strategy to address reproductive health needs in complex emergencies; however, education and provision of EC is frequently limited to gender-based violence cases, inadvertently excluding other women at risk for unintended pregnancy [10]. This is consistent with the provider participants who reported discussing and distributing EC solely to women seeking care after sexual assault and whose perception it was that there is no need for education and access to EC in the general community.

Provider knowledge of EC and willingness to use EC is an important determinant of use [8]. These data suggest that providers are a potential barrier to EC education and use by virtue of a misunderstanding of awareness and demand in the community for EC, and their perception that eligibility for EC is limited to women who seek care postsexual assault. Instead, modern EC should be available to any woman who has had unprotected sex and desires protection from pregnancy. Improving provider knowledge around eligibility and safe use of EC increases both confidence in skills and willingness to use EC among providers and can dramatically improve couples' access to modern EC products.

The strengths of the present study include its contribution to the small body of literature addressing family planning in Haiti, the mixed methodology approach and the insight it offers into the current standards of care and practice patterns for EC education and provision in a public teaching hospital, and the knowledge of and experiences with EC among women seeking care there. The small sample size, convenience sample design, and restriction to women who have delivered in an urban public hospital all contribute to the study limitations.

It is hoped that EC education can be incorporated into general family planning messaging and become available for systematic distribution to any woman at risk for unintended pregnancy in Haiti. EC is included in the Haiti national reproductive health guideline, but has not been put into practical use. Registration of a designated product may help make this theoretical guideline a real, accessible tool for women seeking pregnancy prevention in Haiti, but registration alone is insufficient to realize widespread access and use of EC. In addition, select populations who have demonstrated demand

and willingness to use EC, such as postpartum women, their partners, and women displaced in a complex emergency setting, could be the focus of targeted campaigns to increase education, awareness of, and access to modern effective EC. Imperative to the completeness of such a campaign would be the inclusion of family planning providers, without whose support, belief, and desire to promote this method, no success in incorporating EC into the available mix is possible. If this were to occur, it is possible that the unintended pregnancy rate in these particularly vulnerable populations could decrease.

Conflict of interest

The authors have no conflicts of interest to declare.

References

- [1] Cayemittes M, Placide MF, Mariko S, Barrère B, Sévère B, Alexandre C. Haiti Demographic and Health Survey 2005–2006. <http://www.measuredhs.com/pubs/pdf/FR192/FR192.pdf>. [Published January 2007].
- [2] Raymond EG, Trussell J, Polis CB. Population effect of increased access to emergency contraceptive pills: a systematic review. *Obstet Gynecol* 2007;109(1):181–8.
- [3] White K, Small M, Frederic R, Joseph G, Bateau R, Kershaw T. Health seeking behavior among pregnant women in rural Haiti. *Health Care Women Int* 2006;27(9):822–38.
- [4] Arie S. Haiti is faced with sudden rise in birth rate. *BMJ* 2011;342:d175.
- [5] Lathrop E, Telemaque Y, Goedken P, Andes K, Jamieson DJ, Cwiak C. Postpartum contraceptive needs in northern Haiti. *Int J Gynecol Obstet* 2011;112(3):239–42.
- [6] Ciganda C, Laborde A. Herbal infusions used for induced abortion. *J Toxicol Clin Toxicol* 2003;41(3):235–9.
- [7] United States Agency for International Development. Family Planning Needs during the Extended Postpartum Period in Haiti. http://www.jhpiego.org/files/ACCESSFP_Haiti_analysis%20English_2007.pdf. [Published August 2007. Accessed January 18, 2009].
- [8] Shaaban OM, Fathalla MM, Shahin AY, Nasr A. Emergency contraception in the context of marriage in Upper Egypt. *Int J Gynecol Obstet* 2011;112(3):195–9.
- [9] Al Gasseer N, Dresden E, Keeney GB, Warren N. Status of women and infants in complex humanitarian emergencies. *J Midwifery Womens Health* 2004;49(4 Suppl. 1): 7–13.
- [10] UNFPA. Reproductive Health in Refugee Situations: An Inter-Agency Field Manual. <http://www.unfpa.org/emergencies/manual/2.htm>. [Published 1999. Accessed March 2011].