Emergency contraception access in Fijian community pharmacies: A descriptive study

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Abstract

Objective: To assess pharmacists' knowledge regarding emergency contraceptive pills (ECPs), their attitudes towards women obtaining ECPs, and ECP counselling and dispensing practices.

Methods: An online cross-sectional survey using Qualtrics was distributed via pharmacy emails and networks to recruit registered pharmacists working in community-based pharmacies.

Results: There were 22 valid respondents, predominantly female pharmacists (68%), with an average of 7.5 years of registration. All pharmacists knew the correct time frame after unprotected sex for ECPs to be effective, and 73% knew how ECPs worked, but only 50% knew that there were no contraindications. Most pharmacists (86%) knew that ECPs should be available to all women and girls, but only 59% thought that a married woman should not have to get permission from her husband to buy ECPs. Information or education for clients on the correct use of ECPs was mainly provided by pharmacists (59%), mostly through verbal communication (96%). Only 5% of pharmacists had used the emergency contraception methods wheels.

Conclusions: There were gaps in pharmacists' knowledge regarding ECPs. Biases, judgemental attitudes, and suboptimal practices existed.

Implications for public health: Targeted education and training for pharmacists is needed to improve access to ECPs in Fiji.

Key words: emergency contraceptive pill, pharmacist, knowledge, attitude, practice, counselling

Introduction

Approximately 121 million unintended pregnancies occur in the world every year.[1]

Correct use of effective contraceptive methods, including emergency contraception (EC), is key to reducing unintended pregnancies. While other contraceptive methods are mostly used before and during intercourse, EC is administered after unprotected intercourse or when contraception has failed, including in cases of sexual assault. EC is an essential medicine[2] and is a lifesaving component of care in emergencies, including during natural disasters in the Pacific.[3]

Fiji has a population of just over 900,000 people.[4] According to the United Nations, only 43.9% of women in Fiji, aged 15 to 49 years and either married or in a union, used any modern contraceptive method in 2023. This was lower than in high-income countries in the same region, such as Australia (63.7%), but higher than in some Pacific Island countries, such as Samoa (20.3%).[5]

A cross-sectional study of rural Fijian women in 2013-2014[6] found that while many had correct knowledge on prevention of pregnancy, 88% were not aware of EC, and 43% had never used contraception. Common barriers to accessing contraceptive methods in Fiji include lack of knowledge, fears and partner disagreement. While there is significant variability between Pacific countries, common barriers to accessing family planning services have been identified as lack of knowledge, access difficulty, attitudes of healthcare providers, culture (e.g. a desire to have more children for "future social and economic gain and security"), and religion (e.g. Christian beliefs that children are a "gift from God").[7,8]

The World Health Organization Contraception Guidelines on EC[9,10] are used in Fiji since there are no local guidelines. Four methods of EC are

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recommended: 1) emergency contraceptive pills (ECPs) containing levonorgestrel (LNG), effective up to 72 hours after unprotected sex; 2) ECPs containing ulipristal acetate (UPA), effective up to 120 hours; 3) the Yuzpe method, *a two-dose regimen of combined 100 mcg of e*thinylestradiol plus 0.50 mg of LNG, taken 12 hours apart, effective up to 72 hours and 4) the copper-bearing intrauterine device (Cu-IUD), effective if inserted within 120 hours.[9] The Cu-IUD is the most effective (more than 99% effective at preventing pregnancy), followed by UPA ECPs (98.8%) and LNG ECPs (97.9%-98.8%). The Yuzpe method is least effective (56%-86%).[11] ECPs in the form of a single tablet (UPA 30 mg or LNG 1.5 mg) or two (LNG 0.75 mg) are simple to use and therefore are more acceptable[12] and commonly used[13] than the Cu-IUD, which requires insertion by a heathcare professional.

LNG, Cu-IUDs and ethinylestradiol (an ingredient of the Yuzpe method) are included in the Fiji essential medicines list, but only LNG is listed under the category of EC.[14] Anyone can buy LNG-ECPs over the counter,[15] but those under the age of 18 years require the consent of a parent or guardian.[16] The UPA ECP is not on the essential medicines list but is included in the pharmacist-only medicines list.[17]

Although the government's policy is to have ECPs at the health facility and community distribution level,[18] ECPs are not readily available in many health facilities across the country.[6,7]Apart from health facilities, private, community-based pharmacies are the primary source of ECP access and patient information. Pharmacy technicians and assistants in Fiji are not permitted to dispense ECPs, which are pharmacist-only medications, but they can dispense after the approval from a pharmacist. Pharmacies are generally owned by pharmacists who are registered with the Fijian Pharmacy Profession Board.[19] In 2022, each pharmacist may legally own up to five pharmacies.[20]

The provision of EC through pharmacies offers an opportunity for pharmacists to provide information, advice and referral pathways for effective ongoing long-term contraception choices. Increasing knowledge, attitudes and practices (KAP) of pharmacists is expected to improve their EC counselling skills and dispensing practices. To be effective, training should focus on gaps in pharmacists' KAP. However, information on pharmacists' KAP in Fiji is not available.

This study aimed to identify gaps in pharmacists' KAP regarding the provision of EC in Fiji. Results will inform future initiatives to improve the availability, accessibility, affordability, acceptability and uptake of EC.

Methods

There were 253 registered pharmacists in Fiji in 2023 (R. R. Chand, personal communication, 17 April 2024). An online cross-section survey of Fijian Pharmacy Profession Board-registered pharmacists working in community-based retail pharmacies was conducted between 24 January and 13 March 2023. Invitation emails with a link to an anonymous online survey were sent directly to all 34 privately run commercial retail pharmacies in Fiji with publicly available email addresses, the Fiji Pharmaceutical Society network, the Viber pharmacy contact groups and the pharmacy emailing list. Reminder invitation emails and updates on the research project were also circulated through this network.

Participants completed an online survey on a smart phone or computer, which took approximately 15 minutes, using the web-based survey tool Qualtrics (optimised for mobile phones). The questionnaire was developed after a review of the literature [21,22,23] to guide question selection and consultation with key stakeholders involved in the delivery of reproductive health in Fiji. The survey tool was pilot tested by staff at Family Planning New South Wales and the Fijian Government Ministry of Health and Medical Services.

Questions included demographic characteristics of participants, their knowledge regarding EC, the attitude of pharmacists towards women obtaining ECPs, commodity supplies, customer profiles and information provision. Participants were also asked about the EC methods wheel, which was developed by the European Consortium for Emergency Contraception to support health professionals to counsel clients,[24] and the WHO medical eligibility emergency contraceptive wheel.[25] Most of the questions were multiple choice.

Eligible criteria are registered pharmacists working in privately owned pharmacies. Only the data of these pharmacists were included in the analyses. Qualtrics March 2023, Excel 356 and Stata version 14 were used to analyse data. Descriptive data analyses were used to report the percentage of pharmacists responding to each question was calculated. For questions with multiple choices, the result for each choice was calculated by dividing the number of responses to that choice by the total number of pharmacists instead of the total number of responses to all choices. Therefore, the total percentage from the multiple-choices question could be more than 100%.

Results

Demographic characteristics of pharmacists

Forty pharmacists enrolled in the online survey. Of these, five did not work at a privately owned retail pharmacy, one was not registered with the Fiji Pharmacy Board and 12 did not complete the survey, leaving 22 valid responses out of 34 eligible responses or 64.7%.

The respondents were predominantly female (15; 68%), with an average of 7.5 years of registration with the Fiji Pharmacy Profession Board. All participants completed their pharmacy training at Fiji National University. Most respondents were from the Central Division (Suva) (64%), and the remainder were from the Western Division (Lautoka). English was spoken at all pharmacies, along with Fiji Hindi, Itaukei, Vernacular and Fijian.

Emergency contraception knowledge

All but one of the participating pharmacists reported receiving education on EC during their undergraduate training, and all correctly reported that LNG-ECP was effective at preventing pregnancy up to 72 hours after unprotected sex. However, only half indicated that there were no absolute contraindications. Additionally, only 14% correctly identified that both body mass index (BMI) higher than 26 Kg/m^2 and the use of liver enzyme-inducing medication may reduce the effectiveness of the LNG-ECP. All participants correctly answered that ECP works by preventing or delaying ovulation and not by inducing an abortion. Two-thirds of pharmacists were aware of the Yuzpe method, but only 36% knew that the Yuzpe method was less effective than modern ECPs.

Regarding knowledge of relevant regulations, most participants (86%) correctly indicated that all women and girls can access EC without a prescription. The rest (14% or one in seven), were not aware of this

policy. Two-thirds correctly indicated that parental approval was required for women who were below the age of 18 years.

All participants expressed a desire to have more access to information and education about EC. The preferred methods were online self-directed courses (77%), printed resources (73%) and in-person training sessions/workshops (68%) (Table 1).

Attitudes of pharmacists towards emergency contraceptive pills

Most pharmacists (91%) responded that access to ECPs should not be restricted to married people, and over half (59%) responded that married women should not require their husband's permission to buy ECPs. The remaining (41%) were undecided.

Nearly half of the pharmacists (45%) identified situations where they might feel uncomfortable providing ECP. These situations included selling to minors under 18 years old and when someone else seeks ECP on behalf of the patient. A quarter of pharmacists (23%) reported more comfortable providing ECPs after a disclosure of sexual assault than following unprotected sex (without a condom) (Table 2).

Nevertheless, most pharmacists were very confident or confident in selling ECPs (82%), providing ECP information (100%), directing customers to another pharmacy or resource (91%).

Dispensing practices

Commodity supplies

The LNG-ECP from Hungary, marketed as Postinor,[26] was reportedly available at all participants' pharmacies. However, the cheaper generic LNG-ECP from Pakistan, Emkit,[27] was reported as most frequently purchased (64%), and this was thought to be because of its lower cost (59%) or because it is more well-known (59%).

Only 9% of pharmacists reported ever offering the Yuzpe method, and only 5% had stocked the Cu-*IUD* for EC. Three-quarters of pharmacists indicated that their pharmacies never ran out of ECP stock (73%).

Table 2: Attitudes towards emergency contraception among pharmacist working in private pharmacies in Fiji, 2023.

	n	%
Only married people should be able to purchase emergency contraception pills		
Agree / Strongly agree	0	0
Neither agree nor disagree	2	9
Disagree / Strongly disagree	20	91
A married women should get permission from her husband to purchase and take emergency contraception pills		
Agree / Strongly agree	0	0
Neither agree nor disagree	9	41
Disagree / Strongly disagree	13	59
Any uncomfortable circumstances providing emergency contraception to customers		
Yes (details):	10	45
Minors	2	9
Someone else is seeking emergency contraception on behalf of the person	6	27
Feel more comfortable providing emergency contraception pills after sexual assault rather than to someone who just forgot to use a condom during consensual sexual intercourse		
Strongly agree / Agree	5	23
Neither agree nor disagree	3	14
Disagree / Strongly disagree	14	64

Emergency contraception provision and counselling

On average, most pharmacists (58%) reported seeing at least one customer seeking EC for their use per day. Three-quarters of pharmacists indicated that male sexual partners also purchased ECPs (73%). Half of the respondents reported that some customers unnecessarily provided a script or note from a doctor.

Among pharmacy staff, pharmacists were most often identified as responsible for dispensing ECP (77%) and providing information on the ECP to customers (59%), followed by pharmacy technicians and assistants (18% and 36%, respectively). Communication with customers regarding ECP was mostly verbal (75%), away from others but not in a private room (95%). All pharmacists reported providing information on directions for use and the timeframe to take the ECPs,

Table 1: Emergency contraception knowledge of pharmacists working in private pharmacies in Fiji, 2023.

Correct answer	n	%
Technical knowledge		
Emergency contraception pills work by preventing or delaying ovulation (True)	16	73
Emergency contraception pills work by inducing an abortion (False)	22	100
Time frame after unprotected sexual intercourse can the levonorgestrel emergency contraception pills (Postinor / generic product) be effective (72 h or 3 d)	22	100
Emergency contraception pills not recommended after multiple episodes of unprotected intercourse since the last period (with some episodes more than 5 d ago), as it may harm a developing embryo (False)	8	36
There are no absolute contraindications to the levonorgestrel emergency contraception pills	11	50
Factors reducing the effectiveness of the levonorgestrel emergency contraception pills (multiple responses)		
Body Mass Index >26	5	23
Use of liver enzyme-inducing medications	18	82
Body mass index >26 and use of liver enzyme-inducing medications	3	14
Aware of Yuzpe method (Yes)	15	68
Yuzpe method or other combinations of oral contraceptive pills taken together is less effective than modern ECPs	8	36
Knowledge of regulation		
All women and girls who wish to prevent an unintended pregnancy should be able to access emergency contraception (True)	19	86
A girl/woman who is below 18 years of age needs parents/legal guardian approval to access emergency contraception pills (True)	15	68

Table 3: Emergency contraception provision and counselling practices in private pharmacies in Fiji, 2023.

	n	%
Person purchased emergency contraception pills (multiple responses)		
The person seeking emergency contraception	22	100
The partner of the person seeking emergency contraception	16	73
Couples	8	36
Others (a family member or friend)	12	55
What customers did when they wanted to purchase emergency contraceptive pills (multiple responses)		
Provide a script or note from a doctor	11	51
Only ask a pharmacist for it	14	64
Only ask a pharmacist technician / assistant for it	12	55
Ask anyone working at the pharmacy for it	9	41
Person who hands over the emergency contraception pills to customers		
Only pharmacists	17	77
Only pharmacist technicians / assistants	4	18
Anyone who works at the pharmacy	1	5
Person who provides customers with information or education on how to use emergency contraception pill		
Only pharmacists	13	59
Only pharmacist technicians / assistants	8	36
Anyone who works at the pharmacy	1	5
How information on emergency contraception pills is provided to customers (multiple responses)		
Verbally	21	96
Written	3	14
Pamphlets or flyers	4	18
Place to discuss emergency contraception pills with customers		
In a private room in the pharmacy	1	5
Not in a private room but away from other customers in the pharmacy	21	96
Ever heard of the emergency contraception methods wheel	6	27
Used the Emergency Contraception Methods Wheel when providing information to customers seeking emergency contraception		
Never/rarely	5	27
Sometimes	1	5

and 41% provided information on potential side effects. About one quarter of participants (27%) ever heard of the EC methods wheel[24,25] and only one reported that they used the wheel (Table 3).

When dispensing ECPs, 23% of pharmacists reported that they often or always discussed ongoing contraception using short-term methods (oral contraceptive pills, injectable contraceptives, condoms, diaphragms), and 18% discussed long-acting reversible contraception (hormonal IUDs, Cu-IUDs, contraceptive implants). Oral contraceptive pills (100%) and male condoms (73%) were more commonly discussed than longer-acting methods: injectable contraceptives (59%), implant (23%), hormonal IUD (32%) and Cu-IUD (41%).

About a quarter of pharmacists (27%) stated that they never or rarely provided information about health services and general practitioner (GP) clinics for further advice and access to ongoing contraception. Most pharmacists (59%) said that they rarely or never provided information on health services and GP clinics for sexually transmitted infection (STI) information and screening.

Discussion

We conducted a study to assess pharmacists' KAP regarding ECPs in Fiji. Most pharmacists had basic technical knowledge regarding ECPs and their regulation, had a positive attitude towards women accessing ECPs, and followed good practice in dispensing and counselling. However, several gaps were identified.

Most pharmacists knew the method of action of ECPs and their effectiveness after unprotected intercourse. These results were much higher than those found in pharmacy studies conducted in Nepal,[21,22] Ethiopia,[22] Nicaragua[28] and Jamaica and Barbados.[29] Our study included registered pharmacists only, while other studies included all staff working in pharmacies. These staff may not have received as much high-level training and education about ECPs as pharmacists explaining the disparity in results.

Despite having correct basic knowledge of ECPs, pharmacists demonstrated less understanding about contraindications and factors affecting ECP efficacy. There was also limited appreciation of the superior efficacy of Cu-IUD for EC.[30,31] Further, LNG-ECPs are available via community pharmacies in Fiji, but UPA-ECP was not, and there is limited awareness and uptake of the Cu-IUD. Interventions are needed to support access to the most effective ECP methods, alongside training for pharmacists on their efficacy. Nearly all pharmacists reported receiving education on EC during their undergraduate training. However, as the average time of participant registration was 7.5 years, the knowledge they received during their education might be outdated if no in-service training had been provided. Most pharmacists indicated that in-service training was important to them.

The lower knowledge of the effect of BMI on EC use may have been affected by the fact that there is limited evidence concerning the effectiveness of oral EC and obesity. The Faculty of Sexual and Reproductive Health in the United Kingdom recommends that women should be informed that if their BMI is greater than 26 kg/m^2

or weight more than 70 kg, it may reduce the effectiveness of oral EC, particularly of LNG-EC. Women should be advised that the Cu-IUD is the most effective method of EC. The effectiveness of double-dose LNG-EC is unknown.[32] However, the Faculty of Sexual and Reproductive Healthcare indicates that clinicians consider double-dose (3 mg) LNG-EC if BMI is greater than 26 kg/m^2 or weight >70 kg where UPA is not suitable. This may be appropriate in contexts such as Fiji where UPA is not available and the Cu-IUD is difficult to access. This information should be integrated into continuing professional education for pharmacists.

We also noted that knowledge of the Yuzpe regime was low, which could be explained by the fact that this method is not sold as an emergency contraceptive product but consists of a variety of typical combination hormonal contraceptive pills. It is no longer recommended by several clinical guidelines as research demonstrates Yuzpe to be less effective than LNG-EC[11] and hence pharmacists may not be aware of it.

While the Fiji reproductive health policy states that contraceptive methods, including EC, should be accessible for all,[33] one in seven pharmacists was not aware of such policy, and one in three did not know that 18 years was the approved age to dispense ECPs without parental consent. Some of the attitudes expressed in the survey indicate that pharmacists might refuse to dispense ECPs to women who were unmarried, did not have permission from their husband, or to girls under the age of 18 years.

The attitudes of pharmacists are not the only barrier for girls under the age of 18 years in Fiji to access ECPs; obtaining parental consent could also be a challenge due to the fear of the parent's reaction.[34] These factors could contribute to the high rates of teenage pregnancy in Fiji.[35] To overcome these barriers, Fiji should amend the law to lower the age of obtaining EC without a parent or guardian consent to 16 years. For girls under 16 years, a prescription from a doctor should suffice instead of requiring parental consent. This policy is currently in place for countries such as Australia.[36] Additionally, a prescription from a doctor could potentially influence pharmacists' attitudes and reduce instances of refusal to dispense ECPs to teenage girls.

A high prevalence of violence against women in Fiji has been reported, with two-thirds of all women and a quarter of pregnant women having experienced physical abuse, half of married women experiencing unwanted sex with their spouse, and one in eight women being raped in their lifetime.[37] In our study, only three in five pharmacists responded that married women did not need permission from their husband to buy and take ECPs. Women seeking permission from their husbands to use ECPs has also been described as common in India.[12] Partner disagreement has been reported by women as a barrier to accessing contraception in Fiji.[4,6] Access to contraception is a fundamental aspect of sexual and reproductive health and rights.[38] Requiring permission from a husband undermines women's health and rights.

Requiring spousal authorization for ECPs could also potentially increase their risk of physical or sexual abuse. In our study, pharmacists also reported that some customers were purchasing ECP on behalf of others. While this may facilitate access to ECPs, there may be cases where women have been coerced into taking ECPs.[39] Third-party purchases also have the potential drawback that the person seeking ECP cannot be medically assessed, and pharmacists may miss an opportunity to provide advice on other forms of ongoing contraception. In other countries, such as Australia, communication with women over the phone before supplying ECP is recommended,[40] which should be feasible in Fiji given the high usage of telephones.[41]

Our study identified some potentially judgmental attitudes, such as pharmacists feeling less comfortable dispensing ECPs following failure to use contraception than when providing it after sexual assault. This is similar to findings from other studies in Fiji.[42] Religion and culture have been found to affect contraceptive acceptance.[7,8] It is possible that these factors might also influence pharmacists' attitudes in Fiji, and there is a need for additional sensitisation for pharmacists to reduce judgemental and discriminatory attitudes and practices.

Strategies to increase EC access for all women may include providing ECPs to women in advance, task shifting of ECP distribution to paramedical and community health workers, and task sharing between doctors, nurses, midwives and other healthcare professionals. Additionally, offering ECPs through various health services, including sexual assault services and scaling up service provision through national family planning programmes can further enhance accessibility.[43,44]

Women in Fiji have been found to lack awareness of EC,[6] and indeed in our study we found that women requested ECP with a prescription despite no requirement for this. Educating women about EC and how to access EC in Fiji is essential. In studies to improve knowledge of EC, education using visual materials, one-on-one counselling by researchers and a small incentive have been proven to be effective in improving knowledge of EC.[45,46]

Effective contraceptive counselling, including EC counselling, should be appropriate, evidence-based, holistic and client-centred[47] and privacy during consultation and handling ECPs is important. In this study, most pharmacists discussed with customers privately, although not in a private room but away from other people. Pharmacists may also benefit from materials to support them in delivering counselling. Standardised education tools can be useful for pharmacists during consultation with customers, support positive client attitudes towards emergency contraception and improve satisfaction of the care provided.[24,48]

The EC methods wheel was designed to assist health professionals in choosing appropriate EC methods[49] although our study found few pharmacists had used it. Incorporating job aids into routine training and service delivery is a low-cost strategy that can reinforce knowledge and help pharmacists provide accurate counselling to support women's informed decision-making.[50,51] These tools have been used to support shared discussion of EC and to link women with regular contraception.[52,53] They have the potential to increase EC provision, increase accurate pharmacy-provided contraceptive counselling and strengthen referral pathways to family planning services.

Strengths and limitations

This is the first study on pharmacists' KAP related to EC in Fiji. The results provided essential information on the existing gaps in pharmacists' KAP. The large number of questions in the survey allowed many aspects of the pharmacists' KAP to be explored. However, the small number of respondents limited the statistical power to establish significant associations between the respondents' characteristics and their KAP. Furthermore, some of the pharmacists' characteristics that might influence the pharmacist's dispensing

practice, such as religion, were not explored. Studies in the future should include these factors.

Although the response rate of 64.7% was not ideal, the survey reached most pharmacies with a publicly available email address in Fiji. Given some pharmacists owned multiple pharmacies, the survey elicited a response from the majority of eligible participants in this sample. However, most of these pharmacies were in the more developed areas of the country. Pharmacies without an email address were not included, and there may be selection bias towards more well-resourced parts of the country. The survey was available only in English; language barriers were not perceived to be an issue because all pharmacists had been trained at the Fiji National University, where English is the language of instruction. Additionally, English is the main language used at all pharmacies.

Conclusions

Pharmacists are key in improving access to EC in Fiji. Education and training for pharmacists should be focused on the identified gaps, in particular in-depth knowledge regarding no contraindications and factors limiting the effects of ECPs and regulations related to EC in the country. Given some biases and judgemental attitudes that were identified, it is also important to conduct sensitisation training with pharmacists. Further research in this area can inform the development and improvement of policies, programmes and services related to emergency contraception in Fiji.

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Ethics

The study was approved by the University of Technology Ethics Committee [ETH2207749] and was ratified by Fiji National University's College Human Health Research Ethics Committee [CHHREC: 148.22].

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Conflicts of interest

None declared.

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