

## ORIGINAL PAPER

# Emergency Contraception Among Women With Abortion At University Teaching Hospital In Lusaka, Zambia

N C Chavuma<sup>1</sup>, D O Chanda<sup>2</sup>, B Vwalika<sup>3</sup>

<sup>1</sup>University Teaching Hospital, Lusaka School of Nursing

<sup>2</sup>University of Zambia, Department of Nursing Sciences

<sup>3</sup>University Teaching Hospital, Dept of Obstetric & Gynaecology

## ABSTRACT

**Background:** The maternal mortality ratio for Zambia is 591/100 000 live births. Globally between 15 – 30% of the maternal deaths are due to unsafe abortions. According to the Zambian demographic health survey (ZDHS), the contraceptive prevalence rate was 34% (CSO, 2003). The unmet need for family planning was 27%. Emergency contraception pill (ECP) was officially launched in Zambia in 1998 by the Ministry of Health with the aim of strengthening reproductive health. It can be obtained free of charge at public health institutions and also as an over the counter drug.

**Objective:** To determine knowledge, Practice and attitude towards Emergency Contraception (EC) among women with abortion at the University Teaching Hospital (UTH), Lusaka, Zambia.

**Design:** A cross-sectional descriptive study design and an interview schedule were administered to 200 women admitted to UTH with abortion aged between 18 – 49 years old.

Main outcome measure: Emergency contraception awareness among women with abortions at UTH, Lusaka.

---

### \* Corresponding Author

Nkole C Chavuma  
University Teaching Hospital  
Lusaka School of Nursing  
University of Zambia  
Lusaka

**Results:** The median age of the participants was 19 years. Only 7.5% had ever heard of emergency contraceptive pills (ECPs). Majority (70%) were married with the majority reporting being married for less than 5 years. The contraceptive ever use rate was 78.5% and 58% the participants had their first pregnancies as teenagers. Almost a third (31%) was nulliparous. The most common sources of information about EC were friends (80%). Level of education was significantly associated with the outcome of EC awareness (OR = 9.5; 95% CI [3.06 – 29.87] (P value 0.001). Another factor that was significantly associated with the outcome of EC awareness was the level of EC knowledge (OR = 0.00; 95% CI [0.00 – 0.02] (P value 0.001). Other factors such as age, place of residence and marital status were not significantly associated with EC awareness.

**Conclusion:** Knowledge about Emergency Contraception (EC) among women with abortions admitted to UTH is low. Friends are an important source of EC information. Awareness and knowledge of EC should be increased.

## INTRODUCTION

Expanding the number of family planning options available to women is a critical part of increasing contraception coverage, decreasing unintended pregnancies and reducing maternal morbidity and mortality around the globe (Bongaarts & Johansson, 2002). Emergency contraception Pills (ECPs) are elevated doses of hormonal combined contraceptive pills that when used after unprotected sexual intercourse within defined time limits, can prevent

unintended pregnancy and consequent need for abortion (Trussell & Raymond, 2007). Although it is included in the family planning method mix, there is limited awareness of this method among women and it is underutilized worldwide (Puri et al, 2007).

Annually approximately 20,000 women die from abortion - related complications and a considerable proportion of these abortions can be prevented by timely use of ECPs (Mittal, 2008). Unintended pregnancies, carrying enormous costs to individuals and societies, are largely preventable with improved use of Emergency Contraceptive pills. The full potential of emergency contraception can be realized only when people, especially women are made aware of the existence of these methods and the need to use them within the short time frame of their efficacy and such awareness is still limited in most developing countries (Mittal, 2008).

In UTH majority of women experiencing unintended pregnancies are admitted with incomplete abortions. Most of these are self induced and require manual vacuum aspiration (Mtonga & Ndhlovu, 2001). Literature has shown that most affected women do not utilize these EC methods as there is an 11% increase in the number of women admitted in UTH with incomplete abortions who underwent manual vacuum aspiration (MVA) between 2005 and 2007 (UTH Statistics, 2008). Anecdotal reports from the women show that most of these pregnancies were unwanted and most enunciated their unawareness of EC methods.

The aim of the study was to determine knowledge, practice and attitude towards EC among women admitted with abortion to University teaching hospital (UTH) in Lusaka, Zambia.

## METHODOLOGY

### Study setting and population

The study was conducted at UTH which is a national referral hospital and a tertiary health centre for the district of Lusaka. The study site was Ward C03 which is a gynaecological admitting ward for all gynaecological cases including women presenting with abortion. The study period was November 2009 to January 2010. The participants were approached individually on each day after satisfying the selection criteria.

### Study design, sample size and sampling method

A cross-sectional descriptive study design and an interview schedule were administered to 200 women admitted to UTH with abortion and had undergone manual vacuum aspiration (MVA) aged between 18 – 49 years old. The sample size was calculated using Epi Info Statcalc command for descriptive study. Population size was determined by taking the average MVAs performed every month which was 400. With a 95% confidence interval, a 5 percent margin of error and based on the data from a previous study done at UTH among women seeking termination of pregnancy who reported knowledge of EC of 32% (Ahmed et al, 1998) the sample size needed was 182. Adjusting for 90 percent response rate 8 more participants were added hence a total of 200. Systematic random sampling was used to select the 200 participants. Every second woman was asked to participate in the study until the sample size of 200 was attained. Those women found to be not fully conscious or very ill were not included to participate.

### Data collection tool

An interview schedule covering information about socio demographic data, variables of knowledge, practices and attitude towards EC were administered to the women just before family planning counseling and awaiting discharge from hospital. The interview schedule also had open ended questions about role of health care providers in provision of EC and what the religion and culture of the women say about use of modern contraception, EC inclusive. A five point Likert scale comprising of 9 items was used to determine women's attitude towards EC. The data was checked for consistency in the answers given and completeness of the interview schedule, and recorded on each interview day.

### Data management and analysis

Data collected were entered into Epi Info V6.4 statistical computer software for analysis. The main outcome variables were knowledge of EC and ever use of EC. Analysis involved frequency distribution tables and cross tabulations of socio-demographic characteristics, knowledge of EC, practice and attitude against the outcome variables. The chi square test was used to calculate significant differences between the different study variables. A p value of 0.05 or less was considered to be significant for the Chi square test. The open ended questions were coded and the content analysis was

used to come up with categories. Boundaries and content of the various categories were examined, some were merged, and thereafter all statements were referred to particular themes.

**Ethical considerations**

The study was approved by the University of Zambia Research Ethics Committee. Permission to conduct the study in UTH was sought from the Senior Medical Superintendent. An information sheet about the study and a consent form was attached to the interview schedule for respondents to read and consent to participating in the study. All information was kept confidential and no individual results could be identified.

**RESULTS**

**Socio-demographic characteristics**

200 hundred women aged 18 – 39 years participated in the study and were included in the analysis. Selected basic characteristics of the participants are shown in table 1.

**Table 1:** Selected characteristic of the women

Characteristic	frequency	Percentage %
<b>Age</b>		
18 - 24	112	56
25 - 39	88	44
<b>Marital status</b>		
Married	140	70
Unmarried	60	30
<b>Education level</b>		
High	42	21
Medium and low	158	79
<b>Duration of sexual relationship</b>		
1 – 5 years	138	69
6 – 10 years	32	16
11 - 15 years	25	12.5
16 and above	5	2.5
<b>Age at first pregnancy</b>		
19 years and below	116	58
Above 19 years	84	42
<b>Number of children</b>		
none	62	31
1- 4	128	64
5 - 8	10	5
<b>Was last pregnancy was planned</b>		
Yes	122	61
No	78	39
<b>Desire to have more children</b>		
Yes	69	34.5
No	82	75.5
Not decided	49	24.5

The median age was 19 years. Majority (70%) were married, with the majority reporting being married for less than 5 years. 71% the participants had their first pregnancies as teenagers. Almost a third (31%) was nulliparous. Less than half (42%) had attained high education at college level. Majority (61%) had planned the last pregnancy. Majority (75.5%) of the women indicated that they did not desire to have more children.

**Knowledge of Emergency Contraception**

Only 15 (7.5%) of the 200 women had ever heard of EC. All the 15 were knowledgeable about the mechanism of action of ECPs and majority of them thought the pills can work up to a maximum of 24 hours. The main source of information was from friends (80%). More than half (60%) of the participants who had heard of EC had high level of EC knowledge. There was no statistically significant difference between level of knowledge of EC and source of EC information (p value 0.66). Majority of the participants who knew about EC knew that ECPs were currently available at clinics and at pharmacy outlets, 73.3% and 80% respectively.

**Table 2:** Knowledge of emergency contraception

Topic	frequency	percentage
<b>Ever heard of ECP n=200</b>		
Yes	15	
No	185	
<b>Mechanism of action=15</b>		
Prevents fertilization	15	100
<b>How long after intercourse can EC work n=15</b>		
Maximum 120 hours	1	7
Maximum 24 hours	11	73
Do not know	3	20
<b>Is ECP currently available at the clinic=15</b>		
Yes	11	73.3
No	1	6.7
Not sure	3	20
<b>Source of information about ECP n=15</b>		
Friend	12	80
Health care provider	3	20
<b>Knowledge of availability of ECPs at clinics</b>		
Yes	11	73.3
No	1	6.7
Not sure	3	20
<b>Knowledge of pharmacy access</b>		
Yes	12	80
No	2	13.3
Not sure	1	6.7
<b>Level of EC knowledge n=15</b>		
High	9	60
Medium	5	33.3
Low	1	6.7

**Table 3:** Contraception use

Ever use of contraceptives n=200	Frequency	Percentage
Yes	157	78.5
No	43	21.5
<b>Method ever used</b>		
Combined oral pill	130	47.6
Intra uterine device	4	1.5
Condom	77	28.4
Injectable	44	16.1
Implant	12	4.4
withdrawal	6	2.2
<b>Reasons for not ever used ECPs n=15</b>		
Wanted to conceive	3	20
Thought would not get pregnant	8	54
Was on regular contraception method	2	13
Did not know how to get it	2	13
<b>Knowledge of fertile period in menstrual cycle=200</b>		
Just after a period	29	14.5
Between two periods	48	24
Just before a periods	106	53
Other	17	8.5
<b>Preferred source to learn more about EC n=200</b>		
Health care provider	31	17
Friend	25	13.7
Relative	12	6.6
Do not know	2	1.1
<b>Would you have used ECP if you knew about it to prevent last pregnancy</b>		
Yes	130	65
No	70	35
<b>Attitude towards use of ECP</b>		
Positive	176	88
Negative	24	12

The contraceptive ever used rate was 78.5%. Among the users the most common methods were the oral pill (65%) and condoms (38.5%). Some participants had used one method and then changed to another and the reason that the reasons given were that they wanted a more effective method with less adverse effects. Of the participants who knew about EC no one had ever used it and most of them (54%) gave the reason of being unaware the risk of getting pregnant at the time of sexual intercourse. Knowledge about the fertile period in the menstrual cycle was limited with less than a third (24%) correctly identifying the fertile period. 88% of the respondents had a positive attitude towards the use of ECPs after the method was explained to them and 65% of the respondents would have been willing candidates to have used ECPs if they had known about it.

## DISCUSSION

The median age was 19 years and majority of the participants had teenage pregnancies the first time they fell pregnant. It is well known in Zambia that adolescents exhibit early sexual activities, thereby increasing their length of exposure to unprotected sexual activities before marriage. Early marriages could have occurred in this study population among

respondents and most of them had primary education and lower secondary education. Zambia demographic health survey (ZDHS) states that age at first intercourse for women is 17 years. Further it states that early childbearing limits the girls' educational employment opportunities (CSO, 2003).

There is evidence from the study that awareness of emergency contraception (EC) among women is low. Very few (7.5%) women admitted with abortion at UTH had heard about EC. Other studies among women have indicated that 87% and 30% had heard of EC in California (Schwarz et al, 2007) and South Africa (Myer et al, 2007). In another study done among married women in Iran only 8.3% had heard of EC (Baabee, Jamal & Ali, 2003). In all the 3 studies, however, use and knowledge of correct timing was poor. These findings suggest that EC options are underutilized because of lack of patient awareness. This was not different in this study. The low knowledge of EC in this study could be attributed to health workers not sensitizing the community. Another potential explanation could be inadequate knowledge among health care providers. This information can be supported by a study done by Mulenga, (2000) reports that among family planning providers who were interviewed only 40% informed their clients about it while 20% informed clients on request.

Other studies done previously have shown that one of the barriers to widespread use and acceptance of EC is the concern about its mechanism of action. However in this study all the 15 women who had heard about EC correctly mentioned that it works by delaying ovulation therefore preventing fertilization to occur. This was different with the findings in Sweden among women seeking termination of pregnancy were they lacked knowledge about the mechanism of action (Aneblom et al, 2002). Confusing EC with induced abortion can negatively affect the acceptability of the method especially in countries like Zambia were most religious groups consider abortion as a sin. The main sources of information on ECPs were friends (80%). This is similar as reported by Aneblom et al (2002) and a study done in Uganda among University students (Byamugisha et al, 2006).

More than half (54%) of the women who knew about EC indicated that they did not use EC the last time

they became pregnant because they felt they were not going to fall pregnant. This indicates that the main reason for not using EC was unawareness of being exposed to the risk of pregnancy. This agrees with findings among Swedish teenagers seeking induced abortions and is not different from findings by Morreau et al (2005) which state that the unperceived risk of pregnancy appears to be the remaining barrier to the use of EC. Findings in this study indicates that women's understanding of the fertility period was below what would be needed to rely on safe periods to avoid pregnancy when modern contraception is shunned as evidenced by large proportion of women indicating having not used any contraception method the last time they fell pregnant.

The study result reports that 88% of the respondents had a positive attitude towards EC. Despite the fact that most respondents had low knowledge about EC, majority of the respondents (65%) mentioned that they would have used it if they knew about it to prevent the last pregnancy. This data shows indicates that despite relatively low levels of awareness when the method was explained most respondents would have avoided the unplanned pregnancies which ended up in abortions. It is encouraging to know that the women generally had positive attitudes towards EC and these data suggests that a major barrier to EC use in Zambia is lack of knowledge about the method. Majority (82%) of the respondents indicated that there is need for health care providers to enhance awareness and provision of EC as a contraception option among women through educating and advising them about it.

## CONCLUSION

Knowledge about emergency contraception is low among women presenting with abortion at University Teaching Hospital (UTH) in Lusaka. Friends were the most important source of information on EC. The majority of the women had a positive attitude towards the use of EC in the prevention of unintended pregnancy. It can conclusively be said that if women were to be educated in EC they would use it.

## RECOMMENDATIONS

There is need to educate women about EC and the various contraceptive options that can be used and the importance of counseling them in issues related to sexual and reproductive health by health care providers. Emergency contraception awareness and knowledge should be increased through advocacy and public campaigns of Information, education and communication on the method.

## REFERENCES:

1. Ahmed Y., Ketata M. & Skibiak J. P., (1998). Emergency Contraception in Zambia: Setting a New Agenda for Research and Action. Population Council, Nairobi.
2. Aneblom G, Larsson M, Odland V, & Tyden T., (2002). Knowledge, use and attitudes towards emergency contraceptive pills among Swedish women presenting for induced abortion. *Bjog* 2002; 66(1):23-6.
3. Babae G., Jamali B. & Ali M. M., (2003). Investigating the knowledge, attitude and its relationship with the means of using emergency contraception. *J Sex Marital Ther.* Tehran. 2003 *J u l - A u g ; 2 9 ( 4 ) : 2 6 9 - 7 5 .* <http://www.ncbi.nlm.nih.gov/PubMed/5/5/2008>.
4. Byamugisha J. K., Mirembe F. M., Faxelid E., & Gemzell-Danielsson K., (2006). Emergency Contraception and Fertility awareness among University Students in Kampala, Uganda. *Africa Health Sciences* 2006; 6(4):194–200.
5. Central Statistical Office, Central Board of Health. & ORC Macro. (2003) *Zambia Demographic Health Survey 2001 – 2002*. Calverton, Maryland, USA.
6. Mittal S. (2008). Interventions for emergency contraception: RHL Commentary November, 2008 <http://www.who.int/reproductivehealth/familyplanning/7/09/09>.
7. Morreau C., Bouyer J., Coular H., Bajos N., (2005). The remaining barrier to the use of emergency contraception: perception risk by women undergoing induced abortion. *Contraception.* Mar 2005; 71(3):202-207 <http://www.ncbi.nlm.nih.gov/pubmed/5/5/2008>.

8. Mtonga V. & Ndhlovu M., (2001). Conference paper on "Expanding Access: Midwives role in Management of elective abortion and post abortion care – *A Zambian Country Report*. South Africa 2<sup>nd</sup> – 6<sup>th</sup> December 2001.
9. Mulenga C R. (2000). A study to determine Knowledge, Attitudes and Practices on Emergency Contraception among Family planning Caregivers in Lusaka Urban.
10. Myer L., Mlobeli R., Cooper D. I., Smit J., & Morroni C., (2007). Knowledge and use of emergency contraception among women in the Western Cape province of South Africa: a cross-sectional study. *BMC Women's Health* 2007; 7:14. doi 10.1186/1472-6874-7-14. <http://www.ncbi.nlm.nih.gov/pubmed/5/5/2008>
11. Puri S., Bahatia V., Swami H M., Singh A., Sehgal A., & Kaur A P., (2007). Awareness of emergency contraception among female college students in Chandigarh, India. *Indian Med Sci.* 2007; 61: 338-346. <http://www.ncbi.nlm.nih.gov/pubmed/5/5/2008>
12. Schwarz E B., Reeves M F., Gerbert B., & Gonzales R., (2007). Knowledge of and perceived access to emergency contraception in urgent care clinics in California. *Contraception.* 2007 Mar; 75(3):209-13. Epub 2007 Jan 16. <http://www.ncbi.nlm.nih.gov/pubmed/5/5/2008>
13. Trussell J. & Raymond E G., (2007). Emergency Contraception: A Last Chance to Prevent Unintended Pregnancy. <http://www.ncbi.nlm.nih.gov/pubmed/5/5/2008>