

# International Journal of Clinical Obstetrics and Gynaecology



ISSN (P): 2522-6614  
ISSN (E): 2522-6622  
© Gynaecology Journal  
www.gynaecologyjournal.com  
2019; 3(4): 223-227  
Received: 16-05-2019  
Accepted: 20-06-2019

**Monika Jindal**  
Associate Professor (OBG),  
MMMCH, Kumarhatti, Himachal  
Pradesh, India

**Jaswinder Kaur**  
Associate Professor (Physiology),  
MMMCH, Kumarhatti, Himachal  
Pradesh, India

**Santosh Minhas**  
Professor and HOD (OBG),  
MMMCH, Kumarhatti, Himachal  
Pradesh, India

**Sumit Chawla**  
Assistant Professor (Community  
Medicine), YS Parmar Govt  
Medical College & Hospital,  
Nahan, Himachal Pradesh, India

## Awareness of emergency contraception among first year and final year medical under: Graduates of a private medical college in HP

**Monika Jindal, Jaswinder Kaur, Santosh Minhas and Sumit Chawla**

**DOI:** <https://doi.org/10.33545/gynae.2019.v3.i4d.317>

### Abstract

**Introduction:** Emergency contraception is the last chance to prevent unintended pregnancy. In countries where emergency contraception (EC) is offered, its availability and use vary widely due to factors such as regulations and policies regarding the method, providers and women's understanding.

**Objectives:** 1. To study the awareness of emergency contraception among MBBS students.  
2. To compare the awareness among males and females.

**Methodology:** Questionnaire based, cross-sectional, prospective study carried out and analysed by Chi square test and percentage.

**Results:** Almost all the students were aware about EC, but their knowledge was incomplete and inaccurate. Final year students and girls were more aware as compared to first year students and boys.

**Conclusion:** Women and teenagers must be provided with complete knowledge and over the counter availability of EC pills. It's the need of the hour as the age of first contact is decreasing.

**Keywords:** Abortion, contraception, emergency, pregnancy, student

### Introduction

Emergency contraception is defined as any method women can use after intercourse to prevent pregnancy<sup>[1]</sup>. Adolescents and young women are at the greatest risk of unintended pregnancy because they are unlikely to see a family planning provider before or immediately after the sexual activity. Therefore, preventing unintended pregnancy among them is the important concern. Sexually active young women are clients with special needs for contraception. They are eligible to use a variety of available contraceptives. Introduction of emergency contraception in the recent past can help them avoid such unintended pregnancies<sup>[2]</sup>.

Adolescence and youth are two stages of development which bridge the gap between childhood and adulthood. These stages bring changes in mental process and personal identity. These include transition from total socio-economic dependence to relative independence. Among these two, an adolescent is the most vulnerable. The generation now entering the adolescence is the largest in human history.

Globally 20 million illegal abortions take place every year and out of this 97% occur in developing countries<sup>[3]</sup>. In India, 78% of the pregnancies are unplanned and at least 25% are unwanted. Every year 11 million abortions take place and at least half of these are unsafe and associated with a high morbidity and mortality. At least 20,000 women are dying annually due to abortion related complications<sup>[4,5]</sup>.

EC is especially important for outreach to the 4.5 million women at risk for pregnancy, but not using a regular method by providing a bridge to use of an ongoing contraceptive method. Although ECs don't protect against STD's, but they do offer reassurance to the 8.6 million women who rely on condoms for protection against pregnancy in case of condom slippage or breakage.

EC methods available are pills and Cu-T. Pills are COC, POP and anti-progestin pills (Mifepristone). Pills should be taken within 72 hours and Cu-T within 5 days of unprotected coitus<sup>[6]</sup>.

### Objectives

1. To check the awareness of emergency contraception among MBBS students of 1<sup>st</sup> and final year of our institute.

### Correspondence

**Jaswinder Kaur**  
Associate Professor (Physiology),  
MMMCH, Kumarhatti, Himachal  
Pradesh, India

2. To compare the awareness among males and females.
3. To study if the students were aware of various methods of emergency contraception.
4. To study if they knew about correct usage, side effects and source of information.
5. To know if no. of study years make any difference to above knowledge.

### Rationale of the study

Similar study has been conducted in various institutes and there has been no such study in our state. This is the need of the hour as by creating awareness we can save future reproductive health of our nation by saving illegal abortions.

### Materials and Methods

This cross-sectional, prospective study was carried out to assess the awareness about emergency contraceptives among students of a private medical college and hospital from July 2017 to October 2017. Study was carried out on subjects giving consent for the study after clearance from institutional ethics committee vide ref no:- MMMC&H/IEC/17/66. A preset Performa was given to them and collected after they have filled it completely.

Exclusion criteria followed was students who refused to give consent were excluded from the study.

To remove the bias, questionnaire from one batch were filled and collected on same day. Data regarding socio-demographic variables like age, sex, residential area, parent's education, religion were obtained.

Following questionnaire was given to both the batches. Format of the knowledge questions included single statements yes or no and multiple choice questions. Participants were asked to choose the best answer in response to multiple choice questions. All questionnaires were anonymous and didn't have any identifiers.

### Questionnaire

Q1. Have you heard of the emergency contraceptive pill,

also known as the morning after pill? Yes / No

- Q2. How long after having intercourse can the emergency contraceptive pill (Morning after pill) be taken? Up to 12 hours /24 hrs/48 hrs/72 hrs/don't know
- Q3. How many times can the emergency contraceptive pill be used in a month?
- Q4. Is the emergency contraceptive pill 100% effective in preventing pregnancy? Yes/No/Don't know
- Q5. Does the emergency contraceptive pill also protect against some sexually transmitted infections? Yes /no/don't know
- Q6. Where can a 16 year old girl get the emergency contraceptive pill? Doctor/ pharmacist /either of the two
- Q7. Can a doctor give a girl who is 16, the emergency contraceptive pill without telling her parents? Yes /no/don't know
- Q8. Does emergency contraceptive pill have serious side effects? Yes /no/don't know
- Q9. Can the emergency contraceptive pill be used if a woman is already taking the regular contraceptive pill? Yes / No/ Don't know
- Q10. How many tablets of emergency contraceptive pills to be taken after a single act of unprotected intercourse? Single tablet / Two tablets/Multiple/Don't know
- Q11. Do you know any other method of emergency contraception except pills? Yes/No
- Q12. Can Cu-T be used as emergency contraception? Yes/No.

### Statistical analysis

Data collected was entered and analysed using Microsoft excel sheet. For descriptive statistics results were expressed in terms of percentages and association between variables was calculated by using chi-square test and p-value < 0.05 was considered significant.

### Results

**Table 1:** Distribution of students according to gender

Batch	Male	Female	Gender Not Revealed (Gnr)	Total
Final Year	17	33	13	63
Ist Year	40	54	1	95

**Table 2:** Distribution of students according to questionnaire distribution of students according to q no 1

Answer	Final Yr/Istyr Male	Final Yr/Istyr Female	Final Yr/Istyr Gnr	Final Yr/Istyr Total	P Value
YES	15/36	33/51	0013/001	149	0.0000*
NO	002/004	00/03	00/00	9	0.2570

Distribution of students according to Q No 2

upto 24 hrs	0/05	00/06	01/00	12	0.0020*
upto 48 hrs	01/05	001/005	000/01	13	0.9060
upto 72 hrs	14/28	32/37	12/00	123	0.0000*
not known	02/02	00/006	00/00	10	0.0000

Distribution of students according to Q No 3

Once	003/008	004/006	00/00	00/00	0.0000*
Twice	003/007	007/006	002/00	002/00	0.1620
>2	005/006	16/004	08/00	08/00	0.0190*
don't know	006/19	006/38	003/001	003/001	0.0130*

Distribution of students according to q no 4

Yes	008/011	004/008	002/001	34	0.5720
No	008/027	027/040	011/00	113	0.0000*
don't know	001/002	002/006	00/00	11	0.0000*

Distribution of students according to q no 5

Yes	00/003	003/00	00/00	6	0.1890
No	015/036	030/052	012/001	146	0.0000*
don't know	002/001	00/002	001/00	6	0.1890

Distribution of Students According To Q No 6

Doctor	005/019	007/030	004/00	65	0.0010*
Pharmacist	003/005	006/007	001/00	22	0.4950
Doctor/Pharmacst	008/015	020/014	008/001	66	0.0170*

Distribution of Students According To Q No 7

Yes	002/003	007/001	004/000	17	0.0650
No	013/031	021/047	007/001	120	0.0040*
don't know	002/006	005/006	002/000	21	0.1540

Distribution of Students According To Q No 8

Yes	010/019	013/019	004/00	65	0.0440*
No	006/011	018/021	009/00	65	0.0050*
don't know	001/010	002/014	000/001	28	0.9030

Distribution of students according to q no 9

Yes	005/003	015/010	007/00	40	0.1290
No	010/025	016/022	005/001	79	0.0350*
don't know	002/012	002/022	001/000	39	0.0270*

Distribution of Students According To Q No 10

1	008/025	016/033	008/001	91	0.0010*
2	007/002	014/003	004/00	30	0.6030
Multiple	00/003	001/002	001/00	7	0.1550
Don't Know	002/010	002/016	000/000	30	0.6610

Distribution of Students According To Q No 11

Yes	17/00	33/00	13/00	63	0.001*
No	00/40	00/54	00/01	95	0.001*

Distribution of Students According To Q No 12

Yes	17/00	33/00	13/00	63	0.001*
No	00/40	00/54	00/01	95	0.001*

\*Significant p-value

A total of 158 students participated in study out of total strength of 300 from both the batches. From final year 63 and from 1<sup>st</sup> year 95. Girls participation was more compared to boys in both the groups as there are more no of girls as compared to boys in both the batches.

Most of the students had heard about emergency contraceptive pill (ECP) suggesting that there is good awareness of its existence among teenagers with significant p-value (0.000). Females (96.55%) were more aware than males (89.47%) about existence of EC. Final year (96.83%) students' awareness was a little more than first year students (92.63%).

When asked, how long after intercourse the ECP could be taken, maximum students in both the groups knew about correct timing i.e. within 72 hours with significant p-value (0.000). Female awareness (79.31%) was more than their male counter-part (73.68%). Final year (92.06%) had more awareness as compared to first year (68.42%) due to obvious reason as it is part of their course.

Most of the students were unaware of the number of times it can be used in a month with significant p-value of <0.05. Only 24% knew about its repeated usage. Awareness among females (23%) and final years (46.03%) were more than boys (19.3%) and 1<sup>st</sup> years (10.53%) respectively.

Most of the students (71.52%) were aware that it's not 100% effective in preventing pregnancy and have significant p value of 0.0000. Awareness among female students (77.01%) was more than boys (61.40%) and among final year (80.70%), it was more

as compared to first year (77.01%).

More than 92% (92.41%) knew that ECP doesn't protect against STD's. Knowledge was more among the students who preferred not to reveal their gender (92.86%). Here awareness was more in boys (63.16%) as compared to girls (59.77%). Knowledge among first year (93.68%) was more as compared to final year (90.48%).

Regarding the availability of the drug, 57.41% of final year students knew that it can be obtained either from doctor or from pharmacist as compared to first year (31.58%). Only 41.77% were aware about it's over the counter availability. Boys (40.35%) were a little more aware than girls (39.08%).

Only 10.76% of students were aware that a doctor can give the ECP to a 16 year old girl without telling her parents. Girls (8.05%) awareness was a little more than boys (3.51%). Awareness among final year (20.63%) was more.

When we asked about side -effects, only 41.14% knew that EC pill has no serious side effects, thereby reflecting incomplete knowledge. Awareness among females (44.83%) and final year (52.38%) was more as compared to males (29.82%) and first year (36.78%)

When asked whether the ECP could be used if a woman was already taking the OCP there was lack of knowledge among males (14.04%) and first year (13.68%). Only (57.6%) of students knew that it can be taken for multiple no of times.

Other methods of emergency contraception were known to final year students, but first year students were unaware of other

methods. Cu-T as an alternative EC was known to final year students, but first year students were totally unaware.

## Discussion

Number of students from final year who participated in study (63/150) was significantly less than those from first year (95/150). Reason behind less no from final year participating in study is students got detained due to various reasons. Total 158 students participated in study, out of which 87 were females, 57 males and 14 (final 13/1<sup>st</sup> yr 1) didn't prefer to reveal their gender.

Our study showed that there was good awareness (94.3%) of existence of EC among medical students (149/158). Similar trend was noted by Archana Chandna *et al.* in year 2016 in a study done on 1<sup>st</sup> year medical students [7].

While only 61% students were aware, in a study done by Pankaj Kumar Mandal in rural area of Kolkata [8]. Awareness about EC was practically nil in a study done by Monika Gupta *et al.* in a population of females of age group of 18-49 yrs attending OPD at a tertiary care centre in Himachal Pradesh [9]. 100% awareness about EC was present in a study done by Amisha Dogra [10].

Approx. 97% of final year students were aware about its existence. Similar trends were seen in study done by P Radha Kumari *et al.* (98%) [11]. Source of information among final year students were their study books and teachers and source among first year was found to be media, friends or peers.

Knowledge about correct timing of ECP was there among 78% of students, similar to Archana Chandna *et al.* study's pattern (82%) whereas only 14.7% students were aware in a study done by Puri S *et al.* [7, 2] Variation in result was due to interview among medical students only in our study and study done by Archana Chandna *et al.* [7].

Only 41% correctly knew about the timing when these pills should be taken i.e. within 72 hours of unprotected intercourse in a study done by Priya Arora *et al.* [12].

Only 22.4 percent of respondents had heard of ECPs and of these only 17.9 percent knew the correct time-frame for effective use in a study done at Vientiane, the capital city of the Lao PDR [13].

Most of the students were unaware of the number of times it can be used in a year. Only 24% knew about its repeated usage. Awareness among females (23%) and final years (46.03%) were more than boys (19.3%) and 1<sup>st</sup> years (10.53%) respectively. Similar trend (32%) was seen in study done by Archana Chandna *et al.* [7].

Students must be aware that ECP is not to be used as routine contraceptive method, but simultaneously they must be told that there is no limit to the number of times it can be used in a year [14]. A potential barrier to women presenting for ECP is the fear that they might be denied it because of overuse [15].

In our study girls (77%) were more aware about efficacy than boys (61%) as seen in Archana Chandna *et al.* study [7]. The difference in knowledge of males and females may be due to lesser opportunities to receive info and counselling about sexuality, contraception and prevention as they don't get pregnant and don't have the need to consult physician for their contraception.

Final year (81%) were more aware about its efficacy than 1<sup>st</sup> year students (77%) as emergency contraception along with other contraceptive methods is the part of study protocol of final year students. Most (92%) students knew that EC don't protect against STI's, but awareness among females (60%) and final years (90%) was little less than males (63%) and first years (94%).

Majority of students didn't know that it's over the counter drug and they can get without prescription and without the knowledge of their parents. Confidentiality is an essential part of family planning medicine, but teenagers should be encouraged to inform their parents, but shouldn't be forced to do so except when child protection becomes an issue [15].

Only 41% of students knew that pills don't have serious side – effects. Awareness among females (45%) and final year (52%) students were more as compared to males (30%) and first year (37%) students respectively. As males don't have to use the pills and first year has not studied yet.

Although in many situations of missed pills EC is not required, but if pills are missed in middle of menstrual cycle or multiple pills are not taken, there may be risk of pregnancy. Users of OCP's must be aware that they are not excluded from the use of EC, should they require it [15].

Only 58% students knew that after single act of intercourse one tab is required as most common available or advertised pill is morning after pill. Awareness among boys (58%) and first year (62%) was higher as compared to girls (56%) and final year students (51%). Similarity about more awareness among boys were noted in study by Archana Chandna *et al.* [7] More awareness among first year may be due to social media.

All of final years students were aware of other methods of EC and Cu-T as one of the method for EC, as its part of their curriculum and none among first year student knew about other methods of EC and Cu-T as one of the method as EC. As Cu-T is not being advertised as emergency contraception method anywhere on social media or TV, moreover you can't get it over the counter and for its use you need to visit health worker.

## Conclusion

Some young women with unintended pregnancies obtain abortions in unsafe conditions and others carry their pregnancies to term, thereby increasing morbidity and mortality [16]. It's estimated that EC could prevent 1.7 million unintended pregnancies annually and no of abortions by 40% [17]. In developing countries about 30% women give birth to first child before age of 20 years [18]. In India around 19% of population is of adolescents, of which 90 million are between 15-19 years of age [19]. The average age for first sexual intercourse in India is 17.4 years for boys and 18.2 years in girls [20].

In this study both the groups were aware about the existence of EC, but the knowledge was incomplete and inaccurate. Knowledge of girls and final year students was more accurate.

Our reproductive health can be saved by providing accurate knowledge and complete awareness of emergency contraception, over the counter availability and by their liberal use by teenagers and women who don't want pregnancy.

## References

1. Amalba A, Mogre V, Appiah MN, Mumuni WA. Awareness, use and associated factors of emergency contraceptive pills among women of reproductive age (15-49 years) in tamale, Ghana. BMC women's health. 2014; 14(1):114.
2. Puri S, Bhatia V, Swami HM, Singh A, Sehgal A, Kaur A. Awareness of emergency contraception among female college students in Chandigarh, India. Indian journal of medical sciences. 2007; 61(6):338-46.
3. Henshaw SK, Singh H, Hass T. The incidence of abortion worldwide. Int Fam. Plann. Persp. 1999; 25:S30-8
4. Sedgh G, Henshaw S, Singh S *et al.* Induced abortion: estimated rates and trends worldwide. Lancet. 2007;

- 370(9595):1338-45.
5. Mehra R, Goel P, Dua D, Huria A. Knowledge of emergency contraception among women coming for induced abortion. *Journal of obstetrics and gynaecology of India*. 2006; 56(3):233-5.
  6. Malla B *et al*. Assessment of Knowledge, Attitude and practice of emergency contraceptive pills among medical and paramedical students. *International journal of medicine & biomedical sciences*. 2017; 2(2):6-13.
  7. Chandna A, Nath J, Dhingra D. Awareness of emergency contraception among 1<sup>st</sup> year medical students. *Int J Contemporary Med Res*. 2016; 3(6):1568-70.
  8. Mandal PK, Paria B, Chakrabarty D, Roy AKS, Sau M, Mukherjee A. *Indian J Pev. Soc. Med*. 43:1.
  9. Gupta M, Jindal M, Sood A, Goraya SP, Chawla S, SMatreja P. Knowledge, Awareness and Practices (KAP) Regarding contraception among females attending a tertiary care hospital, Himachal Pradesh. *Int J. Med Res Prof*. 2017; 3(4):70-74.
  10. Dogra A, Wankhede UN. Knowledge and attitude of medical undergraduate, interns and postgraduate students towards emergency contraception. *Int J reprod contracept Obstet gynecol*. 2017; 6:2944-7.
  11. Lakshmi GV, Radha PK, Naidu SA. Knowledge, attitude and practices of emergency contraception among female medical students of Andhra Medical College, Visakhapatnam. *Int J Res Health Sci*. 2014; 2(2):507-10.
  12. Arora P, Bajpai RC, Srivastava R. Emergency contraception: a study to assess knowledge, attitude and practices among female college students in Delhi. *Natl J Community Med*. 2013; 4(2):282-285.
  13. Sychareun V, Hansana V, Phengsavanh A, Phongsavan K. Awareness and attitudes towards emergency contraceptive pills among young people in the entertainment places, Vientiane City, Lao PDR. *BMC Women's health*. 2013; 13(1):14.
  14. Graham A, Moore L, Sharp D, Diamond I. Improving teenagers' knowledge of emergency contraception: cluster randomised controlled trial of a teacher led intervention. *Bmj*. 2002 324(7347):1179.
  15. Summative Assesment Number  
YOR/800/38581.[www.bradfordvts.co.uk/wp-content/.../emergency%20contraception.doc](http://www.bradfordvts.co.uk/wp-content/.../emergency%20contraception.doc). Accessed 2<sup>nd</sup> feb,2016
  16. Michael Aziken E, Patrick I, Okonta, Adedapo BA. *Ande. International family planning perspectives*. 2003; 29:84- 87.
  17. Fritz MA, Speroff L. Oral Contraception. In: *Clinical Gynaecologic Endocrinology and Infertility*. 8th edition. New York: Lippincott Williams and Wilkins. 2011; 22:949-1048.
  18. Kanojia JK, Nirbhavane NC, Toddywala VS, Betrabet SS, Patel SB, Datte S *et al*. Dynamics of contraceptive practice amongst urban Indian women. *The National medical journal of India*. 1996; 9(3):109-12.
  19. Harper CC, Ellertson CE. The emergency contraceptive pill: a survey of knowledge and attitudes among students at Princeton University. *American journal of obstetrics and gynaecology*. 1995; 173(5):1438-45.
  20. Sharma R. More than a quarter of India's youngsters have premarital sex. *BMJ: British medical journal*. 2001; 322(7286):575.