ADDIS ABABA UNIVERSITY FACULTY OF MEDICINE
SCHOOL OF PUBLIC HEALTH

Assessment of Knowledge and Perception of Emergency Contraception among Health Care providers in Addis Ababa

By: Netsanet Tekalign (BSc)

A THESIS SUBMITTED TO FACULTY OF MEDICINE, SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIRMENT FOR THE DEGREE OF MASTERS OF PUBLIC HEALTH IN REPRODUCTIVE HEALTH (MPH/RH)

Advisor:
Fikre Enqueselassie (BSc, MSc, PhD)

December, 2008
Addis Ababa, Ethiopia

Acknowledgment

First of all, I am greatly indebted to my advisor Dr. Fikre Enqueselassie for his great support throughout this paper work. I greatly acknowledge the Addis Ababa University, Faculty of Medicine, School of Public Health for providing me this opportunity and sponsoring this research. I would also thank the Addis Ababa Regional Health Bureau, non governmental and private health institutions for allowing me to do my research in their health facilities.

I would like to thank all my data collectors who engaged themselves with a lot of interest and participated in the study. Lastly, I am grateful to the health workers who participated in this study, for their full co-operation to give valid and relevant information.

Acronyms

AOR Adjusted Odds Ratio

COC - Combined Oral Contraceptive

DACA Drug Control Authority

DHS - Demographic and Health Survey

EC - Emergency contraceptive

ECPs - Emergency contraceptive pills

ESOG - Ethiopian Society of Obstetrician and Gynecologists

FGAE- Family Guidance Association Ethiopia

FP - Family Planning

GP – General practitioner

HA – Health Assistance

HCWs- Health Care Workers

HFs Health Facilities

IUCD - Intra uterine copper Device

IUD - Intra uterine Device

Jun. Nurse Junior Nurse

KAP- Knowledge, Attitude and Practice

MoH - Ministry of Health

MSI-E- Marie Stopes International Ethiopia

NGO - None Governmental Organization

OCPs - Oral Contraceptive pills

OR - Odds Ratio

PATH - Program for Appropriate Technology in Health

SD- Standard Deviation

SPH School of Public Health

SRS- Simple Random Sampling

SPSS - Statistical Package for Social Science

STIs - Sexually Transmitted infections

USA- United States of America

Table of Content Page

List of tables and Figures

List of tables Page

List of figure Page

Summary

Background: Emergency Contraception gives a second chance to women who do not want to be pregnant after unprotected sexual intercourse. It has been estimated that almost two in every five pregnancies worldwide are unplanned thus most of these pregnancies ends with induced abortion. To lower rates of unintended pregnancy, women need better access to both regular contraception and emergency contraception. Thus increasing the knowledge of providers to emergency contraception and trying to improve the service delivery quality is one way of tackling the inaccessibility of this service to the women. This study will help to identify the KAP gap of providers to emergency contraception and to act accordingly by the responsible organizations.

Objective: To assess the knowledge and perception of health care providers about emergency contraception in Addis Ababa

Methods: This study used cross-sectional quantitative type of study design. A standardized self administered questionnaire was used to collect data from a total of 366 health workers at selected health institutions in Addis Ababa.

Result: From the total study participants 160(37.2%) were knowledgeable about EC and 156(42.6%) have positive attitude towards EC. Health care providers working in pharmacies and drug stores were found to be more likely to have knowledge than health care providers working in government health facilities AOR=4.5(95% CI=1.7-11.5). Males had more positive perception towards EC than female health workers AOR=1.7(95% CI=1.1-2.7).

Conclusion: Generally the knowledge and perception of health care providers towards this method is very low. To improve their knowledge and to clarify the misperception about emergency contraception among the health care providers training is essential.

1. INTRODUCTION

1.1 Background

Worldwide, estimates suggest that almost two in every five pregnancies are unplanned. It may be the result of non-use of contraception or of ineffective contraceptive use or method failure. Some of these are carried to term, while others end in spontaneous or induced abortion.[1] In developing countries, of the 182 million pregnancies that occur in each year, more than one-third are unintended and 19% end in induced abortion (8% are safe procedures and 11% are unsafe). The consequences of these unintended pregnancies, particularly where abortion is legally restricted, may be life threatening due to unsafe abortion procedures.[2]

Most teen pregnancies are unplanned and pose a significant societal cost and potential individual risk.[3] For 15-19 year-old teens that become pregnant in the United States, 74 to 95% describe their pregnancies as unintended. Other study in the United States estimates half of the 3.5 million unintended pregnancies that occur each year

could be averted if emergency contraception were easily accessible and used. [4,5]

More than 100 million married women in developing countries have an unmet need for contraception.[2] In Ethiopia according DHS 2005, the unmet need of family planning accounts for 34%, and the total unwanted and mistimed births were 16% and 19% respectively.[6] In other survey conducted in Harar town on unintended pregnancy and induced abortion in a town with accessible family planning service, 225(33.3%) out of 675 pregnant women reported their most recent pregnancies were unintended. Of these 112(50%) had unintended childbirth while the rest 113(50%) ended in induced abortion. This survey shows that high rate of unintended pregnancy is a problem in Ethiopia.[7]

The prevention of unwanted and unplanned pregnancy require comprehensive approach that includes primary and secondary prevention methods, adequate information about and access to Emergency contraception(EC) are essential components of secondary prevention efforts. Emergency contraceptive methods provide a

second chance to prevent unwanted pregnancy and induced abortion rates by 75% and 50% respectively.[8]

In our country some studies show that there is low awareness and utilization of emergency contraception in the potential users, despite the fact that high level of unplanned and unwanted pregnancies.[8, 9,10] To increase the awareness of the general population health care providers are important gatekeeper to provide the information about emergency contraception.

In Ethiopia a high dose of combined oral contraceptives has been given as an emergency contraception by health care providers for decades. In 2003, Ethiopian society of Obstetricians and Gynecologists (ESOG) in collaboration with population council and ECafricque introduced the dedicate product called postinor2 tablets in the selected public health institutions.[11] In 2004, Ministry of Health (MOH), Family Guidance Association of Ethiopia (FGAE), Marie Stopes International Ethiopia (MSI-E), ESOG, population council and ECafricque made an agreement to mainstream EC service into public sectors and to scale up EC service. These organizations developed training curriculum for health care providers. The training was provided for the selected

health professionals in 36 health facilities located through the country's five main regions, Addis Ababa, Amhara, Tigray, Oromiya and South Nation and Nationalities peoples Region (SNNPR). The service was also started in these health facilities as a pilot project. [11] On the other hand DKT International launched Postpill, a double tablet form of 0.75mg Levonorgestrel in 2008 in Ethiopia and will be making this available through its national distribution network which helps the availability of the drugs in public and private health facilities. This helps the users to accesses these drugs easily. DKT International also starts giving training to the pharmacists and planned to give the training to the other health professionals.[12]

Availability of these drugs only cannot be a solution to reduce unwanted pregnancy and unsafe induced abortion. All health care providers must have adequate knowledge to aware the women, about the existence of the service, its advantage and promoting the service use. This study, therefore tried to assess the knowledge and perception of health care providers in Addis Ababa in the selected government and private health institutions.

1.2 Rationale of the study

Emergency contraception pills (EC) enable women and girls to prevent pregnancy after unprotected sex, averting unplanned and unintended pregnancies. Emergency contraception pills, therefore enhance reproductive choice of women, but the method is under utilized.[13]

In Ethiopia induced abortion and unplanned pregnancy are high. [7, 14] But the use of contraception particularly use of emergency contraception is very low.[8,9,10] The high prevalence of unwanted and unintended pregnancy indicates that, there are some barriers for not using regular and emergency contraception by women. Improving access to ECPs could decrease the number of unintended pregnancies and induced abortions that occur in each year. Health care workers (HCWs) can play an important role in making emergency contraceptives (EC) easily available to the clients. They can influence its accessibility through counseling, prescribing or advocating the use of EC. According to a study done in Addis Ababa only 14.1% of women who have received post abortion care seekers get information about emergency contraception.[7] This may be due to poor knowledge or

wrong perception of providers to give appropriate information about EC to their clients or poor client- provider communication.

Enough knowledge to emergency contraception among health care providers is helpful to correctly counsel and administer these contraceptives to the woman in need. In our country research is lacking among these groups knowledge and perception to wards EC. So this type of study will help to describe the knowledge and perception of health care providers towards emergency contraception for improving access to this method by the women and girls who needs it.

2. LITERATURE REVIEW

Emergency contraception is a back up method for failed or unused contraception prior to or during sexual intercourse to prevent unwanted pregnancy. It is also called morning after or postcoital contraception. A woman may require emergency contraception because the contraceptive method she was using failed (e.g., a condom broke or a diaphragm slipped), she neglected to use a method or she was sexually assaulted. [15, 16]

Timing is crucial when using an emergency contraceptive methods. Success is highest if used within the first 72 hours post-coitus for ECPs and IUCD may be effective up to 5 days after intercourse. [17] Additionally, recent studies also described the duration of taking ECPs can be up to 120 hours. [18,19]

There are two type of emergency contraceptive methods; namely ECPs and Copper releasing IUDs.

2.1 Emergency Contraceptive Pills (ECPs)

ECPs contain hormones found in regular family planning pills but in higher dose. There are two types of ECPs: namely progestin-only ECPs and combined ECPs.[19, 20,21]

2.1.1 Progestogen pills

The most convenient regimen is a single dose consisting of 1.5mg levonorgestrel taken as soon as possible after unprotected intercourse; alternatively, one dose of 0.75mg levonorgestrel can be taken as soon as possible after unprotected intercourse followed by a same dose taken 12hrs later.[19,20,21] Where pills containing 0.75mg levonorgestrel are not available, levonorgestrel pills, each containing 0.03mg used for regular contraception are being used instead. Twenty- five of these mini pills should be taken initially, to be repeated after 12hrs.[17]

2.1.2 Combined pills

Combined oestrogen/ Progestogen pills, containing ethinyl oestradiol and levonorgestrel, can be taken in a regimen.

When pills containing 50g ethinyl oestradiol and 0.25mg levonorgestrel are available; 2 pills should be taken as the first dose and should be followed another 2 pills 12hrs later. When only pills containing 30g ethinyl oestradiol and0.15mg levonorgestrel are available: 4pills should be taken as the first dose and should be followed another 4 pills 12hrs later.[16, 17]

2.2 Copper releasing IUDs

A Copper releasing IUDs can be used within 5 days of unprotected intercourse as an EC.[19]

2.3 Mode of action of EC

The ECPs and IUCDs prevent pregnancy, if they are used up to three days to five days after unprotected sex respectively. ECPs prevent pregnancy by inhibiting or delaying ovulation and inhibiting fertilization. IUCDs interfere with implantation which generally occurs on about the sixth day after fertilization when the embryo is at the blastocyst stage or during ovulation or fertilization. [15, 16]

2.4 Efficiency

The Progestogen-only regimen reduces the risk of pregnancy after a single act of sexual intercourse by about 60 - 93% and the combined regimen by about 56 - 89% if taken within 72hrs.[14,16] Emergency insertion of a copper IUD is significantly more effective than use of ECPs, reducing the risk of pregnancy following unprotected intercourse by more than 99 %.[15, 17,19]

2.5 Side effects and contraindications

The side effects of ECPs are nausea, vomiting, irregular uterine bleeding, headache, fatigue, abdominal pain and dizziness. For IUCD the side effects are similar to those seen after routine insertion at other times and include abdominal discomfort and vaginal bleeding or spotting.[15] There are no absolute contraindications to the use of ECPs, with exception of pregnancy. ECPs should not be used in pregnancy, not because they are thought to be harmful, but because they are ineffective.[14] The contraindications for emergency insertion of IUD are the same as for insertion at other times like risk of pelvic inflammatory disease and STIs. [17,20]

2.6 Knowledge and perception among health care providers

A study done on physicians in the USA, out of 167 study participants, majority of respondents did not think provision of emergency contraceptive pills would encourage adolescent contraceptive risk-taking (83%) or would discourage adolescents from using other contraceptive methods (61%). While 29% expressed concern that repeated use of emergency contraception would pose health risks (such complications from high-dose estrogen or an increase in sexually transmitted rates if availability of the method led to lax use of barrier methods), 20% were about the health risks. Whereas 55% of respondents said they would provide emergency contraception to an adolescent even if they knew she would continue a pregnancy in the event that the method failed, 38% said they would not.[22]

In descriptive study done among 38 Pharmacists in Soweto and the Johannesburg Central Business District in South Africa on knowledge and perception of EC; all respondents had heard of emergency contraceptive pills; most pharmacists knew that the pills should be taken within 72 hours of unprotected intercourse and most of them also correctly identified nausea and vomiting as possible side effects. Several pharmacists perceived that use of pills promoted promiscuity

and repeat use, and increased the risk of contracting HIV and other STIs. One commented that the method encourages people not to use precautions. [23]

Awareness study on 64 pharmacists about EC in west Texas, USA showed that none carries EC in his/her pharmacy, and scientific understanding of EC was generally poor. Fourteen percent stated EC conflicts with their religious views, 17% considered it is a method of abortion, 11% would not be willing to fill an EC prescription written by a doctor.[24]

Other study done in Lagos (Nigeria) among 256 health care providers about their Knowledge and attitude towards EC, nine in ten providers had heard of emergency contraception, but many lacked specific knowledge about the method. More than a third incorrectly believed that they may act as an abortifacient. Of those who had heard about emergency contraception, 58% had provided clients with emergency contraceptive pills, yet only 10% of these providers could correctly identify the drug, dose and timing of the first pill in the regimen. Furthermore, fewer than one in ten of those who knew of emergency contraception said they always provided information to clients.[25]

In a study done in Jamaican and Barbadian health care providers, on knowledge, attitude and practice regarding EC; from a total of 228 Jamaican providers and 200 Barbadian providers, only one in five Jamaican respondents and 21% of Barbadian respondents knew that the method could be used as often as needed. The large majority of Jamaican participants were willing to provide the pills to rape victims (90%), women who experienced condom failure (98%) and women who did not use any method of contraception (93%). However, support was much lower for providing the method to minors (those younger than 18years) without parental consent (66%) and the result was more or less similar to the Barbadian health care providers.[26]

There is a scarcity of research concerning knowledge, attitude and practice of EC among health workers in Ethiopia. This study is therefore, aimed to assess knowledge and attitude of EC among health care providers in selected health institutes in Addis Ababa.

3. OBJECTIVES

3.1 General Objective

To assess the knowledge and perception of health care providers about emergency contraception in Addis Ababa.

3.2 Specific Objectives

- To determine the level of knowledge of health care providers about emergency contraception.

- To assess the perception of health care providers towards emergency contraception.

- To assess the practice of health care providers on emergency contraception.

- To assess factors associated with the knowledge, perception and practice of health care providers about emergency contraception.

4. METHODS AND MATERIALS

4.1 Study Setting

The study was conducted in Addis Ababa, the capital city of Ethiopia. The city has ten sub cities and hundred kebeles. The population of the city is estimated to be 2.9 million. Reproductive age of women (15-49) accounts for 34.4%. The potential health coverage is about 100%. Antenatal coverage estimated to be 58.8%, institutional delivery 28.8%, postnatal coverage 20.9%, and family planning 47.9%. Total fertility rate is 1.4, which is below the replacement level. In Addis Ababa, there are 23 government health centers, 230 pharmacies/drug stores, and 506 private/NGO clinics with a total of 3517 health care provider employees of government and private health institutions. [27]

The study was cross sectional facility based quantitative type of survey. The study period was from May, 2008 - October, 2008.

4.2 Study population

4.2.1 Source population

The source population was employees of government and private/NGO health institutions in Addis Ababa.

Exclusion criteria: health care providers working in the clinic/health posts, government/private hospitals, specialized clinics and health care providers with a profession of Laboratory and Sanitary were excluded from the study.

4.2.2 Sample size determination

The following assumption was used to calculate the sample size required for the study:

n_o = number of the study subjects for large population >10,000

Z = is standardized normal distribution curve /value for the 95% confidence interval (1.96)

p =proportion of population with knowledge of emergency contraception among health care providers (50%).

d = the margin of error taken (0.05 taken). Using a single proportion formula;

n_o= (Za/2)2p(1-p)/d2 = 384,

The required sample size was 384

Since the above sample is to be taken from finite population N = 3517 government and private health care providers, the required sample will be obtained from the above estimate by finite population correction factor; using the formula

$$n = \left(\frac{n_o}{1 + \frac{n_o}{N}} \right)$$

And adding 10% for non response, the total sample size after the correction was 381.

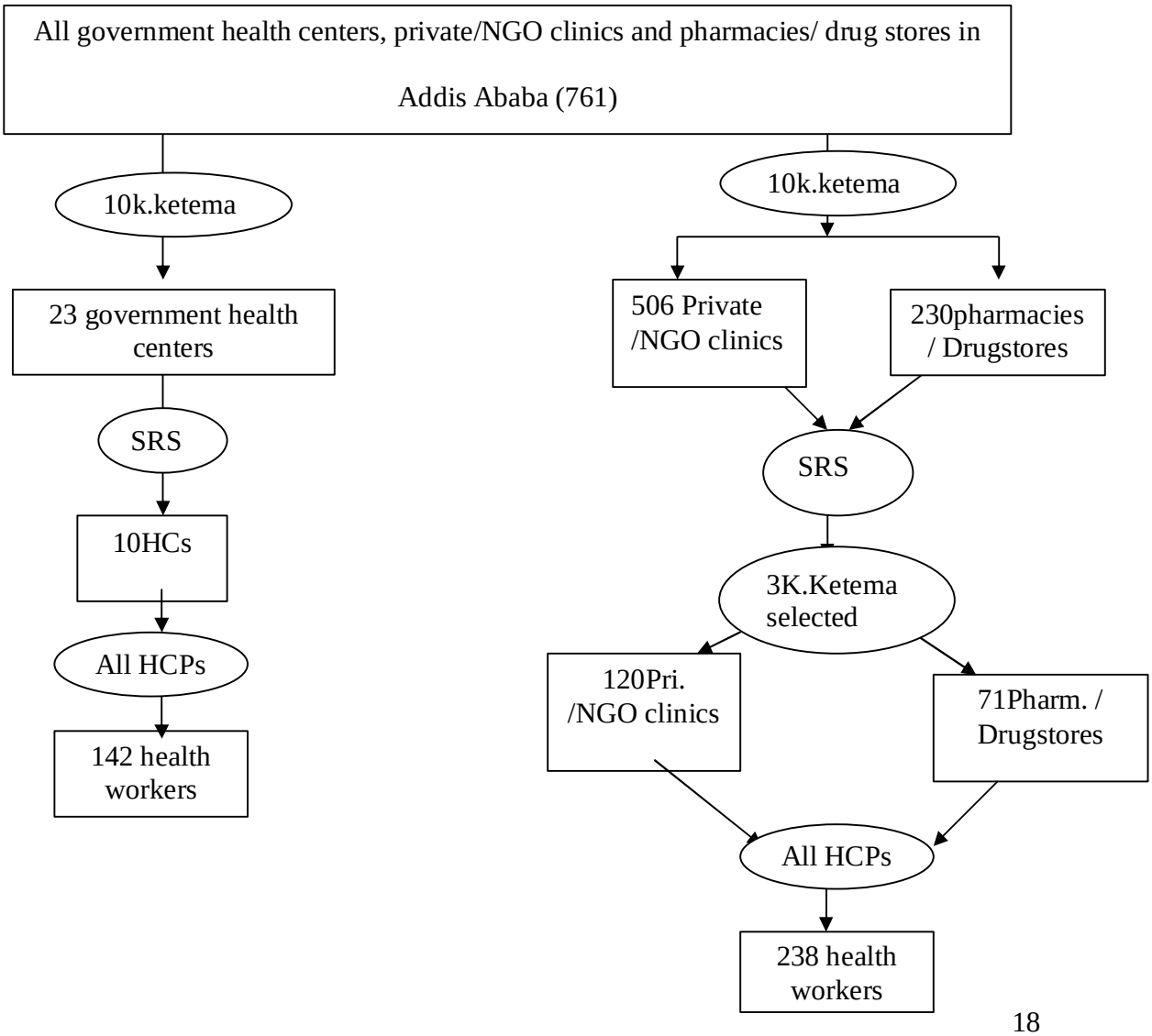
4.2.3 Sampling procedure

There are 1312 government and 2205 private health workers in the study area, by using proportional to size sampling method, the required numbers of participants from each group were: 142 and 238 respectively.

The total number health facilities in Addis Ababa were 23 public health centers, 506 private/NGO clinics, and 230 pharmacies/drug stores. To get study participants from government health institutions; randomly 10 out of 23 government health facilities were included in the study.

All health care providers in the selected health facilities available during the data collection period were included to the study. To get study participants from private health institutions; three Kifle ketemas were randomly selected out of a total of ten Kifle ketemas (Gulele, Addis ketema and Arada Kifle ketema); then all private/NGO clinics (total 120) and pharmacies/Drug(total 71) stores were included found in these Kifle Ketemas.

Figure 1; the schematic presentation of sampling procedure



4.3 Data collection

4.3.1 Data collection Tool

A self administered questionnaire adapted from provider surveys developed by PATH, Population Council of Mexico, and the Family Planning Association of Sri Lanka was used with some modifications to meet the local context. Pre-test was conducted on 15 health care providers which weren't included in the sample, and some modifications were made based on the findings.

4.3.2 Data collection procedure

A self administered questionnaire that explore the objectives of the study was given to the health care providers in the selected health facilities. For distributing and collecting the questionnaires, ten 12th complete data collectors were selected and oriented about the questionnaire. The data collectors went to each of the selected health facilities in Addis Ababa for distributing the questionnaire and got appointment 3 to 5 days from the respondent to gather the filled questionnaire.

4.3.3 Data quality control

To ensure the quality of the data, standard questionnaire adapted and the English version was translated in to Amharic to maintain its consistency for actual data collection purpose. Then, the questionnaires were tested for their accuracy and consistency prior to the collection of data on clients outside the study subjects. The principal investigator was supervising the data collection process.

4.3.4 Variables

Dependent Variables

Knowledge and perception about emergency contraception

Independent variables

Age, sex, educational level, religion, profession, type of facility, availability of EC service

Operational definitions:

Knowledge: knowing the correct dose of prescribing, indicate the time limit for them, recognize the side effect and elements found in

these drugs. Study participant is labeled as knowledgeable, if he/she answers more than half of the four knowledge questions.

Perception: opinion or attitude or beliefs of health care providers about this method like its advantages, concerns, who can take this drug and who must prescribe it. Someone considered as having positive attitude, at least if he/she answers more than half of the seven selected attitude questions as written as in the bracket. The questions were:

- Do you believe?
    - EC can prevent unintended pregnancy (yes)
    - EC is Ideal when no contraception is used(yes)
    - ECPs is easy to manage(Yes)
    - ECPs has no important side effect(yes)
    - EC is not safe (no)
- Women relay on it as regular contraceptive methods (no)
- It encourages irresponsible behavior (no)

Practice: their experience in prescribing emergency contraceptive to the users, materials used by the providers for prescribing and experience of discussing EC issue with clients.

4.4 Data Processing and Analysis

Data entry, cleaning and analysis were performed using SPSS version 13. Association between variables was assessed using crude and adjusted OR with 95% confidence intervals.

4.5 Ethical Considerations

Written consent to participate in the study was secured, while providing the self administered questionnaire. For this a one page consent letter was attached to the cover page of each questionnaire stating about the general purpose of the study, issues of confidentiality and consent of the study participant.

Ethical clearance was ensured from the Institution of Research Board(IRB) of Addis Ababa University. Permission was also obtained from Addis Ababa Health bureau. A formal letter was written from SPH to Addis Ababa Health bureau, Dkt Ethiopia, DACA, FGAE, and ESOG.

5. RESULT

5.1 Socio Demographic characteristics of the participants

Table 1, shows the socio demographic characteristics of the study participants. Three hundred sixty six health care providers participated in the study, making the response rate of 96%. One hundred forty five (39.4%) were from government health facilities, 110(30.1%) were from private clinics, 68(18.6%) were from pharmacies/drugstores and 43(11.7%) were from NGO facilities. By profession 142(38.8%) senior nurses, 66(18%) junior nurses, 32(8.7%) pharmacy technicians, 29(7.9%) mid wives, 25(6.8%) general practitioners (GP), 25(6.8%) pharmacists, 14(3.8%) health officers (HO), 12(3.3%) health assistants (HA), 11(3%) Bsc nurses, 9(2.5%) druggists and one specialist were participated on the survey.

Two hundred fourteen (58.5%) of the participants were females and 152 (41.5%) were males and the majority were in the age group of 25-34 (44.3%), followed by 18-24(25.1%) and 35-44(23%). The age range of the participants was 20-60years with mean age of 31.8 (SD=8.3). By religion 256 (70.3%) were Orthodox followed by Protestant 61(16.8%) and Muslim 35(9.6%). Educational level of the

participants showed that 264(70.1%) were diploma holders, 87(23.8%) degree, 14(3.8%) were certificate holders.

Table 1, Socio demographic characteristics of the participants (n=366)

Characteristics	Number	Percent
type of the health facilities		
Government	145	39.6
Private	110	30.1
Pharmacy/Drug store	68	18.6
NGO	43	11.7
Profession		
Senior nurse	142	38.8
Junior nurse	66	18.0
Pharmacy technician	32	8.7
mid wife	29	7.9
GP	25	6.8
Pharmacist	25	6.8
HO	14	3.8
HA	12	3.3
Bsc nurse	11	3.0
Druggist	9	2.5
Specialist	1	0.3
Sex		
Female	214	58.5
Male	152	41.5
Age		
25-34	162	44.3
18-24	92	25.1
35-44	84	23.0
45^{+}	28	7.7
Religion		
Orthodox	256	70.3
Protestant	61	16.8
Muslim	35	9.6
Catholic and Others	12	3.3
Education level		
Diploma	264	72.1
Degree and Above	88	24.1
Certificate	14	3.8

5.2 Reported available FP Methods in the HF

As indicated in Table 2, most of the health care providers reported that OCPs, male condoms and injections as family planning methods were available in their health facilities, 322(88%), 318(86%) and 308(84.2%) respectively. The least available family planning methods mentioned by the study participants were sterilization 23(6.3%), diaphragm 26(7.1%) and female condom 37(10.1%). Out of the total respondents 200(54.6) described ECPs is currently available in their health facilities. Other family planning methods available during the survey were implants 174(47.5%), safe period 167(45.6%), withdrawal 71(19.4%) and IUCDs 136(37.2%).

Table 2, Reported available Family Planning methods in the health facilities under study (n=366)

FP methods	Number	Percent
OCPs	322	88.0
Male condoms	318	86.9
Injections	308	84.2
ECPs	200	54.6
Implants	174	47.5
Safe period	167	45.6
IUCDs	136	37.2
Withdrawal	71	19.4
Female condoms	37	10.1
Diaphragms	26	7.1
Sterilization	23	6.3

5.3 Knowledge about Emergency contraception among health care providers

Table 3, indicates that 219(59.8%) of the participants said that they were some what familiar with the concepts of emergency contraception, 141(38.5%) said that they were very familiar with the concepts of emergency contraception and only six(1.6%) study participants said that they were not at all familiar. The main sources of information described by the participants were short term training 172 (47%), academic training 141(38.5%), reading books, internet and news papers 70(19.1%) and from others like; media, other health professionals and health facilities 44(12%).

Form a total of 349 who gave answers for the question of the duration to take emergency contraception 299 (85.7%) answered correctly which is within 72hrs after unprotected intercourse, 47(13.5%) answered immediately after unprotected intercourse and 3(0.9%) reported that they don't know. Of the total respondents only 9(2.5%), 42(11.5%), 79(21.6%) had described the correct dose for Progesterone only pills, COC and Postinor2 pills as EC respectively and 60(16.4%) of the respondents described, they didn't know the dose of the above pills as EC at all.

The majority of respondents had mentioned nausea 297(81.1%), headache 219(59.8%) and vomiting 202(55.2%) as side effects of EC. The other side effects mentioned were irregular bleeding by 179(48.9%) and fatigue by 118(32.2%) respondents. About half 183 (51.5%) of the respondents had correctly answered elements found in ECPs, while 66(18.6%) reported that the element are same as OCPs, 31(8.7%) reported that different from elements found in OCPs and 75(21.1%) reported they don't know.

One hundred thirty six (37.2%) of the participants were knowledgeable and 230(62.8%) were not knowledgeable about emergency contraception with the mean knowledge score of 2.15 and SD of 1.05.

Table 3, Knowledge about Emergency Contraception among health care providers

Characteristics	Number	Percent
Familiarity with EC(n=366)		
Somewhat familiar	219	59.8
Very familiar	141	38.5
Not at all familiar	6	1.6
Source of information*		
Training	172	47.0
Academic	141	38.5
Reading(books, internet, leaflets)	70	19.1
Others(HPs, HFs, media)	44	12.0
Duration to take ECPs(n=349)#		
Within 72hrs after unprotected sex	299	85.7
Immediately after unprotected sex	47	13.5
I don't know	3	0.9
Dose*		
Dedicated brand(Postinor2)	79	21.6
COC	42	11.5
Progesterone only	9	2.5
I don't know	60	16.4
Side effect*		
Nausea	297	81.1
Headache	219	59.8
Vomiting	202	55.2
Irregular bleeding	179	48.9
Fatigue	118	32.2
Others(abdominal pain, dizziness)	17	4.6
Elements contained in ECPs (n=355)#		
Same as OCPs but stronger	183	51.5
Same as OCPs	66	18.6
Different form OCPs	31	8.7
I don't know	75	21.1

** has multiple response, # has non response*

5.4 Perception towards EC among health care providers

Table 4 shows that providers' perception for the selected attitude questions. Three hundred fifty one (95.9%) respondents believed that EC can prevent unwanted pregnancy, 206(56.3%) believed that the method is ideal when no contraception was used, 210(57.4%) believed that the dose is easy to manage and 119 (52.5%) believed that has no important side effect. On the other hand 325(88.8%) of the participants were mentioned EC is safe to administer, but most health care providers perceived that provision of EC encourage irresponsible behavior 256(69.9%) and 157(42.9%) believed that women may rely of EC and can avoid the regular form of contraception. From the total participants who answered to the seven selected attitude questions, 156(42.6%) have positive attitude towards EC, the rest 210(57.4%) of respondents have not. The responses ranges form 0 to 7.

Table 4, Providers' perception for the selected attitude question (n=366)

Characteristics	Number	Percent
Believed EC can prevents unintended pregnancy(yes)	351	95.9
Believed EC is ideal when no contraception was used(yes)	206	56.3
Believed ECPs is easy to manage(dose)(yes)	210	57.4
Believed ECPs no important side effect(yes)	119	32.5
Believed EC is not safe(no)	325	88.8
Women rely on ECPs as regular contraception(no)	121	33.1
Encourage irresponsible behavior(no)	110	30.1
Provider perceptions(attitude) to EC (n=366)		
Negative	210	57.4
Positive	156	42.6

Table 5 shows, almost all of the respondents 353(96.6%) agreed that unintended pregnancy and as a result induced abortion is a serious problem in our country. Two hundred four (55.7%) agreed EC are primarily as a form of contraception and 162(44.3%) disagreed. On the other hand 63(17.2%) agreed EC are primarily as a form of abortion and 303(82.8%) disagreed. One hundred sixty eight (45.9%) agreed that EC can effective in preventing unwanted pregnancy and 230(62.8%) agreed that can be managed with out men's participation. But 221(60.4%) believed EC increase the risk of HIV/ STIs transmission, 156 (42.6%) believed there may be problems due to repeated use of EC, and 121(33.1%) have concerns on side effects of emergency contraception.

The majority of health care providers were willing to provide this method for rape cases 333(91%), married or partnered women 188(51.4%), for adolescents 181(49.5%), for commercial sex workers 158(43.2%), for method failure 81(22.1%) and for all who is in need of EC 18(4.9%).

Table 5, Beliefs towards EC among health care providers

characteristics	Number	Percent
Unintended pregnancy as a result induced abortion is a problem in our country (n=365)#		
Yes	353	96.7
No	12	3.3
EC is primarily a form of contraception (n=366)		
Agree	204	55.7
Disagree	162	44.3
EC is primarily a form of abortion (n= 366)		
Disagree	303	82.8
Agree	63	17.2
Advantages of EC*		
Managed by the women without man's participation	230	62.8
Effective	168	45.9
Concerns*		
Not protect against STI	221	60.4
Problems due to repeated use of ECPs	156	42.6
Side effects	121	33.1
You offer EC for*		
Rape cases	333	91.0
Married or partnered women	188	51.4
Adolescents	181	49.5
Commercial sex workers	158	43.2
Clients who used a contraceptive Method(method failure)	81	22.1
Others	18	4.9

** has multiple response, # has non response*

Table 6 describes, providers Opinion on Clients knowledge, obstacles to access EC and suggested ideas to overcome these obstacles.From a total of 342 respondents about their opinion towards their clients, 187(54.7%) said that some of their clients know about the existence of EC, 144(42.1%) of them said that only few of their clients know and 10(2.9%) said all of their clients know the existence of EC.

Concerning obstacles to increase access to EC, 284(77.6%) of the respondents mentioned lack of awareness from the clients side and 199(54.4%) mentioned lack of awareness from the provider side. Other obstacles most frequently mentioned were unavailability of the drugs 250(68.3%), religious opposition 156(42.6%), and opposition due to health reasons 111(30.3%). To overcome these obstacles 301(82.2%) participants mentioned training, 285(77.9%) mentioned information to general population, 257(70.2%) mentioned incorporation of EC in FP counseling, 248(67.8%) mentioned increase accessibility of EC, 221(60.4%) mentioned provision of dedicated product, 212(57.9%) mentioned strong government support and 189(51.6%) mentioned clarifying biases.

Three hundred nine (84.4%) agreed that most effective institutions to reach women with the necessary information about EC is medical

institutions followed by media 248(67.8%), NGOs 195(53.3%), women organizations 170(46.4%) and printed materials 156(42.6%).

Table 6, Providers Opinion on Clients knowledge, obstacles to access EC and suggested ideas to overcome these obstacles

Characteristics	Number	Percent
Awareness of EC among clients(n=342)[#]		
Some of my client know	187	54.7
Few of my client know	144	42.1
All my client know	10	2.9
I don't know	1	0.3
Obstacles to increase access to this method*		
Lack of awareness on the part of clients	284	77.6
Unavailability	250	68.3
Lack of awareness on the part of HCWs	199	54.4
Religious opposition	156	42.6
Opposition for health reasons	111	30.3
Ideas to overcome these obstacles*		
Training courses	301	82.2
Information to general population	285	77.9
Incorporation to FP counseling	257	70.2
Easy access to the method	248	67.8
Dedicated product	221	60.4
Government support	212	57.9
Clarifying bias	189	51.6
Organizations or information sources can most effectively reach to women*		
Medical institutions	309	84.4
Media(radio, TV, newspapers)	248	67.8
NGOs	195	53.3
Women's organizations	170	46.4
Printed materials(posters, brochures, booklets)	156	42.6

**has multiple response, [#] has non response*

5.5 Practice of EC among health care providers

Table 7, indicates that, from a total of 363 respondents, 146(40.2%) include EC issue during family planning discussion only when the client asks, 101(27.8%) include the issue sometimes and 36(9.9%) of them include EC issues always. Two hundred thirty eight (65%) had ever prescribed EC previously, out of these ever prescribed EC, 150(63.3%) prescribed 1-10 times in the last year, 31(12.9%) prescribed more than 30 times, 23(9.7%) prescribed 0 times, 22(9.2%) prescribed 11-20 times, 11(4.6%) prescribed 21-30 times. The most frequently prescribed EC method was Postinor2 157(42.9%) followed by COC 136(37.2%), Progesterone only pills 77(21%) and IUCD 21(5.7%).

From a total of 362 respondents 224(61.9%) reported that they don't know whether there is or no emergency contraception guideline in our country and 42(11.6%) reported that there is no national guideline for EC, but 96(26.5%) of the respondents claim the presence of the guideline. Of 119 respondents who answered to the question of their reference to prescribe EC, 68(57.1%) said that journals, books and internet information which was written on EC and by asking other health professionals. The other references mentioned were training

document by 21(17.6%) of the respondents and leaflet which comes with the drugs by 30(25.2%) of the respondents.

Table 7, Practice of EC among health care providers

Characteristics	Number	Percent
During FP discussion do you include EC(n=363)[#]		
When the client asks	146	40.2
Sometimes	101	27.8
Most of the time	58	16.0
Always	36	9.9
Never	22	6.1
Practice of prescribing EC(n=366)		
Yes	238	65.0
No	128	35.0
Types of EC ever prescribed*		
Dedicated product of EC(Postinor2)	157	42.9
Combined oral contraceptive	136	37.2
Progesterone only pills	77	21.0
IUCD	21	5.7
Frequency of prescribing EC in the last year(n=237)[#]		
1-10times	151	63.3
>30times	31	12.9
0times	23	9.7
11-20times	22	9.2
21-30times	11	4.6
Presence of guideline for prescribing EC in our country (n=362)[#]		
I Don't know	224	61.9
Yes	96	26.5
No	42	11.6
If no guideline what document you use (n=119)[#]		
Other books(journals), internet, HP	68	57.1
Leaflet	30	25.2
Training document	21	17.6

**has multiple response, [#] has non response*

5.6 Factors associated with knowledge, perception and practice of health care providers towards EC

Crude and adjusted odds ratio were carried out to determine the association between socio-demographic and other factors with knowledge and perception of EC among study participants. As shown in Table 8, health care providers who work in pharmacies and drugstores were four times knowledgeable than health workers in government health facilities AOR=4.5(95% CI=1.7-11.5).

Positive attitude or good perceptions towards EC was more among male health care providers than female health care providers, AOR=1.7(95%CI=1.1-2.7). But attitude has no significant association with the other socio demographic factors.

Pharmacies and drug store workers less prescribed EC than health workers works in the other health facilities, COR=0.3(95% CI=0.1-0.5) but the association disappeared when it was adjusted with the other factors. Pharmacists and male health care providers were less prescribed EC, COR=0.4(95% CI=0.2-0.9) and COR=0.5(95% CI=0.3-0.8) respectively. Participants with the age of 45years and above were less prescribed EC than the other age groups, COR=0.2(95% CI=0.1-

0.4), the same association holds when it was adjusted AOR=0.1(95% CI=0.0-0.3). Muslim religion followers were less prescribed EC than the other religion followers COR=0.4(95% CI=0.2-0.8) and AOR=0.4(95% CI=0.2-0.8). The presence of dedicated product of EC in the health facilities has no association with the knowledge and perception towards EC, but it has association with health care providers practice, health care providers who has EC service in their health facility were three times more prescribed EC than health care providers who hasn't EC service in their health facility.

Table 8, Factors association with knowledge and attitude of health care providers towards EC

Characteristics	Knowledge		Attitude		Practice	
	Crude OR 95%CI	Adjusted OR 95%CI	Crude OR 95%CI	Adjusted OR 95%CI	Crude OR 95%CI	Adjusted OR 95%CI
Type of health facility						
Government	1	1	1	1	1	1
Private	0.6(0.4-1.1)	0.9(0.4-1.7)	0.7(0.4-1.2)	0.7(0.4-1.3)	0.6(0.3-1.0)	1.0(0.5-2.0)
Pharmacy/Drug store	1.3(0.7-2.4)	**4.5(1.7-11.5)***	1.0(0.5-1.7)	1.1(0.5-2.5)	**0.3(0.1-0.5)***	1.0(0.4-2.5)
NGO	1.1(0.6-2.3)	1.1(0.5-2.4)	1.1(0.5-2.1)	1.0(0.5-2.1)	0.9(0.4-1.9)	1.2(0.5-2.8)
Profession						
Physicians and HOs	1	1	1	1	1	1
Nurses and HAs.	1.5(0.7-3.1)	2.5(1.0-6.6)	1.0(0.5-2.0)	1.6(0.6-3.9)	1.1(0.6-2.3)	0.8(0.3-2.3)
Pharmacists	1.2(0.5-2.7)	2.1(0.8-5.7)	0.9(0.4-2.1)	1.2(0.5-3.0)	**0.4(0.2-0.9)***	0.4(0.1-1.3)
Sex						
Female	1	1	1	1	1	1
Male	1.2(0.8-1.9)	1.7(1.0-2.8)	1.4(0.9-2.1)	**1.7(1.1-2.7)***	**0.5(0.3-0.8)***	0.6(0.4-1.1)
Age						
18-24	1	1	1	1	1	1
25-34	1.2(0.7-2.1)	1.3(0.8-2.3)	1.0(0.6-1.7)	1.1(0.6-1.9)	0.9(0.5-1.6)	0.9(0.5-1.6)
35-44	1.0(0.6-1.9)	0.9(0.5-1.8)	0.8(0.4-1.4)	0.7(0.3-1.2)	1.5(0.8-2.8)	1.1(0.5-2.3)
45 and above	1.0(0.4-2.5)	1.3(0.5-3.3)	1.1(0.5-2.6)	1.1(0.4-2.7)	**0.2(0.1-0.4)***	**0.1(0.0-0.3)***
Religion						
Orthodox	1	1	1	1	1	1
Muslim	0.8(0.4-1.7)	0.8(0.4-1.8)	0.5(0.2-1.1)	0.5(0.2-1.0)	**0.4(0.2-0.8)***	**0.4(0.2-0.8)***
Protestant	1.2(0.7-2.1)	1.2(0.7-2.2)	1.2(0.7-2.1)	1.4(0.8-2.4)	1.3(0.7-2.4)	1.1(0.6-2.2)
Catholic and others	0.8(0.2-2.9)	0.9(0.2-3.2)	1.3(0.4-4.2)	1.6(0.5-5.2)	0.5(0.2-1.6)	0.5(0.1-1.7)
Education level						
Certificate	1	1	1	1	1	1
Diploma	1.1(0.3-3.3)	0.8(0.2-2.6)	0.7(0.2-2.1)	0.5(0.2-1.7)	2.1(0.7-6.1)	1.6(0.5-5.2)
Degree and above	1.1(0.3-3.5)	1.2(0.3-4.5)	0.8(0.3-2.5)	0.8(0.2-2.6)	1.5(0.5-4.7)	2.1(0.5-7.9)
Availability of ECPs						
No	1	1	1	1	1	1
Yes	1.6(1.0-2.4)	1.6(0.9-2.8)	1.1(0.7-1.7)	1.1(0.6-1.8)	**2.9(1.9-4.6)***	**2.6(1.4-5.0)***

6. DISCUSSION

This study tried to describe health providers knowledge, attitude and practice towards EC. Generally all health care providers in the selected health facilities were familiar with the EC methods (98.3%), this result is similar to a study done in USA (96%), Jamaica (100%) and Barbados (99.5%).[26,28] The major source of information described by the participants in the study were short term training and academic training. Majority of health care providers correctly indicated the time limit to take EC (85.7%) which is higher than a study done in USA (63%) on family medicine providers and a study done in Nigeria health care provides which is (49.8%).[25,28] This variation may be due to the difference in the time of the study under taken.

Pharmacy and drug store workers were more knowledgeable than any other facility workers in this study, this variation may be due to the recent training curriculum started by Dkt international Ethiopia, which is training of pharmacists on EC is already begin. Specific knowledge for EC doses was very low, only 96(26.2%) of the participants were able to mention at least two of the correct dose of the drugs which are used as ECPs in our country. From the total respondents 81.1% were

able to mention the most common side effect of ECPs which is nausea. This finding is higher than a study done in USA which is 72% of the study participants ware able to answer the most common side effect of ECPs.[31] Although almost all participants said that they are familiar with this method, the overall knowledge of the providers was low, only 136(37.2%) were able to answer above two out of the 4 knowledge questions. This shows majority of health care providers lack accurate knowledge of EC.

Almost all participants believed that EC can prevent unintended pregnancy (95.9%). Seventeen percent of the participants wrongly believed that EC is primary as a form of abortion drug. This finding is similar to a study done in USA (20%).[28] Most of the health care providers perceived that repeated use of this method can cause health problem (42.6%), encourage irresponsible behavior (69.9%), this result is higher than a study done in Jamaica (59.1%) and Barbados (55.1%) believed that provision of EC may encourage irresponsible behavior.[24] But studies shows that provision of EC doesn't increase the risk taking behavior or reluctance to use regular contraceptive methods.[32,33,34,35,36]

Majority of health workers in the study believed that EC increase the risk of HIV/STI transmission (60.4%). This result is inline with a study done in Jamaica (59.3%) but higher in a study done in Barbados (45.9%).[25] Twenty one percent of the health care providers in the study believed that safety of the fetus cannot be guaranteed if the method doesn't prevent the pregnancy. These assumptions may be obstacles to increase access of this method to the users, because even if the drugs are available the providers may not be cooperative to prescribe these drugs. Generally less than half of the participants were have positive attitude to wards EC. This result indicates a need of interventions to improve the situation. Males were two times more supportive of EC than females, but their prescribing practice was lower than their female counterparts.

From the study participants 91% were willing to prescribe EC to the rape victims, this result is the same with a study done in Jamaica (90.2%) and higher in a study done in USA on pharmacists (80%).[24,29] But only 49.5% were willing to prescribe EC to females age less than to 18 years, which may be a barrier to its accessibility since adolescents may have sporadic sexual activities and mostly they are

not users of the regular contraception methods. The finding is lower than a study done in Jamaica (65.5%) and higher than a study done in Barbados (29.7%).

On the practice side large number of participants (40.2%) discuss about EC during the FP discussion if only the client asks, this decreases the client access to the method, because if the client did not aware of its existence there will be no way to access it. From the total respondents 65% were ever prescribed EC for their client but when we see the frequency of prescribing during last year was low. Most health workers provided EC only 1-10 times in the last year. This result shows the practice of prescribing EC is very low. The most frequent type of prescribed EC was Postinor2, which was prescribed by 42.9% of the participants, this shows there is awareness of the existence of dedicated product in Ethiopia by health care providers. Even if pharmacy/drug store workers has good knowledge about EC, their prescribing practice was lower than other facility workers. The significant association with crude and adjusted odds ratio showed that the presence of EC service in the health facilities increase its prescribing practice.

7. STRENGTH AND LIMITATION OF THE STUDY

7.1 Strengths

It is one of the very few researches conducted in our country on emergency contraception on the health care providers perspective, so it can use as a baseline for other researches. It includes government, private and NGO facilities in Addis Ababa.

7.2 Limitations

It used only the quantitative technique so some issues which need more elaboration may not be well described.

Generalization to the whole health care givers may be difficult since it didn't include the hospitals and health posts.

8. CONCLUSIONS

- Awareness about EC among the study participants was high, however the specific knowledge and perception towards EC is poor.

- Health care providers working in pharmacies/ drug stores were more knowledgeable than health workers working other health facilities.

- Many study participants perceived that EC encourage irresponsible behavior, there may be misuse of this method and may have negative effect on the regular contraception methods.

- Even if male health care providers showed good perception towards EC their practice was still lower than female HCPs.

- Availability of EC increases its prescribing practice among health care providers.

- There is low availability of dedicated product of emergency contraception in the selected health facilities.

9. RECOMMENDATIONS

- Health care providers should have regular in-service training on EC. This will enable them to keep up to date with the current evidence-based recommendations in the field of emergency contraceptive technologies.

- There is still limited availability of the dedicated product of ECPs in public and private health facilities, thus the ministry of health and other responsible bodies should take an action to increase its availability through the health institutions.

- The availability of EC must be advocated to the General population to increase their awareness and to the existence of this method.

- The health care providers should be encouraged to include EC issues during the family planning counseling sections.

10. REFERENCES

1. Elisabeth Ahman, Iqbal Shah. Unsafe abortion; Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2000; Fourth edition; World Health Organization Geneva, 2004: pp.6 – 26

2. Department of Reproductive Health and Research; World health Organization and Advancing sexual and reproductive health worldwide through research, policy analysis and public education; Guttmacher institute. Facts on Induced Abortion Worldwide in Brief, October 2007, www.guttmacher.org

3. Dick Churchill, Jane Allen, Mike Pringle, Julia Hippisley Cox, Dave Ebdon, Marion Macpherson Sue Bradley. Consultation patterns and provision of contraception in general practice before teenage pregnancy: case control study BMJ VOLUME 321, AUGUST 2000: pp. 486 – 489

4. Committee on Adolescence. Emergency Contraception; AMERICAN ACADEMY OF PEDIATRICS POLICY STATEMENT: *Pediatrics* 2005; 116; 1026-1035; www.pediatrics.org

5. Raine Tina, Harper Cynthia, Rocca Corinne, Fischer Richard, Padian Nancy, Klausner Jeffrey, Darney Philip. Direct Access to Emergency Contraception Through Pharmacies and Effect on Unintended Pregnancy and STIs; A Randomized Controlled Trial; JAMA, January 5, 2005—Vol 293, No. 1, www.jama.com: pp. 54 – 62

6. Central Statistical Agency [Ethiopia] and ORC Macro. 2006. *Ethiopia Demographic and Health Survey 2005.* Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ORC Macro.

7. Worku Solomon and Mesganaw Fantahun. Unintended pregnancy and induced abortion in a town with Accessible family planning services: The case of Harar in Eastern Ethiopia; Ethiop.J.Health Dev.2006;20(2)

8. Desalegn Brihanu. Assesment of KAP on emergency contraception among women seeking post abortion care in Addis Ababa: June 28,2006

9. Mengistu Seife. Assessment of level of awareness and utilization of emergency contraception, among college female students in Oromiya Regional state, Arsi Zone, Asella town South-East Ethiopia, June, 2007

10. Wegene Tamire, Fikre Enquuselassie. KAP on ECs among female university students in Addis Ababa, Ethiopia. Ethiop.J.Health Dev.2007;21;2: pp,111-116

11. Ethiopian Society of Obstetricians and Gynecologists, in collaboration with the MOH, Population Council and ECafrique; Emergency Contraception; A training curriculum for mid-level health workers in Ethiopia : October 2004

12. American Society for Emergency Contraception and the International Consortium for Emergency Contraception; The Emergency Contraception Newsletter, Summer 2008, Vol. 13, No. 1

13. Reproductive Health and HIV Research Unit of the University of Witwatersrand, Emergency Contraception Strategy Meeting in South Africa: June 2, 2005: pp, 1-19

14. Tekle-Ab Mekbib, Yirgu G/Hiwot, Misganaw Fantahun' Survey of Unsafe Abortion in Selected Health Facilities in Ethiopia; Ethiop. J. Reproductive Health May 2007, 1(1), 28-43)

15. David A. Grime, MD, and Elizabeth G. Raymond, MD, MPH; Review. Emergency Contraception: 6 August 2002 Annals of Internal Medicine, Volume 137, Number 3,www.annals.org; pp.181-187

16. Anna J. Rice. Emergency Contraception: How it works and the ethical issues, The Journal of Undergraduate Nursing Writing, Volume 1, Number 1, October 2007,pp. 64-68

17. Robert A. Hatcher. Felicia Stewart, Willard Cates Jr, Gary K. Stewart, Felicia Guest, Deborah Kawal. Contraceptive Technology, 7th edition, 1998: pp. 277-293

18. James Trussell, PhD, Elizabeth G. Raymond, MD, MPH. Emergency Contraception: A Last Chance to Prevent Unintended Pregnancy Princeton University, October 2008, pp.2-4

19. Sheila Dunn, MD,Edith Guilbert, MD, MSc. Emergency Contraception Clinical Practice Guidelines, Society of Obstetricians and Gynecologists of Canada; No. 131,August 2003

20. Faliha Ferki and Usha Malhatra. Medical and service Delvery Giudelines for sexual and Reproductive health services, 3rd edition, 2004: pp. 254-268

21. James Trussell, Elizabeth G.Raymond; Emergency Contraception: A cost-Effective Approach to Preventing Unintended Pregnancy: Advances in Fertility Studies and Reproductive Medicine, April 2007: pp. 252-266

22. Melanie A. Gold, Aviva Schein, Susan M. Coupey. Emergency Contraception: A National Survey of Adolescent Health Experts: Family Planning Perspectives, Vol. 29, No. 1. (Jan. - Feb., 1997), pp. 15-19

23. Kelly Blanchard, Teresa Harrison and Mosala Sello. Pharmacists' Knowledge and Perceptions of Emergency Contraceptive Pills in Soweto and the Johannesburg Central Business District, South Africa, International Family Planning Perspectives, 2005, 31(4):172–178

24. Gary SUTKIN, Brenda GRANT, Tyrone F.BORDERS; Opinions of West Texas pharmacists about emergency contraception, Pharmacy Practice (Granada), Volume 4, Number 4, October 2006: pp. 151-155

25. Olufunke Margaret Ebuehi, Osaretin A. T. Ebuehi and Victor Inem. Health Care Providers' Knowledge of, Attitudes towards and Provision of Emergency Contraceptives In Lagos, Nigeria: International Family Planning Perspectives: June 2006, Volume 32, Number 2: pp. 89-93

26. Eileen A. Yam, Georgiana Gordon-Strachan, Garth McIntyre, Horace Fletcher, Sandra G. Garcia, Davida Becker and Enrique Ezcurra. Jamaican and Barbadian Health Care Providers Knowledge, Attitudes and Practices Regarding Emergency Contraceptive Pills: International Family Planning Perspectives, December 2007, Volume 33, Number 4, December 2007

27. Planning and Programming Department, FMOH. Health and Health Related Indicators, Ethiopia (1998E.C)

28. Jennifer L. Wallace, MD; Justine Wu, MD; Jamie Weinstein, MD; Daniel W. Gorenflo, PhD; Michael D. Fetters, MD, MPH, MA. Emergency Contraception: Knowledge and Attitudes of Family Medicine Providers: Clinical Research and Methods, June 2004, Vol. 36, No. 6: pp. 417-421 Clinical Research and Methods

29. Joseph Winchester Brown and Matthew L. Boulton. Provider Attitudes Toward Dispensing Emergency Contraception in Michiganís Title X Programs: January/February 1999, Volume 31, Number 1

30. Fazili Farooq, Kadri SM, B A Gash; Emergency Contraception: Knowledge of Doctors in Kashmir Valley. Journal of Community Medicine, January 2007, Volume 3, pp. 1-7

31. J.S. Shrack, E.K. Stump, L.S. Hale. Kansas Pharmacists Knowledge, Attitude and Beliefs Regarding Over The Counter Emergency Contraception: Department of Physician Assistant, College of Heath Professions, proceeding of the 4th Annual GRAS symposium Wichita state University,2008.

32. Moreau C, Bajos N, Trussell J. The impact of pharmacy access to emergency contraceptive pills in France. Contraception 2006; 73:602-8.

33. Glasier A, Baird D. The effects of self-administering emergency contraception. N Engl J Med 1998; 339:1-4.

34. Raine T, Harper C, Leon K, Darney P. Emergency contraception: advance provision in a young, high-risk clinic population. Obstet Gynecol 2000; 96:1-7.

35. Jackson RA, Schwarz EB, Freedman L, Darney P. Advance supply of emergency contraception: effect on use and usual contraception¯a randomized trial. Obstet Gynecol 2003; 102:8-16.

36. Gold MA, Wolford JE, Smith KA, Parker AM. The effects of advance provision of emergency contraception on adolescent women's sexual and contraceptive behaviors. J Pediatr Adolesc Gynecol 2004; 17:87-96.

11. ANNEX

11.1 Questionnaire

Addis Ababa University, School of Public Health

Assessment of knowledge and perception of emergency contraception among health care providers

Consent Form

Ser. No_____
Name of the health institution _____
My name is _____. I am working for _____. I am giving this questionnaire to you to fill it by yourself. Your answers are completely confidential; your name will not be written on this form or be kept in any other records. You do not have to answer any questions that you do not want to answer and you may end filling the questionnaire at any time you want. However, your honest answers to these questions will help us better understand about knowledge and perception of emergency contraception among health care providers. The information you provide will be used to design training curricula and materials about ECPs and other contraceptive methods. We would greatly appreciate your helping. Would you willing to participate?

If Yes, _____ (1) Continue
If No, _____ (2) Stop
Signature of Respondent_____

1. Completed
2. Refused
3. Partially completed

Data collector Name, _____Signature_____
Date of data collection _____
Checked by supervisor: Name _____ Signature ____ Date _____

Thank you for your help.

_____

1. Profession (Please check below)

Specialist.....
Doctor (GP) .....
Mid wife.....
Health assistant.....
Pharmacy Tech.....
Druggist.....
Pharmacist.....
Sin. Nurse .....
Jun. Nurse ... .
Other _____

2. Sex (Please check below)

Female .....
Male .....

3. Age (in years).....

4. Religion (Please check below)

Orthodox.....
Muslim.....
Protestant.....
Catholic.....
Other.....

5. Education level (Please check below)

Secondary .....
Certificate.....
Diploma.....
Degree.....

6. Do you agree that unintended pregnancies and, as a result, induced abortions are serious problems in our country? (Please check below)

Yes .....
No .....

7. How long does a typical appointment with your client last? (Please check below)

Less than 15 min. .....
15-20 min. .....
20-30 min. .....
More than 30 min. .....

8. Does a typical appointment include a discussion of family planning? (*Please check one)*

Always.....
Most of the time .....
Sometimes .....
When the client requests information .....
Never .....

9. What are the contraceptive methods available at your health facility? (*Please check all that apply)*

Hormonal methods

Oral contraceptive pills .....
Emergency contraceptive pills .....
Contraceptive injection.....
Contraceptive implant .....

Barrier methods

Male condom.....
Female condom .....
Diaphragm.....

Other methods

Safe period (rhythm) .....
Withdrawal .....
Sterilization.....
IUCD.....

10. Do you agree or disagree with the following statement, "ECPs are primarily a form of contraception"? (*Please check one)*

Agree .....
Disagree..... .....

11. Do you agree or disagree with the following statement, "ECPs are primarily a form of abortion"? (*Please check one)*

Agree .....
Disagree .....

12. How familiar are you with the use of ECPs? (*Please check one)*

Very familiar .....
Somewhat familiar .....
Not at all familiar .....

13. Where is your source information? (Please check below)

Academic .....
Training..... .....
Other..... .....

14. The time limit at which ECPs should be taken (Please check below)

72hrs after unprotected sex.....
Immediately after unprotected sex.....
At any time .....
I don't know.....

15. How much (the dose) must be given as an emergency contraceptive?(*please write the dose)*

For progesterone only pills_____
For oral combined _____
For any Dedicated brand EC (write the name) _____
I don't know .....

16. Side effect of EC(*Please check all that apply)*

Nausea .....
Headache .....
Vomiting .....
Irregular bleeding .....
Fatigue .....
Dizziness .....
Other (please specify)_____

17. Elements contained in emergency contraception pills *(Please check all that apply)*

The same as normal oral contraceptive pill but stronger .....
The same as normal oral contraceptive pill .....
Completely different drug from normal contraceptive .....
I don't know.....

18. When you or someone at your health facility when discuss family planning, do you include a discussion of emergency contraception? (*Please check one)*

Always.....
Most of the time .....
Sometimes .....
When the client requests information .....
Never .....

19. Have you ever prescribed ECPs? (*Please check one)*

Yes .....
No..... .....
If *yes*, please check *one* of the following:

20. In the last year, how many times have you prescribed ECPs? (*Please check one)*

0 times .....
1-10 times.....
11-20 times.....
21-30 times .....
More than 30 times.....

21. Which type of ECs ever you prescribed? *(Please check all that apply)*

Progesterone only pills .....
Combined oral contraceptive .....
Dedicated product of ECs (postinor2) .....
IUCD .....

22. What advantages do you believe this method has? *(Please check all that apply)*

None .....
Prevents unintended pregnancy.....
Ideal when no contraception was used.....
Accessible.....
Easy to manage (dose).....
Not necessary to use a routine contraceptive .....
Women can self-prescribe .....
Low cost .....
Effective .....
Few contraindications .....
No important side effects .....
Can be managed by the woman without the man's participation .....
Other (*please describe*)_____

23. What concerns do you have about ECPs? (*Please check all that apply)*

No concerns.....
Women will rely on ECPs as a regular form of contraception.....
Side effects—nausea and vomiting .....
Moral or religious objection.....
Ineffective in preventing pregnancy .....
Safety of fetus if ECPs are not effective in preventing pregnancy .....
Causes abortion .....
Not safe .....
Does not protect against sexually transmitted infections .....
Insufficient time for adequate patient counseling/education.....
Encourages irresponsible behavior.....
Repeated use of EC may cause health problems.....
Other (*please describe*)_____

24. What would you like to learn more about emergency contraception? (*Please check all that apply)*

Types of emergency contraception .....
Mechanism of action of emergency contraception.....
Effectiveness.....
IUD as emergency contraception .....

Safety of EC…… .....
Possible side effects .....
Other (*please describe*) _____

25. Where do you believe ECPs should be offered? (*Please check all that apply)*

Government hospitals.....
Private hospitals .....
Government health centers.....
Private clinics .....
Drug stores.....
Pharmacies .....
Supermarkets .....
Schools .....
Other (*please describe*)_____

26. Who do you think should offer ECPs? (*Please check all that apply)*

Obstetricians/gynecologists.....
Doctors (GP).....
Nurses.....
Pharmacy tech. .....
Druggists…..
Midwives .....
Pharmacists.....
Jun. Nurses.....
Other (*please describe*)_____

27. Is there any guideline governing EC use in our country? *(Please check all that apply)*

Yes…..
No…….....
I don't know……..

28. If you answered, *"No/* I don't know*"* to the previous question, what documentation you use to provide EC?

_____
_____ .

29. Please check the statement that best describes your clients: (*Please check one)*

"All of my clients know that there
is a contraceptive method that can
prevent pregnancy after unprotected sex." .....

"Some of my clients know that there
is a contraceptive method that can
prevent pregnancy after unprotected sex." .....

"Few of my clients know that there
is a contraceptive method that can
prevent pregnancy after unprotected sex." .....

30. To which clients do you offer the method? *Please (check all that apply)*

Adolescents.....
Married or partnered women.....
Rape cases .....
Clients who used a contraceptive method .....
Commercial sex workers .....
Other (*please describe*)_____

31. Do you have any materials for clients that discuss emergency contraception? (*Please check one)*

Yes .....
No.....

32. Are there any written guidelines that you use for emergency contraception? (*Please check one)*

Yes .....
No.....

33. What materials would make it easier for you to provide EC information to women? (*Please check all that apply)*

Written materials and resources designed
for medical providers .....
Written materials and resources for women.....
Data/studies on emergency contraception
effectiveness and safety.....
Comprehensive emergency contraception training .....

Other *(please describe)* _____

34. What are the obstacles to increased access to this method in this country in general? (*Please check all that apply)*

None .....
Religious opposition.....
Health center politics.....
Opposition for health reasons.....
Opposition from civil groups .....
Opposition from medical personnel .....
Lack of awareness on the part of clients .....
Lack of awareness on the part of providers' side.....
Cost .....
Availability .....
Legal restrictions .....
Other (*please describe*)_____

35. Do you have any ideas about how to overcome these obstacles? (*Please check all that apply)*

Training courses .....
Clarifying bias..... .....
Government supports.....
Information to the general population.....
Government norms.....
Incorporation into counseling on family
Planning methods .....
Offer it at a low cost .....
Provision in appropriate doses .....
Dedicated product .....
Easy access to the method.....
Other (*please describe*)_____

36. What barriers exist for your clients to access emergency contraception? (*Please check all that apply)*

Lack of awareness about ECPs .....
Fear of side effects .....
Fear of effects on fetus if already pregnant.....
Cultural barriers.....
Cost .....
Health providers' reluctance to refer clients for ECPs.....
Health institution working hours .....

Transportation .....
Other (*please describe*) _____

37. In your community, is emergency contraception information easily available for women? (*Please check one)*

Yes .....
No .....

38. In your community, what organizations or information sources can most effectively reach women with information on health and lifestyle issues? (*Please check all that apply)*

Medical institutions .....
Media (radio, TV, newspapers) .....
Nongovernmental Organizations.....
Women's organizations.....
Printed materials (posters, brochures, booklets) .....
Other (*please describe*) _____

_____

This material was adapted from provider surveys developed by PATH with little modification, Population Council of Mexico, and the Family Planning Association of Sri Lanka

¾S [Í T cvcu=Á ØÁo - 9

¾: Ç=e : uv ¿ ›y ` c=+ ¾l w[ } cw Ö? ' U l ` ' u? ' : ¾Ö? vK S‹Á - 9 eK É Ñ} •Ó ` ´ S xLxÁ ²È - 9 ÁL ¨‹ • ¨‹k ' : S K"x ' K T ¨p ¾T›Å[Ó Ø '

¾S ÖÃ l } . l .....

¾Ö? } s S‹ eU.....

eT..... ÃvLM ¾U c ^ ¨‹ u: Ç=e : uv ¿ ›y ` c=+ } T ] - 9 ¾U [ n êG‹ó ¨‹ K T ²ÒË ' uT›cucu‹' S [ Í& uS [ Í cwdu= ' ¨‹:: Ãl ¾ØÁo ¨ [k ' K ` f ¾U cÖ ¨‹ u^e - • Ç=V K‹' ¨‹:: •²=l ¨ [k ' LÃ ¾T›Ác õ

1. ¾VÁ - : Ã ’ ()Tj 1 0 0 1 186.24 725.97 Tm (•)Tj 1 0 0 1 193.68 725.97 Tm (v)Tj
   1.1. eühK=e ’ (Specialist)…….
   1.2. TÇ="M Ê¡}` (General practitioner)…….
   1.3. : ªLÏ `e

8. xÅ u - Ò` uq¿u' Ñ›²? eKu?}cw U× ¦ ²È - 9 '¨ÁÁL9 G‹;()T j 1 0 0 1 473.28 7

9. uÖ? É`Ï' - ¨‹eØ ÁK¨‹ ¾u?}cw U× ¦ : Ã ' ÁUM¡~
J`V M ²È - 9

13. ¾É Ñ} •`Ó´ Sq×Ö]Á • ¡wM KÅ u - x²=I uò' :²¨‹ Á¨‹nK‹;
()Tj /f11 11.684 Tf 1 0 0 1 106.32 701.01 Tm (•)Tj /f11 11.684 Tf 1 0 0 1 113.76 7
13.1. : -.....
13.2. : Ã.....
SMe- : - xJ •v¡ -' ØÁo 17' ÃSMc‹& SMe- :Ã xJ
v¡ -' ¨Å ØÁo18 ÃH›Æ::

14. vKð¨‹ :S' ¨‹eØ U ÁIM Ñ›²?¾É Ñ} •`Ó´ Sq×Ö]Á • ¡wM
KÅ u - :²ªM; ()Tj /f11 11.684 Tf 1 0 0 1 203.28 600.69 Tm (•)Tj /f11 11.684 Tf
14.1. U U Ñ›²?.....
14.2. 1 -10 Ñ›²?.....
14.3. 11 -20 Ñ›²?.....
14.4. 21- 30 Ñ›²?.....
14.5. x30 Ñ›²? uLÃ.....

15. eK É Ñ} •`Ó´ Sq×Ö]Á ²È-9 U ÁIM Á¨‹nK‹; ()Tj /f11 11.684 Tf

15.1. u×U :¨‹nKG‹.....
15.2. ' i ' i :¨‹nKG‹.....
15.3. U U :L¨‹pU.....
SMe- 'u×U' ¨ÃU "' i" :¨‹nK¨‹ xJ •v¡ -¨Å ØÁo 19 ÃH›Æ::
SMe- "U U :L¨‹pU" xJ •v¡ -¨Å ØÁo 27 ÃH›Æ::

16. eK É Ñ} •`Ó´ Sq×Ö]Á • ¡wM KT¨p U à - U É¨‹;()Tj 1 0 0 1 473.04 3

16.1. '/u?'.....
16.2. eMÖ .....
16.3. K?L ()Tj /f11 11.684 T.f....1..0..0..1..180.72..333.57 Tm (•)Tj 1 0 0 1 188.4 333.5

17. ¾' ¨‹ ¯Ã ' ¾É Ñ} •`Ó´ Sq×Ö]Á SÇ›' :²¨‹
Á¨‹nK‹;()Tj 1 0 0 1 151.92 283.65 Tm (•)Tj 1 0 0 1 159.36 283.65 Tm (v)Tj 1 0 0
17.1. ýaËc'a w0 • ¡wM

18.4. : L ¨‹pU .....

19. ¾É Ñ} •`Ó´ Sq×Ö]Á U ÁIM S ¨cÉ : Ku’; ()Tj 1 0 0 1 466.08 68

19.1. ý aËc’a w0 • ¡wM

22.11. S É N ›~ u S ¨‹c É ¾T›S Ö‹ 9 Óa9 ’ i ¨‹
(no important side effect).....
22.12. ¾¨ Æ ’ ww` vÃ" `U&c?& w0 u^e ª S ¨c ’ 9 LK9 .....
22.13. K?L ()T j /f11 11.684 T f 1 0 0 1 180.72 687.57 T m (v) T j 1 0 0 1 187.68 687

23. eK É Ñ} •`Ó´ S q × Ö] Á c=Áeu‹ ¾T›Ádex ’ Ña9 : ()T j /f11 11.684 T f

23.1. U U ¾K ÜU .....
23.2. c? 9 • ÅSÅu ¨‹ ¾¨K=É S q × Ö] Á G‹M Ñ›²? K=Ök S‹u ’
Ã9 LK‹ .....
23.3. u S ÉG ›~ U ¡ Á ’ ¾T›S Ö‹ ’ 9 Óa9

26. u¾’"! Ö? vKVÁ-9 S•²´ :Ku’ wK¨‹ ÁevK‹;()Tj 1 0 0 1 408.24 725.97 Tm (

26.1. uTIì ê e eühK=e’.....
26.2. uGx=U .....
26.3. u `e .....
26.4. uó`Tc= ¡ iÁ .....
26.5. u:ªLÏ `e .....
26.6. uSKe} `e .....
26.7. uó`Tc=e’ .....
26.8. K?L()Tj 1 0 0 1 174.96 613.41 Tm (•)Tj 1 0 0 1 182.4 613.41 Tm (v)Tj 1

27. u:G‹‹¨p’ KÉ Ñ} •`Ó´ Sq×Ö]Á SÇ›’ SS]Á }wKA ¾}²ÒË
îG‹õ uGÑ^9 ¨‹eØ :K;
27.1. :K.....
27.2. ¾KU.....
27.3. :L¨‹pU.....

28. xLÃ LK¨‹ ØÁo SMe- ()Tj 1 0 0 1 272.4 418.89 Tm (¾)Tj 11 11.684 Tf 1 0
Sq×Ö]Á KT²´ U :Ã ’ S[Í-9 ÃÖkTK‹; ()Tj 1 0 0 1 397.2 474.69 Tm (•)T

---

29. v¡-’ Å u - uÅ w ÃÑMì ªM wK¨‹ ¾T›Áeu‹’ UM¡’ ¾É`Ñ‹
29.1. G‹K‹U Å u"` Ø no xÔÅK¨‹ Ów[ eÒ Ó ‹’ u%¡L •`Ó´
K=xLxM ¾T›9 M SÉG›’ • ÇK Á¨‹nK‹ .....
29.2. :Ç É Å u"` Ø no xÔÅK¨‹ Ów[ eÒ Ó ‹’ u%¡L •`Ó´
K=xLxM ¾T›9 M SÉG›’ • ÇK Á¨‹nK‹.....
29.3. u×U Øm’ Å u"` Ø no xÔÅK¨‹ Ów[eÒ Ó ‹’ u%¡L
•`Ó´ K=xLxM ¾T›9 M SÉG›’ • ÇK Á¨‹nK‹ .....

30. K¾’"! Å u"9 - ¾É Ñ} •`Ó´ Sq×Ö]Á SÇ›’ Á³K‹; ()Tj 1 0 0 1 473.04 2

30.1. x18:S’ •ÉT¦u•9 LK‹c?9 .....
30.2. LÑu‹¨ÃU ¾¨ É ÕÅ LL¨‹c?9 .....
30.3. K}Åð

32. KÉ Ñ} •`Ó´ Sq×Ö]Á ²È-9 :ÖnkU SS]Á }wKA ¾}²ÒË
êG‹õ-9 :K-';()Tj 1 0 0 1 207.6 701.01 Tm (•)Tj /f11 11.684 Tf 1 0 0 1 215.04
32.1. :- .....
32.2. :Ã .....

33. eKÉ Ñ} •`Ó´ Sq×Ö]Á SM¡' KTe}LKõ ¾' ¨‹ :Ã '
SS]Á SÖkU ÃkM-•M;()Tj 1 0 0 1 274.08 625.89 Tm (•)Tj /f11 11.684 Tf 1

33.1. KvKS‹Á ¾}²ÒÌ îG‹ö9 .....
33.2. Kc? 9 ¾}²ÒÌ ¾Te}T]Á Sd]Á-9 .....
33.3. uÉ Ñ} •`Ó´ Sq×Ö]Á ²È-9 LÃ ¾}c

36. Å u" R ¾É Ñ} •`Ó´ Sq×Ö]Á SÉN›' • ÇÁÑ‹ • pó' K=J‹ Ã9 LK‹ ¾T›L¨‹ U¡ Á 9: ()Tj 1 0 0 1 280.8 713.25 Tm (•)Tj /f11 11.684 Tf 1

36.1. um •¨‹k' T×' .....
36.2. SÉN›~ uS¨‹cÉ K=SÖ‹ ¾T›9K‹' ¾Ö? 9Óa9 uSõ^' .....
36.3. SÉN›~ vÃc^ Ií‹LÃ K=xc' Ã9LM wK¨‹uT›ÑU~' 9Ó` U¡ Á' .....
36.4. uvIM U¡ Á' .....
36.5. ªÒ¨‹.....
36.6. ¾Ö? vKS‹Á-9 9M}Ü' .....
36.7. ¾Ö? }sT 9 ¾Y^ c¯ 9 .....
36.8. ¾'^ eþ`' 9Ó` .....

37. u: "vu=- c? 9 eKÉ Ñ} •`Ó´ Sq×Ö]Á SÉN›' S[Í ukLK‹ ÁÑ K‹;
37.1. : - .....
37.2. : Ã.....

38. u: "vu=- LK‹ c? 9 eKÖ? T : ¦¦` p`w Ø