

# Assessment and Patient Satisfaction following the Use of Intrauterine Contraceptive Devices

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*Objective:* The aim of the study was to determine the increase in use of the intrauterine contraceptive device (IUD/IUS) used by women from Southampton, U.K.; to assess views of patients regarding the contraceptive services offered; and assess patient satisfaction.

*Study Design:* The target group for this study were the patients attending the Contraceptive Sexual Health (CASH) clinic and the Primary Care Setting in Southampton. Information was obtained about the types of contraceptives used by the 1,524 women who formed part of the study group from where data was collected. A questionnaire was then sent to 50 women of this group, regarding their experience while receiving the intrauterine contraceptive device and the satisfaction derived. Each item was graded on a scale of 5 to 1, that is, 'extremely happy' to 'very dissatisfied' using the Likert Scale of patient satisfaction.

*Results:* Out of the 1,524 patients, 7.02% women preferred to use IUD/IUS while 30.19% used a combined pill, 9.84% used injection Depo-Provera, 6.30% used implants and 46.72% used other methods like condoms. 94.4% of the women were very satisfied with the overall services offered (grades 5 and 4 on Likert scale).

It was observed that there is a direct correlation between women's assessment of services and their experience of coil insertion. If the experience of the woman at coil insertion was very good, it correlated well with the level of satisfaction that she expressed about services offered and this was statistically significant.

*Conclusion:* Increase in usage of IUD/IUS was recorded at 7.02% for those women from Southampton U.K. who availed NHS facility, compared to the national average of 4%; and these patients were very satisfied with the services provided.

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## INTRODUCTION

Planning the size of the family and contraception are important issues worldwide. In offering optimum contraceptive services, factors like the safety and efficacy of the method, its convenience, cost, reversibility, acceptability, availability of services and the trained service providers play a vital role. A successful programme is often the result of patients receiving adequate information on the various contraceptive methods available and also on the provision of good quality services.

There are a number of methods of contraception available worldwide and practised as well in various countries. One such method of contraception is the intrauterine contraceptive device (IUD). While the World Health Organization (WHO) estimates 156 million IUD/IUS users worldwide, 60% (92 million) are from China alone, while in the U.K., the current usage is around 4%.

Modern IUD/IUS are safe, reliable and highly cost effective methods of contraception. Clinical effectiveness of IUD/IUS is excellent with a recognised failure rate being quoted as 0.2–2/100 woman years for the IUD and 0.16/100 woman years being quoted for the hormone releasing intrauterine system (Mirena IUS). This compares well with a failure rate of 0.5/100 woman years for female sterilization.

The safety, effectiveness and acceptability of the currently available IUD/IUS depends not only on the device itself but also on the quality of services provided which include expertise in counselling, good fitting techniques and an easily accessible follow-up care.

The recent NICE guidelines on Long Acting Reversible Contraceptives (LARC) have demonstrated excellent cost effectiveness of these methods, which is greater than the combined oral contraceptive pill even at one year of use. In fact, the IUD/IUS were the most cost effective of all the LARC methods looked at in the guidelines.

Despite all this, surveys indicate that in England and Wales, IUD/IUS are underused as compared to other methods of contraception.

Available literature suggests that a number of factors may be associated with a reluctance to use the IUD/IUS, which include pain, menstrual disturbances, infection, pregnancy, infertility and doubts about its effectiveness.

There are few studies which explore women's view or perceptions about contraception and even fewer that examine the way they perceive the IUD/IUS.

Against this background, work was undertaken to find out that the usage of IUD/IUS as a method of contraception; to identify any deficiencies in the services provided to the user; to assess views of patients regarding IUD/IUS as a contraceptive method; and their overall satisfaction regarding the services.

## **METHODOLOGY**

The present study was undertaken in 2006 in Southampton, U.K., in Contraception and Sexual Health (CASH) clinics and in primary care settings.

The study-design was circulated to all doctors working in the contraception and sexual health clinics and to all practice managers from GP surgeries in Southampton, where IUD insertions were being regularly undertaken. Data was collected from CASH clinics and also from four GP surgeries which participated in the study. Study-design was approved by the local Ethics Committee.

From this, information was obtained regarding the type of contraceptive method used by women. This enabled us to find out the use of IUD/IUS as a contraceptive method chosen by women in comparison to other contraceptive methods offered.

Relevant findings were entered from these records with special reference to counselling, information provided by the doctor about failure rate of IUD/IUS, effect on menstruation, risk of expulsion, risk of perforation, infection, etc.

A total number of 50 such women were given a set of two questionnaires (Appendices 1 and 2) regarding their experience while using the contraceptive services; and 39 women agreed to participate and replied by filling the proforma of several questions. Analysis of the data was undertaken regarding quality of services provided and patient satisfaction. The questionnaire involved details about patient satisfaction ranging from extremely happy to very dissatisfied, graded from 5 to 1, respectively. All the results on satisfaction were assessed using 'Likert Scale of Patient Satisfaction'.

## RESULTS

A total number of 1,524 patients attended the clinics during the study period

**TABLE 1: Method of Contraception Used by Women**

<i>Method of Contraception</i>	<i>No. of Women</i>	<i>Percentage</i>
Combined Oral Contraceptive Pill (COCP) + Progesterone Only Pill (POP)	459	30.19
Injection Depo Provera	150	9.84
IUD/IUS	107	7.02
Implants	96	6.30
Others (Condoms, etc.)	712	46.72
<b>Total</b>	<b>1,524</b>	<b>100</b>

The findings show that a majority of women used either barrier contraception or the combined oral contraceptive pill. The usage of IUD/IUS was found to be 7.02%.

The following is the analysis of data from 50 patients who had undergone an IUD insertion:

**TABLE 2: Age Distribution of the 50 Patients Who Used IUD/IUS**

<i>Age Group</i>	<i>No. of Women</i>	<i>Percentage</i>
Below 20 years	1	2
20–40 years	41	82
Above 40 years	8	16
<b>Total</b>	<b>50</b>	<b>100</b>

**TABLE 3: Type of IUD Used by the 50 Patients**

<i>Type of IUD</i>	<i>No. of Women</i>	<i>Percentage</i>
T-Safe Cu 380 A	23	46
Mirena IUS	24	48
Nova T	3	6
Frameless	–	–
Inert	–	–
<b>Total</b>	<b>50</b>	<b>100</b>

Using Fisher's Exact Test, it was seen that there exists a statistically significant correlation between the women's perceptions regarding 'overall services' with their 'experience at the time of coil insertion' ( $P < 0.001$ ). This shows that those women who had a good experience at the time of coil insertion expressed a satisfactory response regarding the services provided.

When overall services were compared with other parameters like counselling, ability to ask questions, provision of information leaflets and advice on pain relief, it was seen that there exists a correlation but was not found to be statistically significant. ( $p > 0.01$ )

## **DISCUSSION**

Nearly 40 years ago, the United Nations conference on population recognised family planning as a basic human right and stated that all couples and individuals have the basic human right to plan their families freely and responsibly and to have the information, education and means to do so. As a result, over the past several decades, family planning and contraception have emerged as the most important basic social right of a human being and more so of a woman.

Large scale research conducted all over the world has led to the development of various methods of contraception to be presented to the woman or her partner. An ideal contraceptive should be 100% convenient, coital independent, 100% reversible, 100% safe, cheap, easy to distribute, independent of medical profession (no monitoring or follow-up required), acceptable to be used by the woman and obviously visible to the woman. All the available methods of contraception fall short by one or more criteria, yet their efficacy far outweigh their risks and, hence, are in use today. The various methods could be surgical like sterilization (tubal ligation and vasectomy) and non-surgical like the oral contraceptive pill (mini-pill, combined pill), male condom, female condom, injection, implant, intrauterine device, intrauterine systems-hormone releasing (IUD/IUS), caps, diaphragms, foams, gels, etc. Different countries, all over the world, show varying percentages of contraceptive methods used. In the U.K., 28% of the women use the pill, 21% use male condoms, 4% use the IUD/IUS (3% IUD + 1% IUS) 3% use injection/implant, 1% caps or diaphragms, 22% use surgical

**TABLE 4: Results from Feedback post IUD/IUS Insertion, Using Likert Scale<sup>4</sup> of Satisfaction. 18 questions were Posed to Each Patient**

Type of Response Received from Patients	Gradation of Response by Women (Satisfaction Level)											
	5+		4+		3+		2+		1+		No Response	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Appropriateness of counselling	0	0	18	100	-	-	0	0	0	0	0	0
Patient could ask any questions to the doctor/nurse	8	44.4	10	55.6	-	-	0	0	0	0	0	0
Patient information leaflet provided	17	94.4	-	-	-	-	-	-	-	-	1	5.6
Understanding of patient to the information provided	17	94.4	-	-	-	-	-	-	-	-	1	5.6
Patients reading of information sheet	13	72.2	3	16.7	1	5.6	0	0	-	-	1	5.6
Provision of information about timing of coil insertion with menstrual cycle	17	94.4	-	-	-	-	-	-	-	1	5.6	-
Advice on pain relief	18	100	-	-	-	-	-	-	-	-	-	-
Experience regarding coil insertion	7	38.9	5	27.8	4	22.2	1	5.6	1	5.6	-	-
Adequate recovery time	18	100	-	-	-	-	-	-	-	0	0	0
Post-insertion leaflet with emergency contact numbers	17	94.4	-	-	-	-	-	-	-	0	0	1
Overall services	6	33.3	11	61.1	-	-	0	0	0	0	1	5.6
Recommendation of this service to a friend	4	22.2	14	77.7	-	-	0	0	0	0	0	0

methods (sterilization male, female), 2% use safe period method, and 1% use emergency contraception as per the Omnibus Survey, 2002 (Office for National Statistics).

Meanwhile, statistics from the developing world shows that in India, 1.9% use IUD/IUS, 1.2% use the pill, 31% women undergo sterilization and 40.7% use other methods. In Sri Lanka 2% of the women use IUD, 5% use pills, 7.7% undergo sterilization, 3% use injectable and 62% use any other method. In the U.S., the use of IUD as a method of contraception fell from 10% in the mid-1970s to only 1% in 2003–04. It is interesting to note that a survey on contraceptive use by female members of the American College of Obstetricians and Gynaecologists showed that 17% of them used IUD to postpone a pregnancy and 27% used an IUD when no future pregnancy was desired.

## **USE OF IUD**

In the present study, 7.02% of women used IUD/IUS as a method of contraception, which is above the national standard of 4%.

The Omnibus Survey, conducted by the office for National Statistics, reveals results conducted in the UK where the use of IUD was 4% in 1997–98; and 2001–02 the usage of IUD was 3% and IUS was 1% (total usage 4%).<sup>2</sup>

However, our present study with 7% usage of IUD/ IUS could be a reflection of the high standard of counselling, provision of information and good quality of services provided in this region.

As seen from the Table 4, patient feedback was obtained through two questionnaires. Patients psychometric expressions like 'strongly disagree, very happy, disagree, happy, unhappy' were converted into a score using Likert Scale 5 points. (5=strongly agree or very happy, 4=agree or happy, 3=neither agree nor disagree or satisfied, 2=disagree or unhappy, 1=strongly disagree or very unhappy). Patient's responses to 13 questions that were asked have been graded using the Likert Scale of Satisfaction. This is a widely used scale since 1932 and grades patient responses related to their satisfaction.

It has the advantage of better gradation but sometimes respondents may not be able to perceive smaller differences. The scale still is a representation of an ordinal level of measurement and is in common use.

A summative score of all the parameters of satisfaction gives the following results:

- Score of 5 has been the highest category, that is, very happy. When calculated for all women under all 12 parameters, it gave a value of 788.6 points out of 1080;
- Score of 4 is the second category, that is, happy and a value of 338.9 points was obtained;
- Score of 3 is the third category which meant neither satisfied nor dissatisfied, a value of 27.8 was obtained;

- Similarly, for second category, that is, unhappy, a value of 15.6 was obtained; and
- For category one which means very unhappy a score of 11.2 was obtained.

Non-responders score was 28. All these point out that the highest score was obtained by category one which testified highest level satisfaction.

All women expressed maximum satisfaction regarding counselling provided by doctors. It is known that a well-undertaken consultation with good counselling helps to increase women's understanding of the IUD/IUS which in turn reduces unfounded fears or exaggerated concerns.

This finding was confirmed, stating that 100% compliance was noted as regards discussing the efficacy, benefits, risks, etc., with patients thus stressing the importance of counselling resulting in better usage of this method.

It was observed that 44.44% of the patients felt that they could ask the service providers (doctor/nurse) questions they wanted to, while 55.6% could ask most of the questions. This shows that the doctor's ability to communicate, availability, approachability, ability to allay anxiety and fear was very good. This is probably one important area that helps women opt to use the IUD/IUS. Good training to service providers and their motivation has probably resulted in good counselling and women therefore rightly felt that their questions were answered and difficulties solved.

94.4% of the women were provided with pre- and post-insertion information leaflets and 94.4% of women understood it. 72.2% of patients read all the information provided, 16.6% read most of it, 5.6% read some of it and 5.6% gave no response, that is, they could not remember.

All these observations document that the most important and effective way of counselling and communication was direct face-to-face discussion by the doctor supported by provision of written information leaflets.

### **Experience of Women with Regard to Coil Insertion**

38.9% of women said that they were very happy with the procedure of coil insertion, 27.8% were happy while 22.2% were just satisfied. 5.6% were unhappy and 5.6% were very unhappy. The major reason for dissatisfaction was the pain factor, despite the fact that all women received pain relief advice. Two women had written an added comment that the pain was too severe.

### **Experience Regarding Overall Service**

94.4% of women were happy with the services provided. No woman was unhappy with the service. Analysis of Table 4 showed that there is some

correlation between women's assessment of services. If the experience of coil insertion has been good for the woman, there is a good chance that she would be satisfied with overall services provided. This correlation is statistically significant ( $p < 0.001$ ). There is also direct correlation between counselling and overall services. All the women agreed that they would recommend the services to a friend thereby indicating 100% user satisfaction.

Work done by R. Tewari and V.J. Kay on assessment of user satisfaction and duration of use of IUD observed that overall satisfaction with family planning services in Fife, Scotland, among 254 women was high with similar side effects in different types of IUDs except for higher mood disorders with LNG-IUS. A study by C. Asker, *et al.*, in Birmingham identified the perceptions of non-users of IUD, which were found to be mainly related to lack of information, reported side effects, anxiety about process of fitting, risk of infection, lack of personal control, rarely messy and embarrassing while fitting, hidden nature of the device and unreliability. Many such studies have quoted the efficacy and safety of IUDs. However, a comprehensive study auditing compliance by practitioners and assessing patient satisfaction is not undertaken by investigators, as is done in our present study.

## CONCLUSIONS

An overall 7.02% uptake of IUD was recorded as a method of contraception used by women, which is in line with the target to be achieved as per NICE guidelines. This is above the U.K. national standard of 4%.

Patient's feedback reported a very satisfactory overall response (94.4% of women) regarding services offered.

There was a direct correlation between experiences at coil insertion and overall services offered thereby meaning that good fitting techniques along with appropriate counselling and information provision are of paramount importance. This was statistically significant.

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### APPENDIX 1: Pre-IUD Insertion Questionnaire

1. **I Consider myself to be in the following age-group**  
<20yrs                      20-40yrs                      >40yrs
2. **Are you a first time user of the coil (IUCD /IUS)?**  
 Yes/No              If Yes, proceed to 3, 4; If No, proceed to 5
3. **State the contraceptive method you are currently using**  
 Pill/Injection/implant/Condoms/None/Other (please specify)
4. **Is the coil being fitted as**  
 Planned contraceptive / Emergency contraceptive
5. **Are you here for a coil replacement/coil check**  
 Yes/No              If Yes, proceed to 6, 7, 8 and 9; If No, proceed to 10
6. **Your coil has been fitted as part of**  
 Emergency contraceptive / Planned contraceptive
7. **How long are / have you been using the coil?**  
 Months/Years
8. **Have you ever become pregnant with the coil?**  
 Yes/No
9. **Has the coil ever fallen out / been expelled?**  
 Yes/No
10. **Are you here for a coil removal?**  
 Yes/No              If Yes, proceed to 11, 12
11. **Possible reasons for coil removal**  
 Ongoing pain/Bleeding problems/Risk of infection/Worried about risk of ectopic pregnancy/Partner feels the coil threads/Foreign body effect/Worried about becoming pregnant with the coil/any other (please state)
12. **Your coil was fitted as part of**  
 Emergency contraceptive/Planned contraceptive

## **APPENDIX 2: Post-IUD Insertion Questionnaire**

- 1. I had all the appropriate counselling regarding the chosen contraceptive method**  
Strongly agree/Agree/Disagree/Strongly disagree
- 2. I was unable to ask the doctor/nurse questions I wanted to**  
Strongly agree/Agree/Disagree/Strongly disagree  
**I was provided with the patient information leaflet**  
Agree/Disagree/Cannot remember
- 3. I did not understand the information provided**  
Agree/Disagree
- 4. How much of the information leaflet were you able to read?**  
I did not read it/I read some of it/I read most of it/I read all of it
- 5. I was advised regarding timing of insertion of coil (with respect to menstrual cycle)**  
Agree/Disagree
- 6. I received adequate advice regarding pain relief**  
Agree/Disagree
- 7. What was your expertise regarding coil insertion?**  
Very Happy/Happy/Satisfied/Unhappy/Very Unhappy
- 8. Did you have enough time to recover**  
Adequate/Inadequate
- 9. Did you receive the after-fitting advice leaflet and emergency contact numbers**  
Yes/No/Cannot remember
- 10. Would you recommend this method to a friend?**  
Strongly Agree/Agree/Disagree/Strongly Disagree
- 11. Your opinion regarding the overall service**  
Very happy/happy/Unhappy