Patterns of Intrauterine Device Use Among Family Planning Acceptors Seen In the Outpatient Department of a Tertiary Hospital

Mariemids S. Isidro*, MD and Maria Antonia E. Habana, MD, MSc, FPSRM**
Department of Obstetrics and Gynecology, *Far Eastern University-Nicanor Reyes Hospital
**University of the Philippines Manila

Intrauterine device is a popular means of reversible birth control in the world. In the Philippines, Copper T intrauterine device (IUD) supplies may come from private sources but the bulk has been from the public sector. The public sector gets IUD for free and inserts them at virtually no cost.

Although the IUD has been known for decades, there is still low utilization despite its effectiveness and safety. It is worthwhile to determine the dynamics of IUD use. This study reviewed the use of IUD among women consulting the Family Planning Unit of a tertiary university hospital.

It is necessary to evaluate the clients' needs both by improving the accessibility and quality of services and intensifying information dissemination on available family planning services. This is especially true for those who already want to limit their children but do not want to undergo a permanent method.

Key words: Intrauterine device, birth control

Introduction

The Philippine population as of August 2015 is approximately at 100, 981, 437 and it is steadily increasing from the August 2007 population of 88.55 million.[1] This population growth is taking its toll in the country's economy and health of the Filipino as well, most importantly to the women and their children.

The maternal mortality ratio is at 52/100,00 livebirths in 2015 which is a marked decrease as compared in 2006(162). The majority of maternal deaths are due to complications occurring during labor, delivery and postpartum period. The likelihood of maternal and neonatal deaths is further magnified by a mistimed, unplanned, unwanted and unsupported pregnancy.[2]

The desire to have children and raise them well are the ultimate goals of couples and with this in mind, planning the timing and number of births is essential. The total fertility rate of Filipino women has decreased from 6.0 in 1973 to 2.7 in 2015.[3] The rate is slow despite the efforts of the government in promoting family planning services among women in the reproductive age group.

Providing women with reproductive health services including family planning services will help control the increasing population and lower the total fertility rate. However, in the Philippines, lack of education and poor health care system compromise the provision of family planning services. Since the mid-1990s, a fairly steady figure of 45 to 50 percent has been using some form of family planning methods. A very far cry from other countries like Vietnam, which is also a third world country, but with a 78% contraception prevalence rate.[4]

One of the widely used reversible method of contraception is an intrauterine device. It has the advantage of providing protection for up to 12 years. The effectiveness of IUD with perfect use is 99.4% and 99.2% with typical use. The contraceptive protection afforded by IUD is comparable with tubal sterilization and the insertion is less invasive,

reversible and less expensive.[5] According to the National Demographic Health Survey in 2017, only about 3.5% from women of reproductive age (15-49 years old) are using intrauterine device. Among the modern contraceptive methods, the oral contraceptive pill is still the most widely used at 19.8%.

The IUD's positive characteristics are not well known to most Filipino women, men and healthcare providers. This is due to misconceptions, lack of training of providers and absence of promotion of IUD use.

This study evaluated the socio-demographic profiles, reasons for choosing and discontinuation of use of IUD among women of reproductive age who sought consult at the Family Planning Unit of a tertiary hospital over a three-year period.

Methods

A retrospective chart review was done from August 2011 to May 2014 of all women who sought consult at the Family Planning Unit of a tertiary university hospital. Medical records of all patients who had an IUD inserted at the Family Planning Unit were included. Excluded were patients who chose other forms of contraception and those who had it inserted in another institution.

A standardized data collection tool was used to enter data including the demographic profile, previous method of contraception, reason for choosing the IUD as to limiter or spacer and any reported side effects. For those who had their IUD removed, the reasons for its removal were included.

All data were entered into Microsoft Excel software. Descriptive statistics such as mean, frequencies and percentages were obtained for the sociodemographic characteristics. Data were expressed as frequency, percentage and mean ± standard deviation (SD). Records with missing information were noted, but were not excluded in the final analysis.

Ethical Considerations

The protocol was submitted and approved by the University of the Philippines-Manila Research Ethics Board (UPMREB). Personal information and data collected from each medical record were kept confidential. All patient information was anonymized. The authors disclose no conflict of interest in any form (financial, propriety, professional).

Results

Fifty six (56) charts were retrieved and reviewed. There was a gradual increase in IUD use across three years as seen in Figure 1.

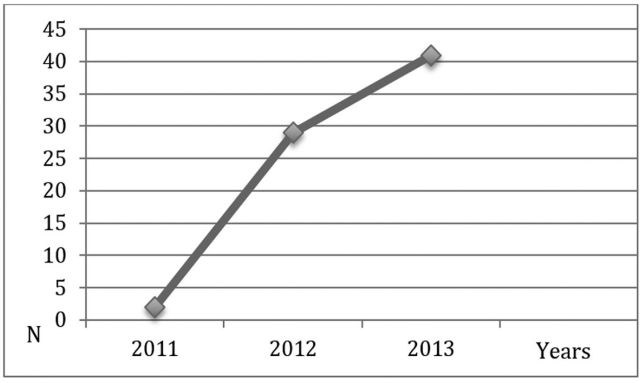

Figure 1. Number of IUD Users Across Three Years

The ages of the majority of patients ranged from 24 to 38 years old, with the highest number from the 24-28 year-old group. Youngest IUD acceptor was 19 years old. Fifty-nine percent (59%) were married. Thirty-six percent (36%) were from Manila, 20% from Cavite, 9% from Pasay and the rest from other areas of Metro Manila.

Most of the patients were high school graduates (46%) and housewives (50%). Sixty percent (60%) were gravida 2 to 3 while 25% were gravida 4 or more. There were forty-three percent (43%) new acceptors without any previous use of contraception. Thirty-eight percent (38%) had previous use of oral contraceptive pills followed by use of DMPA (see Figure 2)

There were equal numbers of limiters and spacers among IUD users. Table 2 shows the distribution of IUD users based on age and gravidity.

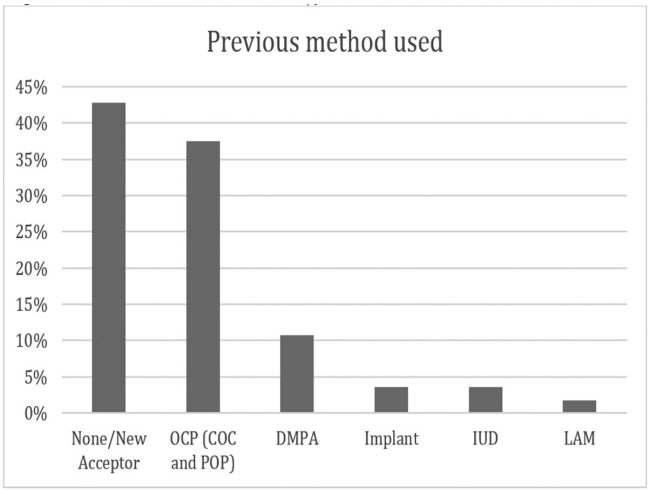

Figure 2. Previous method used prior to IUD

Table 2. Distribution of IUD user based on gravidity and age

	Limiter	Spacer
Age	33.45±5.38	28.78±6.08
Gravidity	(N)	(N)
G1	0	10
G2	7	8
G3	9	8
≥ G4	14	1
Total	29	27

Among the 56 users, 51% were limiters and the rest were spacers. The limiters were older and had more children. Among the limiters, 48% had four or more pregnancies. A majority of the spacers were found in those with one pregnancy followed by those with two or three pregnancies.

Only 16% of patients followed up at the clinic. Eight patients had complaints of either heavy menstrual bleeding (5) or foul smelling vaginal discharge (3).

There were 18 patients who had their IUD removed at the clinic. The average year of use is 13, with a range of 5 to 33 years. Table 3 lists the reasons for removal.

Discussion

There has been a gradual increase in the use of IUD from 2011 to 2013. For the first half of 2014, there were already 16 IUD users. There were also three recorded postpartum IUD insertions, 2 of which were inserted in 2014.. The National Demographic and Health Survey (NDHS) in 2015 showed that the contraceptive prevalence rate increased to 54.3% from the previously reported 48.9% in 2003. However, it also showed that oral contraceptive pill use is a more popular method at

Table 3. Reasons for IUD removal

Reason for removal	N	Family Planning method after removal	Age in years Ave (Range)	Comments
Time expired*	7	None	51.6 (41-67)	One needed hysteroscopic guided removal
Shift of method	7	Implanon (4) OCP (2) DMPA (1)	35.5 (25-41) 34 30	
Desirous of pregnancy	1	None	27	
Foul smelling discharge	4	OCP (1) Implanon (1) None (2)	35.25 (27-37)	One was desirous of pregnancy

*Time expired: beyond the recommended duration of use

19% versus intrauterine device use at 3.5%. No increase in IUD use was noted in the NDHS report in 2013. This implies the need to promote the use of IUD among Filipino women.

According to the retrospective study of Min Hae Park, et al. in Vietnam, about 29% of the 1316 women with IUD are in the older group (36-40 yo), married, with 2 children and able to reach up to primary level of education. The main reason of these women in choosing IUD is that of convenience. The discontiuation rate is at 12.1% at 12 months, 19.4% at 24 months and 26.9% at 36 months and the reason for discontinuation was mainly due to health concerns followed by excessive menstrual bleeding.

In India, Rati, et al. assessed the factors affecting acceptance of IUD among women. The IUD acceptors in the study were younger at 20-24 years old, majority were housewives and were able to reach up to secondary education. The result of the study showed that there was a statistical significant association between the factors (knowledge, physiological, psychological, socio-cultural and economical) and socio-demographic variables such as age of women, educational status of both women and their husbands, religion, nature of family, occupational status of both women and their husbands and monthly income of the family. The study concludes that due to scattered knowledge of women regarding contraceptives, mostly were leading to myths and misconceptions in physiological, psychological and socio-cultural factors for non-acceptance of IUD as a spacing method.[6]

In China on the other hand, the main feature of IUD use is its close association with family size. Significant independent determinants of IUD failure were age at start of IUD use, number of living children, period at start of IUD insertion, previous experience of contraceptive use and failure, region and urban– rural residence. Most women using IUD were young at 25-29 years old with none or 1 child and were able to finish secondary education.[7]

Awareness of the intrauterine device (IUD) as a long-term contraceptive method is fairly high among married women (89.6%) and married men (69.5%) in Bangladesh. In contrast, the current use of IUDs remains low (0.6%) compared with the use of other modern methods. Most women with IUD were found to be around 25-34 years old, poor, uneducated residing in the rural area and lack exposure to print media, radio or TV. Most women were previous users of other methods mostly pill-users (79%). Majority of the study participants were limiters or did not want to bear children as their reason in choosing IUD. The majority of Bangladeshi IUD users (63.7%) stated that side effects and health concerns are the major reasons behind method-specific IUD discontinuation.[8]

In the Philippines, contraceptive behavior among married women is still a concern. Lamberte et al in 2000, examined the contraceptive behavior of married women in the 1993 National Demographic Survey (NDS) and 1998 National Demographic and Health Survey (NDHS). The studies dealt with dimensions of family planning behavior, levels and trends in the contraceptive use by method, provider choice, willingness as well as ability to pay for services and monetary costs incurred in the use of services. In general, results of the study showed that the greatest percentage change in prevalence was seen among women with no education. The use of contraception rises as the number of children ever born increases, and employment status increases the likelihood of using any form of family planning. The results from the logistic regression analysis indicate that use of contraceptives is significantly influenced by age, total number of children, and ideal number of children, marital status, education, and religion. It is evident from the 1993 NDS and 1998 NDHS that the predominant methods used were female sterilization, pills and IUDs.[9]

According to the Family Health Survey 2017, IUD acceptors are among women 25-29 years old, those who are high school undergraduate, in the low socio-economic status and mostly chose IUD because they already want to limit their children. Surprisingly, IUD use in the National Capital Region is low at 2.3% compared to other regions like Northern Mindanao at 10.4%.

In the present study, the majority of users were 24-28 years old, the youngest being 19 years old. Most were married, reached high school, were housewives and had two or more pregnancies. Forty-three percent were new users.

Most IUD users who wanted to limit their pregnancies had 4 or more pregnancies and most of the spacers were primigravids. Complaints included heavy menstrual bleeding and foul smelling vaginal discharge.

In a study by Ragland, et al. (2014), two most commonly cited barriers to IUD use were lack of knowledge and concerns regarding the side effects. Majority of the patients were high school undergraduates and side effects reported were pain, discomfort and bleeding.[10]

In the present study, the most common reason for removal is that the IUD was long overdue for removal (39%) with one needing hysteroscopic guided-removal, 33 years after insertion. The average age of those with IUD time expired is 52 years old with an average duration of IUD use of 23 years. The duration of IUD use ranged from 10 to 33 years.

The median duration of uninterrupted IUD use in the study of Ali et. al (2014) was at 37 months (3 years) with a 13.2% probability of discontinuation at 12 months. Half of the women shifted to modern methods of contraception and they were noted to have obtained higher level of education.[11] In the present study, the shortest duration of use from time of insertion was at 2 years.

The same number of users shifted to another method to either Etonorgestrel implant, oral contraceptives and depo-medroxyprogesterone acetate. Four requested removal due to foul smelling discharge.

In a recent systematic review, misconceptions of both providers and lay people led to the low usage of IUD. There was hesitancy in providing IUD to HIV positive women, teenagers and nulliparous women. The review recommended further training of providers with initiatives providing correct information to potential users.[12]

Limitations and Recommendations:

A large number of women in this study were lost to follow up. There is also a need to have an in-depth evaluation of the reasons for choosing IUD and reasons for its removal. There is a need for counseling women and addressing their concerns including those of the healthcare providers.

References

1. Philippines Statistics Authority (2019). Results from Population census 2015. Retrieved from http://www.psa.gov.ph/content/philippine-population-surpassed-100-million-mark-results-2015-census-population.
2. Philippine Statistics Authority (PSA) and ICF. 2018. Philippines National Demographic and Health Survey 2017: Key Indicators. Quezon City, Philippines, and Rockville, Maryland, USA: PSA and ICF.
3. Philippine Statistics Authority (PSA) and ICF. 2018. Philippines National Demographic and Health Survey 2017: Key Indicators. Quezon City, Philippines, and Rockville, Maryland, USA: PSA and ICF.
4. Min Hae Park, Thang Huu Nguyen, Thoai Dinh Ngo. (2011). Dynamics of IUD use in Vietnamn: Implications for family planning services at primary health care level. Int J Women's Health 2011; 3: 429-34 http://dx.doi.org/10.2147/IJWH.S26620
5. Philippine Obstetrical and Gynecologic Society. Clinical Practice Guidelines on Family Planning, 1st edition. 2012
6. Rati SA, Jawadagi S, Pujari J. A study to assess the factors affecting acceptance of IUD among rural women of Hirebagewadi, Belgaum. J Nursing Health Sci 2014; 3(2): 37-52.
7. Wong D and Altmann DR. Sociodemographic determinants of intrauterine device use and failure in China. J Hum Reprod 2002; 17(5): 1226-32.
8. Alam ME, Bradley J and Shabnam F. IUD use and discontinuation in Bangladesh. E&R Study #8. New York: EngenderHealth/The ACQUIRE Project 2007.
9. Lamberte EE, Lee NR and Garganian DU. Family Planning service utilization and market segmentation in the Philippines. Calverton, Maryland: ORC
10. Ragland D, Paykachat N, Dajani N. Barriers to intrauterine device use at an university-based women's clinic. Open J Obstet Gynecol 2014; 1058-64. http://dx.doi.org/10.4236/ojog.2014.416145
11. Ali M, Park M, Ngo T. Levels and determinants of switching following intrauterine device discontinuation in 14 developing countries. J Contraception 2014; 90: 47-53.
12. Daniele M, Cleland J, Benova L and Ali M. Provider and lay perspectives on intra- uterine contraception: a global review. Reprod Health 2017; 14(19). DOI 10.1186/s12978-017-0380-8