

# Intrauterine Device as a Method of Contraception at Selected Municipal Health Offices of Ilocos Sur..... An Assessment

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**Abstract :** The study was conducted among the 103 mothers who were inserted with Copper Releasing IUDs at Galimuyod, Bantay, and Sto. Domingo, Ilocos Sur from 2012 to 2014.

The study determined the success rate and expulsion rate of IUD. Variables included in the study are the socio-demographic factors, obstetrical-related factors, the insertion time, and IUD provider-related factors. The tool used in gathering data needed was a questionnaire checklist .

The research study discovered that the expulsion rate is low accounting to 1.94 %. A mark percentage of the respondents are aged 20-24 years old, they got pregnant for the fifth time, and have six living children ; most are unemployed. The majority were inserted with IUD several weeks after normal delivery. Most of the IUD providers are already fifteen years or more in the service and had attended training on IUD insertion at the national level.

No one of them died after the insertion of IUD, 27 suffered from pain, and one suffered from perforation as a complication. There were two with expelled IUDs, two who got pregnant with an intact IUD and two who suffered from dyspareunia prior to the expulsion of IUD. The socio-demographic and obstetrical profile of the respondents, timing of insertion, and IUD provider-related factors failed to attain significance with the expulsion of IUD.

**Keywords:** Expulsion Rate, Success Rate, Maternal Outcomes, Risk Factors, Ilocos Sur.

## INTRODUCTION

In the Philippines, family planning is one of the major programs of the Department of Health to address the exploding Philippine population. Even if a lot of misinterpretations, women have on the various methods, especially on IUD, the Municipal Health Offices (MHOs) of the province of Ilocos Sur struggles to work with the Department of Health to implement the said program. Many women claim that to be inserted with IUD will be the most painful experience in a woman's life, that the IUD might be dislodged to the different parts of the body like the lungs and the heart, and it also causes infection. However, despite of these myths, the MHO staff can effectively counsel women to submit themselves for insertion of IUD during the postpartum period and few weeks after delivery.

According to Mehmet Sakinci, Cihangir Mutlu Ercan, Safak Olgan, Hakan Coksuer, Kazim Emre Karasahin and Oguzhan Kuru (2014), IUD is the most commonly preferred long-term reversible method of contraception because it is safe, cost-effective, and suitable for all reproductive ages.

Shukla, Qureshi, and Chandrawati 2012 said that intrauterine contraceptive device is currently used by 127 million women because it is the most commonly used reversible method of contraception.

According to Zhang, Feldblum, Chi, and Farr (1992) the IUD is an effective contraceptive method that is well appropriate to all women regardless of age.

The WHO of 2004 states that there are several factors that influence expulsion rates, including the skill of the provider, the woman's age and parity, the length of time since insertion and the timing of insertion. Many studies indicate that the provider's ability to place the IUD correctly at the top of the uterine cavity, or fundus, may be the most important factor in determining the risk for expulsion. In some studies, higher expulsion rates were associated with providers whose skills were inadequate.

It is for this purpose that the researchers decided to assess IUD and to discover what are the factors contributing to the expulsion of IUD. Results of the study may serve as a springboard for the Municipal Health Offices and all other support organizations to enhance their delivery on family planning services particularly the intrauterine device.

### Objectives of the Study

This study aimed to assess the Intrauterine Device as a method of contraception among mothers from calendar year 2012-2014.

Specifically, it tried to find out the socio-demographic and obstetrical-related profile of the respondents, the timing of IUD insertion, the maternal outcomes of IUD insertion, clinical signs suffered by the mothers prior to the expulsion of IUD and the IUD provider –related factors. It also looked into the relationship between the socio-demographic factors and obstetrical-related, timing of insertion, and IUD provider related factors with the expulsion of IUD.

### Methodology :

The study utilized the descriptive correlational method of research. Respondents of the study are all the 103 mothers inserted with Cu T 380 from 2012 to 2014. These are the mothers who were counseled for IUD insertion during the pre-natal visit, labor, the postpartum period and follow up check up after delivery. The questionnaire was formulated by the researchers and content validated by a pool of experts. Permission was sought from the Municipal Health Officer through a letter. The profile of the respondents and the IUD provider, maternal outcomes after IUD insertion, clinical manifestations seen on mothers prior to the expulsion of IUD is also looked into through the use of frequency and percentage. Simple linear analysis was used in establishing the relationship between expulsion rate of IUD and the previously stated variables of interest.

Documentary analysis of the records filed at the Municipal Health Office was employed in the study.

Table 1 displays the distribution of the respondents.

Table 1

#### Distribution of the Respondents

Municipal Health Office	f
Galimuyod	73
Bantay	11
Sto. Domingo	19
Total	103

### Results and Discussions:

Table 2 shows the respondents' profile.

**Table 2**  
**Profile of the Respondents**

A. Socio-Demographic Factors	f	%
<b>Age</b>		
45-49	11	10.7
40-44	26	25.2
35-39	21	20.4
30-34	13	12.6
25-29	21	4.9
20-24	5	4.9
15-19	6	5.8
<b>Total</b>	103	100.0
<b>Occupation</b>		
None	77	74.75
Overseas Foreign Workers ( OFW)	16	15.53
Laborer	8	7.77
Farming	2	1.94
Government Employee	5	4.85
<b>Total</b>	103	100.0
B. Obstetrical-Related Factor		
<b>Number of Pregnancy</b>		
6	18	17.5
5	41	39.8
4	22	21.4
3	21	20.4
2	1	1.0
<b>Total</b>	103	100.0
<b>Number of Living Children</b>		
7	20	19.4
6	39	37.9
5	24	23.3
4	19	18.4
3	1	1.0
<b>Total</b>	103	100.0

**On the Socio-demographic and Obstetrical -Related Profile of the Respondents:**

A mark percentage of the respondents 26 or 25.2% belong to the age bracket 40-44 years old, great majority ( 77 or 74.75 %) are not employed, a great percentage ( 41 or 39.8%) got pregnant for the fifth time prior to the insertion of IUD, a great percentage 39 or 37.9% have six living children.

It can be noted that respondents aged 40-44 years old still use IUD because they are afraid of getting pregnant at a very old age because of the different risks pregnant may suffer during the pregnancy period. Aside from that, respondents are already multiparas and that they really want to protect themselves from getting pregnant again because of the pregnancy complications.

Table 3 displays the timing of insertion.

**Table 3**

### Timing of Insertion

	f	%
Several Weeks After Normal Delivery	52	50.5
Several Months After Delivery	12	11.7
Several Years After Delivery	26	25.2
Early Postpartum Period	10	9.7
Immediate Postpartum Period	3	2.9
<b>Total</b>	<b>103</b>	<b>100.0</b>

### On the Timing of IUD Insertion

It is reflected in the table that most (65 or 89.04) of the respondents had their IUD inserted several weeks after normal delivery. The findings imply that the respondents preferred to recover first from the stress brought about by labor and delivery before submitting themselves for IUD insertion because of the pain that they may suffer after insertion of IUD.

Table 4 presents the maternal outcomes of insertion .

**Table 4**

### Maternal Outcomes of IUD Insertion

	f	%
<b>A. Discomforts</b>		
Abnormal Bleeding	6	5.83
Pain	27	26.21
None	70	67.96
<b>Total</b>	<b>103</b>	<b>100</b>
<b>B. Complications</b>		
Infection	0	0.0
Pelvic Inflammatory Disease	0	0.0
Perforation	1	1.0
None	70	67.96
<b>Total</b>	<b>103</b>	<b>100</b>
<b>C. Death</b>		
Yes	0	0.0
No	103	100.0
<b>Total</b>	<b>103</b>	<b>100.0</b>

### On Maternal Outcomes of IUD Insertion

It is reflected in the table that no one died after the insertion of IUD. A mark percentage of the respondents (27 or 26.21) suffered pain after insertion of IUD and one (1.0%) suffered from perforation as a complication of IUD insertion.

Pennington (2009) claimed that some women did not experience side effects after IUD insertion. However, according to him, during and after the procedure most of them felt some cramping. He added that Ibuprofen or any other analgesic such as Advil, can be used to manage cramping. He further stated that, a woman's menstruation for the first 3-6 months may be irregular and may suffer from spotting. Furthermore, he made mention that few suffers from heavy bleeding in the first 3-6 months, and may experience fewer days of bleeding. For him, spotting is regarded as a sign of infection. Lastly, a woman must use backup birth control and contact her gynecologist or health care provider immediately, if she is bleeding, feels that the string is shortened or unable locate it.

As stated by the WHO (2004) the common but usually transitory signs and symptoms experienced by women inserted with IUD are denser and lengthy menstrual bleeding, as well as cramping and bleeding between periods. Further stated by WHO (2004) that studies have shown that these clinical indicators are usually bearable and does not necessarily mean IUD removal, and at this time women must be reassured by providers that these side effects do not point out a serious medical problem.

The findings of the study of Mehmet Sakinci, Cihangir Mutlu Ercan, Safak Olgan, Hakan Coksuer, Kazim Emre Karasahin and Oguzhan Kuru (2014) indicated that Cu-IUD users might have decreased sexual arousal, lubrication, orgasm, and, more importantly, increased pain compared to women with no contraception.

Table 5 displays the status of IUD.

**Table 5**  
**Status of IUD**

Status of IUD	<i>f</i>	%
Intact	101	98.05
Not Intact	2	1.94
<b>Total</b>	<b>103</b>	<b>100.0</b>



**On the Status of IUD**

The table above manifest that almost all (101 or 98.05%) of the respondents have an intact IUD.

According to Muthal- Rathotre (2010) approximated that the expulsion rate associated with interval insertion of T- shaped IUDs in the initial year is 1-4.5% . Post placental insertion has an expulsion rate ranging from 6% to 20 % for T-shaped IUDS over one year. Immediate postplacental insertion has lower expulsion rate compared with early (11 minutes to 72 hours) postpartum insertion.

Table 6 presents the clinical manifestations suffered by a mother with expelled IUD.

**Table 6**

**Clinical Manifestation Suffered by a Mother Prior to the Expulsion of IUD**

Clinical Manifestations	<i>f</i>	%
Cramping	1	.97
Dyspareunia	2	1.94
None	100	97.09
<b>Total</b>	<b>3</b>	<b>100</b>

\*Multiple Response

### On Clinical Manifestations Suffered by Mothers with Expelled IUD

It is reflected in the table that a great percentage (2 or 1.94%) of the respondents with expelled IUD suffered from dyspareunia.

According to Grimes , Lopez, Schulz, Van, Stanwood(2015), a woman may manifest unusual vaginal discharge, cramping or pain, intermenstrual spotting, postcoital spotting, dyspareunia , absence or lengthening of the IUD string, and presence of the hard plastic of the IUD at the cervical os or in the vagina as symptoms of IUD expulsion. He added that for the man or the partner, he may also experience dyspareunia. He emphasized that when the menstrual period is delayed a client must check for IUD strings and for him, a missed menstruation may be the first symptom of a “silent” expulsion and that If the woman is not gravid, she can be inserted with another IUD immediately.

According to the WHO( 2004) ,irregular bleeding could happen due to a partially removed intrauterine device .

Table 7 presents the pregnancy that occurred in mothers with intact IUD.

**Table 7**  
**Success Rate of IUD**

Pregnancy Occurrence with intact IUD	2	1.9
Pregnancy not Occurred with intact IUD	101	98.1
<b>Total</b>	<b>103</b>	<b>100.0</b>

It is presented in the table that a great percentage ( 2 or 1.9%) got pregnant with intact IUD. This maybe because the respondents were pregnant prior to the insertion of IUD.This maybe because these women arepregnant prior to the insertion of IUD.

According to Dr. Lanalee Araba Sam, an ob-gyn in Ft. Lauderdaleas cited by Mauer ( 2015), an intrauterine device ( IUD ) , is one of the most popular and effective forms of birth control , and it's rare to become pregnant while using one. She said that the IUD has a 99.7 percent efficacy rate and claimed that very, very few women with IUD will become pregnant. She emphasized that she always tell her patients that someone on this planet is that one-in-a-million exception, that there are instances where someone becomes pregnant with an IUD in place .

Table 8 reflects the IUD-provider related factors.

**Table 8**  
**IUD Provider-Related Factor**

	<i>f</i>	%
<b>Length of Service of IUD Provider</b>		
Below 5 years	2	1.9
6-10 years	0	0.0
10-14 years	29	28.2
15 years and above	72	69.9
<b>Total</b>	<b>103</b>	<b>100.0</b>
<b>Nature of Training Program and Seminar Attended</b>		
National	76	73.8
Regional	27	26.2

<b>Total</b>	103	100.0
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**On the Profile of the IUD Provider**

It is gleaned in the table that majority (72 or 69.9 %) of the IUD provider have been in the service for 15 years and above. Majority (76 or 73.8%) of the IUD provider attended training on IUD insertion at the national level.

Table 9 reveals the relationship between the profile of the respondents and the status of IUD.

**Table 9**  
**Correlation Coefficient Showing the Relationship Between the Status of IUD and the Profile of the Respondents**

<b>Variables</b>	<b>r-value</b>	<b>Significance</b>	<b>Decision</b>
Age	-.145	p > .05	Do not Reject Ho
Occupation	.72	p > .05	Do not Reject Ho
Gravidity	-.142	p > .05	Do not Reject Ho
Parity	-.141	p > .05	Do not Reject Ho

**On the Relationship Between the Status of IUD Insertion and the Profile of the Respondents**

The socio-demographic profile, such as the age and occupation bear no significant effect on the status of IUD. This implies that whether the respondent is young or old, with or without occupation, do not significantly increase the possibility of IUD expulsion.

The result of the study contradicts the study of Zhang, Feldblum, Chi, and Farr (1992) which states that maternal age is a risk factor for expulsion. The result of the study also contradicts the statement of the WHO (2004) that younger women who have never delivered a baby have higher tendency to expel an IUD than older women with children. The result of the study also negates the outcome of the study of Zhang, Feldblum, Chi, and Farr (1992) revealed that young maternal age is a risk factor for copper T IUD expulsion. They said that the danger of expulsion steadily rise as age decreased and the risk of expulsion decreased with age.

The obstetrical-related factor which include the number of pregnancy and number of living children also bear no significant effect on the status of IUD. This implies that whether the respondents got pregnant for the first, second or third time, has no or many living children, do not significantly affect the status of IUD.

The obstetrical-related factor which includes the number of pregnancy and number of living children failed to attain significance. The findings of the study negates the result of the study of Chi and Farr (1989) that younger women who have never delivered a baby are more likely to expel an IUD than older women with children. The result of the study also contradicts the statement of Moore (2014) that regardless of IUD type, possibility of expulsion is higher in parous women than nulliparous women. He added that compared with women older than 20, adolescents had higher expulsion rates of IUD.

Table 10 reveals the relationship between the profile of the respondents and the status of IUD.

**Table 10**

**Correlation Coefficient Showing the Relationship Between the Status of IUD and Timing of Insertion and the Profile of the IUD Provider**

<b>Variables</b>	<b>r-value</b>	<b>Significance</b>	<b>Decision</b>
Timing of Insertion	-.031	$p > .05$	Do not Reject Ho
<b>IUD Provider-Related Factor</b>			
Length of Service of the IUD Provider	-.112	$p > .05$	Do not Reject Ho
Nature of Training Programs and Seminars Attended	-.036	$p > .05$	Do not Reject Ho

**On the Relationship Between the Timing of Insertion, and IUD Provider-related Factor with the Status of IUD**

The timing of insertion ( $r = -.031$ ), and the IUD provider-related factors such as the length of service ( $r = -.112$ ) and training program attended ( $r = -.036$ ) do not significantly affect the status of IUD.

The findings imply that whether the IUD is inserted weeks/months/ years after normal delivery, or during the early and immediate postpartum period; whether the IUD provider is young or old in the service; and regardless of the nature of a training on IUD insertion do not significantly affect the status of IUD.

The result of the study negates the statement of Chi and Farr (1990) that the majority of early studies on IUD insertions as late as eight weeks postpartum were marked by very high expulsion and uterine perforation rates. They said that an IUD inserted within 20 minutes of delivery there was only 7% expulsion. They added that a group in Belgium achieved expulsion rates as low as 6% after 30 months.

The result of the study negates the statement of the WHO (2004) that the expulsion rate is only marginally higher for insertions completed in the immediate postpartum period, within the first 10 minutes after the placenta is delivered. It is moderately higher if inserted after 10 minutes but before the woman is discharged from the hospital, usually 48 hours after birth of the child. The data on expulsion rates for late postpartum insertions, done between 48 hours and four weeks after delivery, are limited. However, inserting an IUD during this time is not suggested due to a greater risk of perforation.

Outcomes of the study opposes the findings of the study of Grimes, Lopez, Schulz, Van, Stanwood (2015) that immediate postpartum IUD insertion has higher retention rate if the IUD is inserted within 10 minutes after the expulsion of the placenta. He added that the insertion that was performed within ten minutes after placental delivery has lower expulsion rates.

The result of the study disagrees with the result of the study of Chi and Farr (1989) that the insertors' experience in post placental insertion is associated with the IUD expulsion rates.

The findings of the study also contradicts the claim of Grimes, Lopez, Schulz, Van, Stanwood (2015) that IUD can be inserted safely at any time during the first 48 hours after delivery but immediate postpartum IUD insertion has a higher retention rate if the IUD is inserted within 10 minutes after expulsion of the placenta. He mentioned that recent studies revealed that the expulsion rates are usually lower if the insertion is done within 10 minutes after placental delivery, although still higher than those for interval insertion. They emphasized that the risk of



expulsion increases as the interval from delivery of the placenta, and the time of IUD insertion increases during the postpartum period are usually associated with higher expulsion rates.

Moreover, the result of the study also contradicts the findings of Chi and Farr (1989) that the risk of IUD expulsion has the greatest possibility during the first few months after the IUD insertion while the woman's body is adapting to the device.

Chi and Farr (1989) claimed that IUD inserted by experienced providers who had undergone heedful training produced reliable results.

## CONCLUSIONS AND RECOMMENDATIONS

The intrauterine device is a very effective form of contraception. Although that it is not a 100 % effective due to several reasons, it is the most appropriate one for mothers who seeks for a long term form of contraception.

With the findings of the study, the following recommendations are forwarded to improve the delivery service of the different MHOs where the study is piloted .1. Additional training for IUD insertion is recommended to the IUD providers not only at the national level but in the international level. 2. Counselling must be done in all women before the insertion of IUD to give emphasis on pain as one of the maternal outcomes of IUD insertion. 3. Clients inserted with IUD must be properly educated on how to assess for an intact IUD to prevent pregnancy. 4. Clients with expelled IUD must be encouraged to submit themselves for an immediate check up and be counselled for the re insertion of IUD once IUD is expelled.

## REFERENCES

Chi, IC and Farr, G. 1989. Postpartum IUD Contraception: A Review of an International Experience, Retrieved at <http://www.popline.org/node> on January 24, 2016

Grimes, DA, Lopez, LM, Schulz KF, Van, Vliet HA, Stanwood NL. 2015 Immediate Postpartum Insertion of Intrauterine Devices, Retrieved at [www.ncbi.nlm.nih.gov/pubmed](http://www.ncbi.nlm.nih.gov/pubmed) on February 14, 2016.

Mauer , Elena Donovan 2015. Pregnancy With an IUD: Is It Possible?, Retrieved at <http://www.parents.com/pregnancy/signs/symptoms/iud-pregnancy/> on February 5, 2017

Mehmet Sakinci, Cihangir Mutlu Ercan, Safak Olgan, Hakan Coksuer, Kazim Emre Karasahin and Oguzhan Kuru, 2014. Comparative Analysis of Copper Intrauterine Device Impact on Female Sexual Dysfunction Subtypes , Retrieved at <http://www.sciencedirect.com/science/article/pii/S1028455915002855> on February 5, 2017

Moore, Anne 2014. IUD Expulsion, A Closer Look at Risk factors, Retrieved at <http://www.jwatch.org/na35645/2014/09/15/> on April 30, 2016

Muthal, Rathore A. 2010. Immediate postpartum insertion for intrauterine devices, retrieved at <http://apps.who.int/rhl/fertility/contraception/cd003036> on April 30, 2016.

Pennington, Katherine. 2009, All About the IUD Process, Retrieved at [www.sheknows.com/health -and-wellness/articles](http://www.sheknows.com/health-and-wellness/articles) on Sept. 1, 2016.

WHO 2004 Contraceptive Technology and Reproductive Health Series Module, Retrieved at <http://www.fhi360.org/sites/default/files/webpages/Modules/IUD/s1pg19.htm> on May 6, 2016

Zhang J, Feldblum PJ. Chi IC, Farr, 1992. MG, Risk Factors for Copper T IUD Expulsion : An Epidemiologic Analysis, Retrieved at <http://www.ncbi.nlm.nih.gov/pubmed> on December 15, 2014.

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