

## Feasibility, Adherence and Acceptability of Placing the Postpartum Intrauterine Contraceptive Device in Katanga

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### Abstract

**Aims and Objective:** The Poor integration of the provision of family planning in the perinatal and / or postpartum period may contribute to the low prevalence of modern contraceptives in Democratic Republic of Congo. The Postpartum Intrauterine Contraceptive Device (PPIUD) is a catch-up strategy in family planning. The objective of this study was to determine provider performance, adherence and complications related to the insertion of PPIUD.

**Methodology:** It was a research-action carried out from November 2014 to May 2015 in five General Reference Hospitals of Lubumbashi. Ten providers were trained on the PPIUD with the support of the Association Santé Familiale (ASF); their competence was validated after the insertion of at least 5 PPIUD during two months post-training. An exhaustive sample of 113 patients who received a PPIUD was assembled and descriptive statistics were used to analyze the results.

**Results:** In our series, the mean age of our patients was  $32 \pm 7$  years. The majority were married, housewives with a secondary level of education. The Protestant religion was the most represented (77.0%). They were multiparous in 56.6%. The median inter-reproductive space was 2 years. For the most part, PPIUD insertion was performed after delivery (57.0%), before leaving the maternity ward (35.7%) or during per caesarean section (7.1%). In 76.0% of cases, this was initiated and carried out by providers, the majority of whom were midwives (89.4%), followed by physicians (9.7%). Within the given time, the competence of the providers was validated for 4 providers (40.0%). By extending this period with formative supervisions all providers had validated their competence in a period of approximately 6 months. Of all the patients, 50.0% of them adhered correctly to the PPIUD. Complications were observed in 15.0% of cases.

**Conclusion:** The postpartum intrauterine device (PPIUD) as a family planning method is feasible in Katanga. There is a need for progressive scaling. An exercise period of 2 to 6 months would allow providers to acquire adequate skills for PPIUD.

**Keywords:** Adherence, DIUPP, Complications, Katanga

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### I. Introduction

According to the results of the Demographic and Health Survey conducted in 2013 in the Democratic Republic of Congo (EDS-RDC 2013-14), the maternal mortality ratio was estimated at 846 per 100,000 live births and the neonatal mortality rate at 28 deaths for 1000 live births<sup>1</sup>. Modern contraceptive prevalence has increased from 6% to 8% between 2007 and 2013. However, there is a marked improvement in the use of modern contraceptive methods in urban areas compared to rural areas<sup>1,2</sup>. In 2007, contraceptive prevalence and level of knowledge about contraceptive methods were estimated at 19.9% and 5.6%, respectively, which decreased in 2013<sup>1,2</sup>. A catch-up approach is important. Intrauterine device insertion during the immediate postpartum period has been shown to be safe, effective and convenient for women. The insertion of the intrauterine device during the immediate postpartum is already carried out in several countries such as China, Mexico and Egypt<sup>3</sup>. Because some women rarely have access to health services, Intrauterine device insertion during the immediate postpartum period is a convenient way to start a long-term, reversible family planning method<sup>4</sup>. The objective of this study was to determine provider performance, adherence and complications related to the insertion of PPIUD.

## II. Methodology

It was an Action Research (Applied) spread over a period of 6 months from November 2014 to May 2015. Five General Reference Hospitals (GRH) benefiting from the interventions of the Association Santé Familiale (ASF) were retained.

**Study design:** It was an Action Research.

**Study location:** The study was done at GRHs of Kamalondo, Kenya, Kampemba, Katuba and Kisanga.

**Study duration:** November 2014 to May 2015

**Sample size and sample size calculation:** The nonprobability sample of 113 patients was constituted.

**Subjects and selected method:** A total of 10 providers, including four midwives, four birth attendants, a multi-skilled nurse and a doctor were recruited and trained in PPIUD for 7 days. Monitoring and coordination were provided by the ASF in collaboration with the National Program for Reproductive Health (PNSR in french) and the Congolese Society of Gynecology and Obstetrics (SCOGO in french). Thus the formative supervision, the critical meetings and the system of reference and counter-reference were set up. For proficiency validation and performance monitoring, each provider must be able to place correctly five PPIUD within two months.

**Inclusion and exclusion criteria:** All patients who received pre-delivery counseling, during delivery, and in the immediate postpartum period. The others who did not receive the counseling were excluded.

**Procedure methodology:** The data were collected using a pre-established form and using ASF's documentary review and during exchange meetings or supervisions. The variables of study were the following: the socio-demographic aspect (age, marital status, parity, level of study), the adhesion and acceptability of the PPIUD (Motivation, insertion moment, arrival at the appointment of the 15th day, evolution), the acquisition of the skill and performance, and the Obstacles to the acceptance of PPIUD. Data were collected anonymously and women who received PPIUD were followed for a week to monitor side effects. A consent form was signed by each participant in the study. The acceptance of a PPIUD was free and confidential for each woman.

**Statistical analysis:** The collected data was captured and analyzed using the Epi Info 7.0 software. We used percentage calculations and averages.

## III. Results

### 3.1 Patients classified by the hospital

The table I shows that most patients were collected from the GRH of Kampemba (37.2%) then of Katuba (19.5%).

**Table I: patients classified by hospital structure**

Hospital structure	Staff (n = 113)	Percentage
GRHKamalondo	15	13,3
GRHKampemba	42	37,2
GRHKatuba	22	19,5
GRH Kenya	14	12,4
GRHKisanga	20	17,7

### 3.2. Sociodemographic aspects

The table II shows that 71 (62.8%) were between the ages of 18 and 35 years old. The average age is  $32 \pm 7$  years. Married patients represented 110 patients or 97.0%. The majority was multiparous (56.6%) compared to 8.8% of primiparas. Regarding the level of education, the majority of patients (76.1%) had a high school education against a patient who had a zero level of education. In relation to the profession, the majority were housewives (77.0%).

**Table II: Sociodemographic characteristics of the patients who benefited the insertion of the PPIUD**

Maternal age (ans)	Staff (n=113)	Percentage (%)
<18	6	5,3
18- 35	71	62,8
>35	36	31,9
<b>Mean <math>\pm</math> SD</b>	32 $\pm$ 7	
<b>Civil status</b>		
single	3	2,7
married	110	97,3
<b>Parity</b>		
Primiparae	10	8,8
Few previous deliveries	13	11,5
Multiparous	64	56,6
Great multiparous	26	23,0

Level of study		
No level	1	0,9
Primary	20	17,7
Secondary	86	76,1
University	6	5,3
Profession		
shopping	3	2,7
Employee	7	6,2
household	77	68,1
Technical profession	22	19,5
unemployed	4	3,5

### 3.3. Acceptability(motivation) and Membership and DIUPP

It follows from Table III that 86 patients (76.1%) adhered by provider motivation, the intrauterine device (IUD) was inserted in immediate postpartum at 56 patients or 49.5%. On the 15th day of the appointment, 56 patients answered this.

**Table III:** Distribution of patients according to PPIUD membership and acceptability

Parameters	Staff (n=113)	Percentage (%)
Motivation		
Initiated by the provider	86	76,1
provoked	4	3,5
Spontaneous	23	20,4
Moment of insertion		
postplacental	40	35,4
Immediat postpartum	64	56,6
Per cesarian section	8	7,0
Appointment of the day 15		
yes	56	49,5
no	57	50,4
Evolution		
Without complication	95	84,1
With Complications	18	15,9
Types of complications		
	n=18	
Lack of wiredescent	15	83,3
Infection	2	11,1
IUD rejection	1	5,5

### 3.4. Acquisition of competence and performance of the service provider

It emerges from this table that 89.4% were inserted by midwives or birth attendants. 4 out of 10 trained providers were qualified competent at 3 months. At 6 months, all have become qualified.

**Table IV:** Distribution of Providers by Jurisdiction and Performance in PPIUD

Provider quality	Number of PPIUD inserted	Percentage (%)
Doctor	11	9,7
Midwives and birthattendants	101	89,4
multi-skilled nurse	1	0,9
Certification of provider'sskill		
	staff (n=10)	
2 months	0	0,0
3 months	4	40,0
6 months	6	100,0

### 3.5. Analysis strength and weakness in of PPIUD

Critical meetings (with supervisions) were held with the trained providers to analyze the weaknesses and strengths that could influence the acceptance of a PPIUD by the women.

The major weaknesses (obstacles) identified by the providers were:

- At the level of the population, intoxications by misconceptions with the risk of development of cancer because of an IUD.
- At the level of the mothers, it was the fear, the ignorance and the authorization of the husband (partner) before accepting the PPIUD.
- At the level of provider it was resistance to this approach for fear of morbidity, frustration after failing once to set up an IUD and lack of motivation, lack of enough equipment, sabotage by other colleagues because they were not includedinthetrained provider team.

The major forces identified by the providers were the fact that Providers appreciated their training, the involvement of managers, the presence of social mobilizers and technical support in the form of formative

supervision and meetings and in addition the establishment of a team of experts for the management of complications.

#### **IV. Discussion**

##### **Sociodemographic aspects**

The tables show that 42 patients (37.2%), joined the PPIUD from the GRH of Kampemba, followed by 22 patients (19.5%) from the HGR Katuba. The age group of 18-35 years was in the majority (62.8%) The average age was  $32 \pm 7$  years old with 16 and 47 as extremes. Married patients were more represented (110 patients) or 97.0% against 3 patients or 2.7% who were single. The majority was multiparous (64 patients or 56.6%), compared with 10 or 8.8% who were primiparous. Regarding the level of study, the majority of patients (86 patients, or 76.1%) had a secondary school education against a patient (1 or 0.9%) who had a zero level of education. In relation to the profession, the majority were housewives (77.0%).

Regarding age, our results are similar to those of France<sup>4</sup> where the age group of 25-35 years was the most represented and slightly higher than Congo Demographic and Health Survey II where 26.4% of women used a contraceptive method<sup>1</sup>. This is because patients at this age are generally in favor of long-term contraceptive methods. In relation to marital status, our results are similar to those of Boubacar<sup>5</sup>, which was 82% of married patients. The findings found in our study can be explained by the fact that the population or society compared to single patients better perceives married patients at the level of family planning services. In addition to the majority of these patients having a stable relationship, they wanted to avoid another pregnancy for at least a long time after giving birth; while the divorced patient has opted for this long-term method until they have a stable couple life. Patients at the secondary school level were the most represented. This proves that the patients were still educated. These data are similar to Demographic and Health Survey of Mali IV, 2006<sup>6</sup>, in which all patients who had opted for the IUD were educated and are in contrast according to 2013-2014 Demographic and Health Survey of Congo II [1], in which 48.6% of women who used a contraceptive method were academic. This difference is explained firstly by the fact that in our study quality counseling in family planning / IUD was carried out among all the patients admitted in the structures of health. Our study shows that the majority of patients who benefited from the insertion of the PPIUD were housewives. This majority of women depends on their husbands, is in fact under their orders because they are economically poor, and have no other distraction except to procreate. Multiparas and large multiparas were the most represented, as the Demographic and Health Survey of Mali IV, 2006<sup>6</sup> data showed that multiparas and large multiparas accounted for the majority of IUD users. This reflects the fact that these categories of patients, most of whom have a high number of living children, needed to control births.

##### **Membership-acceptability of the PPIUD and quality-performance of the provider**

Seventy-six percent adhered following a motivation of the provider, the IUD was inserted in immediate postpartum at 56 clients (or 49, 5%). On the 15th day of the appointment, 56 clients answered this. To confirm adherence to the method; the client must be present at the appointment of the 15th day. Midwives performed the majority of the PPIUD insertions. This frequency is similar to that of Sidibé<sup>7</sup> who found in his study a majority (58.8%) of PPIUD inserted by midwives. Deme<sup>8</sup> found in her study that midwives did 100% of IUD insertions. This could be explained by the fact that the majority of providers trained in PPIUD during training sessions are midwives, they are the most represented in the family planning units, and this is well perceived by the customers for reasons of personal convenience, trust and freedom. Anyway it is a proof that the insertion of an IUD was delegated to the midwives by the doctors. The accessibility of the beneficiary will then be much improved.

##### **IUD complications observed in women.**

A considerable number of clients (84.1%) who received DIUPP did not show any side effects. The remaining percentage was divided by a few side effects experienced by patients in this way, including: lack of wire descent (83.3%), infections (11.1%) and IUD rejection (5%). A similar observation was made by Sidibé<sup>6</sup> and Paraguay<sup>8</sup> where the majority of patients did not show any side effects. These results are consistent with that of the literature<sup>9</sup> which shows that the rate of side effects is evaluated between 2 and 6%. This could be explained by the organism's tolerance to the copper IUD in the postpartum, and especially by the information provided by the providers to the clients about the fact that the post-insertion side effects can be confused with postpartum events normal bleeding and cramps.

##### **Analysis strength and weakness in acceptance to acceptance of PPIUD**

The women who gave birth held critical meetings (with supervisions) with trained providers to analyze the weaknesses and strengths that could influence the acceptance of a PPIUD. The major weaknesses (barriers)

identified by the providers were: At the level of population intoxication with wrong ideas with risk of development of cancer because of an IUD. At the level of the child, it was the fear, the ignorance and the authorization of the husband (partner) before accepting the PPIUD. At the level of provider it was resistance to this approach for fear of morbidity, frustration after failing once to set up an IUD and lack of motivation, lack of enough equipment, sabotage by other colleagues because they were not included in the trained provider team. The major forces identified by the providers were the fact that Providers appreciated their training, the involvement of managers, the presence of social mobilizers and technical support in the form of formative supervision and meetings and in addition, the establishment of a team of experts for the management of complications.

## V. Conclusion

The postpartum intrauterine postpartum device (PPIUD) as a family planning method is feasible in Katanga. There is a need for progressive scaling. An exercise period of 2 to 6 months would allow providers to acquire adequate skills for PPIUD.

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We thank the members of the ASF and his staff for the opportunity he gave us in consultancy for this experimentation, GRH authorities and staff who helped us to collect the data.

### Conflict of interest

No conflict of interest

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