ORIGINAL RESEARCH ARTICLE

Uptake and determinants of post-partum intra-uterine contraceptive device use among women in Kwazulu-Natal, South Africa: A prospective cohort study

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Abstract

This study aimed to determine the uptake of the post-partum intra-uterine contraceptive device (PPIUD) and characteristics of women choosing PPIUD. The authors evaluated safety, efficacy and satisfaction following PPIUD insertion via a prospective cohort study. 276 pregnant women (age: 16-50 years) gave informed consent and received a PPIUD. Follow up was between 6-8 weeks postpartum. The mean age was 25.8 years with 74.9% being gravida 2-4. The follow up rate was 60.5%. PPIUD was found to be safe and acceptable with 79.6% of participants experiencing no side effects and 74.3% expressing high satisfaction. No pregnancies were reported. Expulsions (n=15) were not associated with gravidity, parity, gestational age or medical and surgical risk factors. (p-value >0.05). PPIUD is a safe, effective and acceptable form of contraception. Participants experienced few side effects and high satisfaction. Low follow-up is a concern. *(Afr J Reprod Health 2022; 26[2]: 126-136).*

Keywords: Post-partum intra-uterine contraceptive device, long-acting reversible contraceptives, contraceptive service delivery

Résumé

Cette étude visait à déterminer l'adoption du dispositif contraceptif intra-utérin post-partum (DIUPP) et les caractéristiques des femmes choisissant le DIUPP. Les auteurs ont évalué l'innocuité, l'efficacité et la satisfaction après l'insertion du DIUPP via une étude de cohorte prospective. 276 femmes enceintes (âge : 16-50 ans) ont donné leur consentement éclairé et ont reçu un DIUPP. Le suivi s'est déroulé entre 6 et 8 semaines après l'accouchement. L'âge moyen était de 25,8 ans avec 74,9% de gravida 2-4. Le taux de suivi était de 60,5 %. Le DIUPP s'est avéré sûr et acceptable, 79,6 % des participants ne ressentant aucun effet secondaire et 74,3 % exprimant une grande satisfaction. Aucune grossesse n'a été signalée. Les expulsions (n = 15) n'étaient pas associées à la gravidité, à la parité, à l'âge gestationnel ou aux facteurs de risque médicaux et chirurgicaux. (valeur p > 0,05). Le DIUPP est une forme de contraception sûre, efficace et acceptable. Les participants ont ressenti peu d'effets secondaires et une grande satisfaction. Le faible suivi est préoccupant. *(Afr J Reprod Health 2022; 26[2]: 126-136).*

Mots-clés: Dispositif contraceptif intra-utérin post-partum, contraceptifs réversibles à longue durée d'action, prestation de services de contraception

Introduction

Almost half of pregnancies worldwide are unintended[1]. This is a problem in South Africa (SA) as well[2], with approximately two-thirds (64.33%) of pregnancies in Kwa-Zulu Natal (KZN) being unintended[3]. Post-partum women represent a key population to focus strategies to reduce the unmet need for contraception. Fertility can resume as early as 28 days postpartum in non-lactating mothers, with ovulation occurring before the first menses[4]. Between 40-57% of women engage in unprotected intercourse before 6 weeks post-partum[5]. Barriers to accessing post-partum contraception including lack of awareness, inaccessible health care facilities, lack of funds and preoccupation with the care of the infant all increase the risk of unplanned and poorly spaced pregnancies[6-7].

Spacing pregnancies by two years can decrease maternal mortality by 30% and childhood mortality by 10%[8]. Rapid repeat pregnancies are associated with an elevated risk of preterm deliveries and low birth weight babies[9]. The World Health Organization (WHO) recommends that women should wait at least 24 months after a live birth before attempting another pregnancy[10].

The immediate post-partum period presents an opportune time to provide contraception because most post-partum women are highly motivated to avoid pregnancy and they are in a facility with skilled attendants[11]. In SA 96.7% of all deliveries are conducted at a health care facility[2]. The National Contraceptive policy recommends a wide method mix of contraceptives be available for women to choose from and have promoted the use of long-acting reversible contraceptives (LARC) which are more effective than short-acting methods[12,13]. Worldwide intra-uterine device (IUD) use has increased and accounts for 8.4% of use in contrast with only 0.7 % in Sub-Saharan Africa and 0.9% in SA[14]. The reason for the underutilization in SA appears to be lack of appropriate knowledge of IUD's by women and healthcare providers[15,16]. Promotion of the use of LARC by the health department might explain the increase in IUD use by 37% from 2017/2018 to 2018/2019. Most of this increase was attributable to KZN[17].

The implant was introduced in SA in 2014 to offer women wider choice. Although both LARC methods are highly effective, advantages of the IUD over the implant is that it is non-hormonal, more cost-effective and has a lower incidence of problematic bleeding[13,18]. The absence of drug interactions is relevant as many women in SA are on chronic medication like antiretroviral therapy[19].

Side effects of the post-partum intra-uterine device (PPIUD) insertion are few and evidence suggests they are similar to interval insertion[20]. They include problematic bleeding patterns (23.5%) and expulsion (10%)[21]. Pelvic infection, pregnancy and perforation are rare to non-existent at 6 week follow up[22,23]. Although PPIUD is associated with higher rates of expulsion than interval insertion there is evidence that immediate insertion is associated with significantly higher continuation rates than insertion at six weeks[21,24]. Expulsion rates are reduced with post placental insertion (insertion within 10 minutes) compared to insertion after 10 minutes[21]. PPIUD expulsion rates may be higher when inserted at NVD compared to CS[20,25]. Little data exists about satisfaction rates in these women[26].

PPIUD was promoted by International Federation of Gynaecology and Obstetrics (FIGO) in a large scale initiative involving six countries[27]. Uptake during this initiative increased from 0.9-1.5% to 6-34% amongst the different countries[28]. PPIUD has also been successfully implemented in countries like India and Brazil[29]. A study conducted in Nigeria concluded that training providers in postpartum IUD counselling and insertion techniques resulted in a high acceptance rate of 41%[30]. Although there has not been any National initiative to scale up PPIUD in SA, the authors, as proponents of sexual and reproductive health in KZN, undertook to promote PPIUD in the district of eThekwini. As a pilot initiative, it required a rollout plan that included training, procuring commodity and creating demand. A critical component was monitoring and evaluation. To this end, a prospective study was conducted to assess PPIUD provision and follow up of women in a regional hospital in KZN, SA. To our knowledge, this is the first such study in SA. This study also aimed to document challenges and draw recommendations to contribute to the success and sustainability of such a service. It also serves as a pilot study for other facilities to benchmark from. The lessons learnt will be presented to the National Department of Health to guide sexual, reproductive and maternal health policies.

The aim of this study was to assess PPIUD provision in a regional hospital in KwaZulu-Natal, SA. The aim of this study was addressed by meeting the following objectives:

- To determine the uptake of PPIUD in women attending maternity services at a regional hospital.
- To determine the profile of women who choose to use the PPIUD.
- To assess safety and efficacy of the insertion technique by measuring complication and failure rates following both CS and NVD.
- To evaluate the follow up of women who chose PPIUD at birth.
- To assess the satisfaction rate of women who chose to use the PPIUD.
- To discuss challenges and draw recommendations based on the experience of conducting this study.

Methods

This was a prospective cohort study conducted at R K Khan Memorial Hospital, a regional hospital in KZN, SA. This is a busy public sector hospital caring for a population of just over 200000[31]. Eleven clinics, one Community Healthcare centre and one district hospital refer directly to this

facility. A further seventeen clinics and one Community Healthcare Centre refer only high risk patients to the facility. It is an academic hospital where registrars and nurses rotate for training under supervision. The average number of deliveries at this institution is 564 per month. The mean caesarean section rate is 32% per annum.

The target population was pregnant women between the ages of 16-50 years seeking maternity care. Prior to the commencement of this study all women attending maternity services were offered contraception in the form of barrier, injectables, oral and sterilisation only. Long acting reversible contraception (LARCS) i.e. implants and IUDs were not offered as immediate post-partum contraception. If women wanted LARCs, they would be advised to get this from the PHC after 6 weeks post-partum.

Patient recruitment

The study period was from 1. October 2018 to 31 August 2019. Women aged 16–50 years old who had at least one documented antenatal visit, delivered at gestational age 36–41 weeks and had antenatal haemoglobin levels > 8 g/dl were included in this study. Exclusion criteria included women with clinical features of chorioamnionitis at delivery, ruptured membranes for more than 18 hours before delivery and post-partum haemorrhage.

Procedure

Maternity staff were trained by the study principal investigator (PI) on PPIUD counselling and insertion as per USAID guidelines for PPIUD provision[32]. Each staff member had to conduct five insertions supervised by the PI before practising independently. All doctors (22) including intern trainees, medical officers, registrars and specialist obstetrician gynaecologists and midwives (20) were trained.

All women were counselled about PPIUD in the antenatal clinic, antenatal ward and in labour ward. Enrolled participants signed informed consent and a yellow sticker was placed on their antenatal record to identify them at delivery. Participants less than 18 years of age signed consent with assent from a parent or guardian. At delivery, the patient's willingness to continue participation in the study was reconfirmed. All contraindications were excluded and the device was inserted within 10 minutes of delivery of the placenta. Strings were not trimmed unless extending beyond the introitus. On discharge, patients were given a 6 week follow-up appointment.

Data were collected at enrolment, delivery and the follow up visit. (Addendum A and B). If a patient did not return for follow-up they were contacted telephonically and advised to visit their primary health clinic (PHC) if they could not keep to their appointment at the hospital. At the follow-up visit, the participants had a full clinical assessment. IUD strings were trimmed if necessary. Those with lost strings were referred for an ultrasound. They were asked to grade their satisfaction according to a five-degree rating scale ranging from very good to very bad.

Statistical analysis

The statistical minimum sample size for analysis was determined to be 152. Means and SD were used for statistical analysis (SPSS 24.00 for windows; SPSS Inc, Chicago, USA). Comparison between two groups was determined using a Chi-square test and the level of significance was $p < 0.05$. Multinomial logistic regression analysis was used to analyse the association of device expulsion with various factors.

Results

From October 2018 to August 2019, 286 participants were enrolled in the study. During this period 6199 deliveries were conducted. Ten participants did not have the IUD inserted because they withdrew consent or there were no trained staff on duty. Of the 276 patients who had successful PPIUD insertion, 167 (60.5%) completed follow up and were included in the final analysis. One hundred and forty-five (86.8 %) patients followed up at the hospital. Twenty-two (13.2 %) were consulted telephonically and confirmed that they visited a PHC and were assessed. Of those who were unreachable 26 had no telephone number recorded, 22 had an invalid telephone number recorded, 48 did not answer the telephone on three attempts.

The mean delivery rate for the study period was 564/ month. The mean caesarean section rate was 32%. In contrast 61 % of participants receiving and IUD had undergone a caesarean section (Table 2).

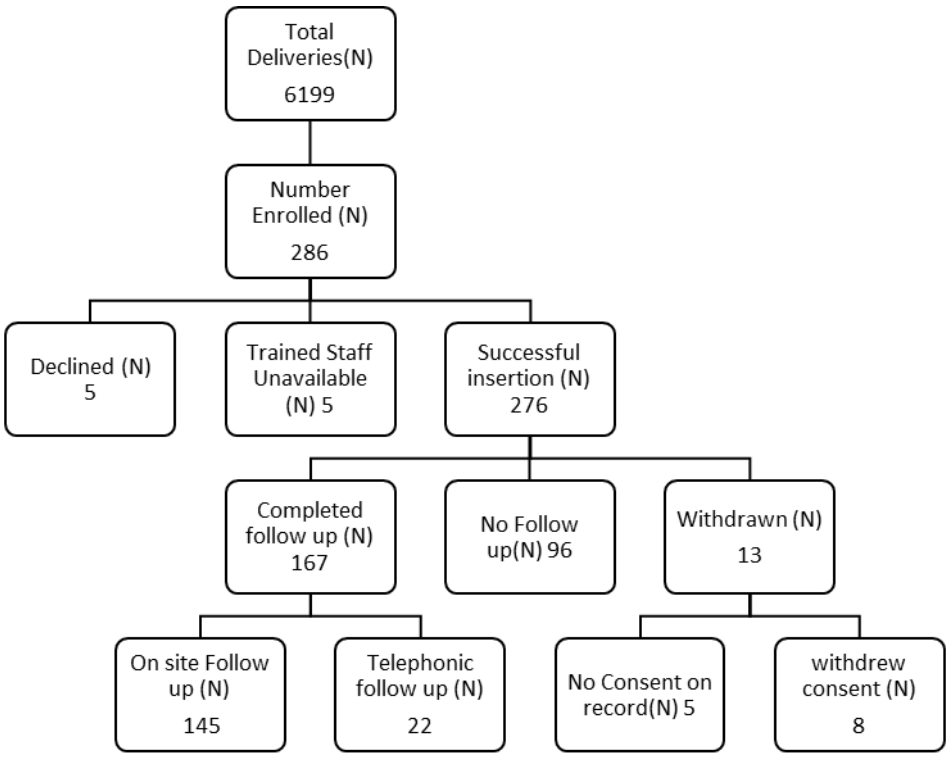

Figure 1: Flow chart of study participants

Table 1: Demographic and clinical data of study population

Variables	N=167	%
Age Group (in years)		
<20	21	12.6
20-35	130	77.8
>35	16	9.6
Gravidity		
1	35	21.0
2-4	125	74.9
≥5	7	4.1
Parity (before index delivery)		
0	39	23.6
1	78	46.7
2-4	49	29.3
≥5	1	0.6
Race		
Black	158	94.6
Coloured	1	0.6
Indian	7	4.2
White	1	0.6
Gestational Age		
36-38	31	18.6
38-40	104	62.3
>40	32	19.2
HIV Status		
Positive	31	18.6
Negative	136	81.4

Table 2: Mode of delivery

Variables	N=167	%
Delivery type		
CS	102	61.1
NVD	65	38.9

The majority (77.8%) of participants were in the age group of 20-35 years with a mean age of 25.6 years (SD 5.79). Almost three quarters of the participants were of gravidity 2-4. Almost all the women belonged to the Black race (94.6%). HIV infection rate was 18.6%. The majority (62.3%) of the women had a gestational age of 38-40 weeks, while only 18.6% had a gestational age of 36-38 weeks. This is comparable to the background characteristics of the women delivering at this hospital[33] (Table 1).

In the first month of the study, only 19 participants had IUD insertions. This number more than doubled mid-study to 41 successful insertions per month. Insertions began to decline in the final three months. The mean PPIUD insertion was 25.1/month accounting for 4.5% of women delivering during the study accepting IUD as their method of choice (Figure 2). The average incidence

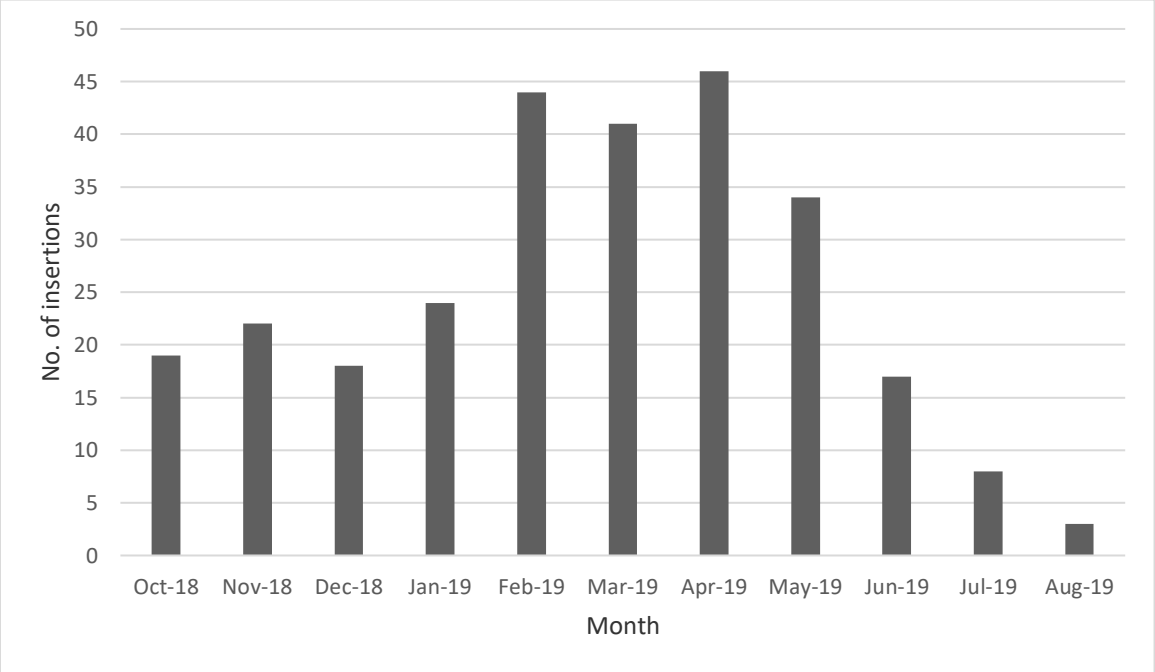

Figure 2: IUD insertions/ month during the study

Table 3: Side effects of IUD use

Side effects	N	%	Requested removal(N=3)
Nil	133	79.64	2
Vaginal discharge	16	9.58	1
Expulsion	15	8.98	N/A
Lost Strings	13	7.78	0
Problematic Bleeding	2	1.20	0
Lower abdominal pain	1	0.60	0

of postpartum contraceptive methods in the facility were as follows:

1. Oral contraceptive pill – 7.3%
2. Medroxyprogesterone injection - 32.3%
3. Noretisterone enanthate injection 2.1%
4. Female sterilization 5.2%

Of the participants that followed up there were no pregnancies reported. Most participants in the study (79.6%) did not experience any side effects. The most common side effect was vaginal discharge (9.6%). Participants with pathological discharges were treated and advised to use barrier contraceptives. Training included counselling of women to expect an increase in physiological discharge associated with the device. The expulsion rate was 9% (5.4% of expulsions occurred post CS and 3.6% after NVD). Of the13 participants (7.8%) presenting with lost IUD strings, 8 had CS (7.8%) and 5 had NVD (7.7%). All participants with lost strings had an ultrasound that confirmed correct placement.

Two participants reported problematic bleeding. They complained of increased menstrual flow compared to pre-pregnancy. Both participants were haemodynamically stable with haemoglobin levels of more than 10g/dl. They were reassured that abnormal uterine bleeding (AUB) is an expected and temporary side effect. The patients chose to continue with the IUD and were asked to return if the problem did not settle. No side effect required patient admission.

The delivery type (p-value 0.93) did not affect expulsion. There was no association between expulsion and patient factors such as; age, gravidity, parity and gestational age (p values > 0.05) (Table 4). The most common medical and surgical risk factor was hypertension (6/167) and having a previous CS (69/167) respectively. This is comparable to the women delivering at the hospital[33]. From our data, no surgical or medical factor was associated with expulsion (p-value of 0.58). However, the incidence of medical risk factors in this study is too small to draw firm conclusions. Although the follow-up appointments were scheduled for 6 weeks, on average participants followed up 72.4 days after insertion with only 2.4% of participants following up at exactly 42 days.

Table 4: Associations with expulsion

	Total(N)	Retained(N)	Expelled(N)	Expulsion rate (%)
Age (In years)				
<20	21	19	2	9.5
20-35	130	120	10	7.7
>35	16	13	3	18.8
Chi-Square Test	2.49			
p-value	0.29			
Gravidity				
1	35	32	3	8.6
2-4	125	114	11	8.8
≥5	7	6	1	14.3
Chi-Square Test	2.46			
P-value	0.78			
Parity				
0	39	36	3	7.7
1	78	71	7	8.9
2-4	49	44	5	10.2
≥5	1	1	0	0
Chi-Square Test	6.68			
P-value	0.25			
Delivery Type				
C/S	102	93	9	8.8
NVD	65	59	6	9.2
Chi-Square Test	0.01			
P-value	0.93			
Gestational age (weeks)				
<38	31	29	2	6.5
38-40	114	93	11	9.6
>40	32	30	2	6.3
Chi-Square Test	0.86			
P-value	0.65			
Medical Risk Factors				
Asthma	1	1	0	0
Epilepsy	1	1	0	0
Gestational Diabetes	3	2	1	33.3
Hypertension	4	4	0	0
SPE	2	2	0	0
Chi-Square Test	3.07			
P-value	0.8			
Surgical Risk Factors				
MDPP	1	1	0	0
Previous C/S x1	69	61	8	11.6
Previous C/S x2	11	10	1	9.1
Nil	86	80	6	7
Chi-Square Test	1.86			
P-value	0.58			

Most patients expressed high satisfaction rates with 74.3% rating the IUD as "very good". Only 5.4% rated the IUD as being very bad and 1.8% bad. Only 3 participants (1.8%) requested removal at follow up. They rated the IUD as very good, neutral and bad respectively (Figure3).

Discussion

The IUD is a safe, effective and acceptable form of contraception[34]. It has been promoted in many countries to reduce the unmet need for contraception in postpartum women[27,22]. In KZN, PPIUD is a recent addition to the method mix for post-partum women and it was important to evaluate the impact of this novel initiative. To our knowledge, this is the first prospective cohort study in SA to assess the implementation of a PPUID program and confirm that it can be successful within a busy and resource restrained setting. On duty PPIUD training was successfully conducted by

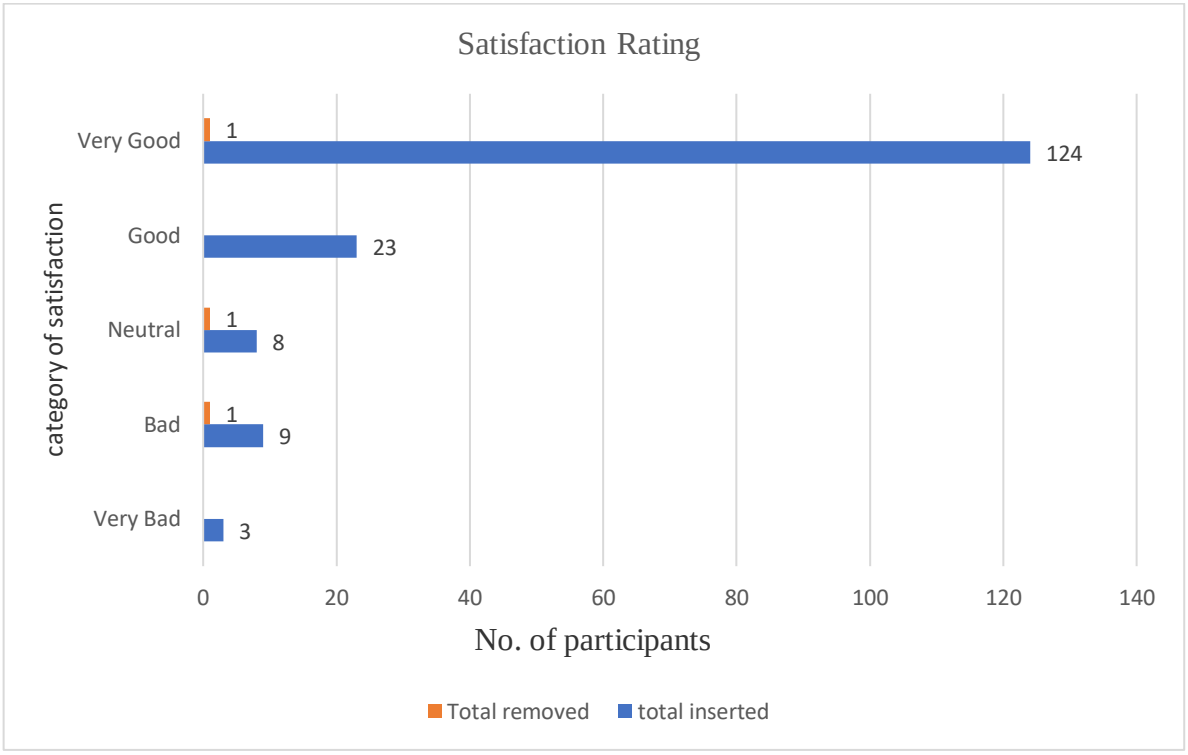

Figure 3: Satisfaction rating at follow up

staff for staff to ensure clinical work continued. All staff displayed enthusiasm and acquired the skill with ease. Participants were counselled and enrolled during the antenatal and early intrapartum period and it was evident that many women were unaware of the IUD as an option for postpartum contraception. This has been established in other local studies[16,2]. Patients were counselled and enrolled in the antenatal clinic individually in the consultation room by doctors as well as group counselling was performed twice a week by the family planning sister or in the antenatal ward and in the labour ward on an individual basis when they presented in early labour i.e. less than 4 cm dilation and before administration of any opiate analgesia. Patients were not counselled post-delivery for enrolment. Patients were willing to receive counselling and as the study progressed, it was encouraging that the uptake increased from zero to 45 (8%) post-partum women per month. Demographics and clinical data confirm that PPIUD is an acceptable and welcomed option among all South African post-partum women. Initially, the PPIUD was inserted by the study PI. As the staff were trained and competent IUD uptake increased from 14 insertions in the first month of the study to 41 insertions mid-study. Eventually all staff were trained however as the study concluded, the number of insertions decreased. This highlights the need for a champion to drive the program, persistently create demand and motivate staff.

Sixty-one percent of insertions of PPIUD were at caesarean section. The facility has a mean caesarean section rate of 32% per annum. The possible reasons for this discrepancy could be that insertion at NVD could be viewed as a painful procedure where as they would be under anaesthetic at caesarean delivery, those who are undergoing caesarean section may be more motivated to have long term family planning and consent taken for caesarean section is done by a doctor who may have more time and inclination to counsel in details as compared to midwives who are overburdened with clinical as well as administrative work. This could be better evaluated in a HCP questionnaire study to get deeper qualitative insights.

All PPIUDs were inserted successfully. There were no failed insertions. There were no immediate complications after insertion to necessitate removal e.g. post-partum haemorrhage, partial expulsion or perforation. This confirms a quick and easy skills development for maternity staff[35].

All patients were counselled and given 6 week follow up appointments. Only 167 (62.5%) patients attended their follow up appointment. This is concerning as the success of a PPIUD program depends on at least one follow-up visit to assess that the participant is well and satisfied with her chosen method. It is an opportunity to confirm proper placement, treat any adverse effects and reinforce counselling. Understandably, patients are preoccupied with the infant and need to take the baby for a 6-week clinic visit. This may be the reason they neglected to keep their hospital appointment. The follow up date given to participants was different from their routine 6 week postpartum and infant care follow up which was done at the local PHC. This was for the purpose of study completion on site. This was a clear disadvantage and could have contributed to the low follow up as women needed to add one more visit to their schedule. It would be advisable to have a comprehensive 6 week visit that includes the PPIUD check. This highlights the need to include the PHC as an integral part of the PPIUD program.

PPIUD was established as safe and effective in this study. Of the participants that did return for follow up, there were no contraceptive failures and 80% reported no side effects. Vaginal discharge was the most common side effect (10%). Leucorrhoea is a common occurrence in postpartum patients as well as IUD users [36]. It is more likely to be physiological because many post-natal women do not resume sexual activity by this time[37]. Current local practice is to diagnose discharges clinically and treat syndromically. Without laboratory confirmation, differentiation is often overlooked and over treatment possible. Both verbal and written information must be shared with patients at every visit. Common side effects, if expected, may be better tolerated as evidenced by only one patient requesting removal for side effects.

The expulsion rate of post placental IUCD in this study was 9%, which is similar to international literature[6,21,22]. Findings of Jatlaoui et al that CS PPIUD had lower expulsion rates compared to insertion at NVD was not confirmed in this study[21]. This could be because our insertions were immediate post-partum. Other studies showed factors influencing adverse events of PPIUD were skill of the inserter and age of the patient with parity showing no significant difference[38].

Age, parity, gravidity, and gestation did not affect expulsion in this study. Medical officers and registrars with the same level of skill inserted PPIUD at CS. Midwives, medical officers and registrars who received the same training inserted PPIUD at NVD. For these reasons level of skill as an influencing factor could not be assessed in this study. Medical and surgical risk factors were not associated with increased risk of expulsion. However, the number of participants with medical comorbidities was too small to postulate any conclusions.

An expulsion rate of 9% may be considered by some as high but this is balanced by the higher continuation rates of LARCs (78%) compared to injectable contraception(57%) and the combined hormonal contraceptives(68%)[12]. Continuation rates in our study were high (93%) and comparable to other studies[21]. Mishra et al found that 81.11% continued the method[27].

Two patients who requested removal of the IUD scored it as "neutral" and "very good". Both patients had delivered via CS and expressed that the reason for removal was cultural. They were advised by elders against contraception particularly the IUD. This finding reflects a need to gain deeper insights into socio-cultural barriers to contraceptive use in SA which may assist in understanding and mitigating fears and misconceptions. Behavioural, cultural and religious factors do contribute to the low contraceptive uptake[24]. It has been reported that women were less likely to ask to have the IUD removed at follow-up if inclusive and comprehensive counselling had been undertaken before insertion[35].

Follow up in this study was 6 weeks. Postnatal care is often side-lined in resource restrained countries[39]. Low follow up rates are a weakness in rollout of a successful PPIUD program and must be addressed. Long-term follow-up is also important to assess the full impact of PPIUD.

The main reason for rating the IUD as bad or very bad was expulsion, which is understandable and can be minimised by offering women counselling and re-insertion. It is encouraging that most patients expressed high levels of satisfaction with the PPIUD. This is consistent with limited international data[40]. Our study provides information on satisfaction not measured in other large scale PPIUD programs[24].

Challenges and recommendations

1. The program was initiated by a registrar in training (PI) who was rotating through the hospital for 12 months and not by permanent staff or management. Once the PI left the enrolment numbers decreased. An individual cannot undertake such a program. It requires participation of many role players. The initiative must be led by senior management to supervise, delegate and sustain the program. Champions are needed to continuously motivate staff and provide support on the ground.
2. The study focussed on the antenatal clinic nurses to counsel, screen and enrol participants however most participants were recruited in labour ward in early labour. This was not ideal. The PHC clinic nurses and hospital counsellors were not included in the program roll out. In hindsight we realise their crucial role in both creating demand and completing follow up. The clinical team must include doctors, nurses and counsellors in antenatal, delivery and post-natal services at the hospital and PHCs. Each role must be clearly defined and carried out by the responsible member for successful rollout of a PPIUD program.
3. In a busy maternity unit where staff shortages are common in-depth counselling especially about what to expect after insertion and side effects is difficult to conduct well. The use of group counselling, audio-visual aids like videos playing in waiting areas and information leaflets can be useful adjuncts to optimise counselling. Support staff like counsellors should also be trained to assist.
4. Some side effects were not managed optimally. An example is participants with expelled IUDs were not offered replacements. There must be standard operating procedures to manage all side effects effectively. This will improve outcomes and satisfaction rates.
5. We do not know how those participants who did not follow up are. Poor follow up has many drawbacks. It can impact negatively on the standard of care provided, outcomes and continuation rates. The follow up visit is imperative. It allows us to clinically assess the mother and child, confirm satisfaction with the method, confirm placement, trim strings, manage any side effects and reinforce counselling.
6. There were two cases where removal of PPIUD was requested for cultural reasons. Community advocacy to create awareness, understanding and demand may help prior to rolling out a new service. This may also help providers to understand cultural beliefs and address misconceptions and myths.

Strengths

This was a prospective study that was adequately powered to provide useful information. Both caesarean and vaginal deliveries were assessed. This PPIUD program was a new and novel intervention that was embraced by both patients and staff. This proves it is an acceptable and much-needed intervention. This pilot study documents success on a small scale, which can be expanded nationally. The National Department of Health of South Africa can use this information to draw up policies and guidelines. This study highlights the need for further qualitative research to understand cultural or other barriers to PPIUD as a method of contraception both for women and providers.

Limitations

1. This was a single-site study however the outcomes are measurable.
2. It is a short term follow up study. Conclusions about efficacy and continuation rates will be more meaningful with long term follow up which is planned.
3. Ultrasound was not offered to all patients at follow up. The use of ultrasound is contentious and guidelines are unclear[41]. It might have been helpful to determine malposition's and partial expulsions. There is a 14-times higher incidence of pregnancy with an intracervical IUD than an IUD positioned at the fundus[42].

Ethics approval

Relevant approvals were obtained from the R K Khan Hospital, Kwa-Zulu Natal provincial department of health and University of Kwa-Zulu Natal Biomedical Research and Ethics Committee (BE 539/18).

Conclusion

PPIUD in KwaZulu-Natal is an acceptable form of family planning. It provides an additional choice for post-partum women. It is safe and effective with a low incidence of side effects provided there is adequate training and follow up. It is very possible to provide this critical service within busy, resource restrained facilities. High satisfaction rates are promising and will contribute to a positive impact in the community.

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Contribution of authors

Dr Upkar B Gungapursad: Conceived study idea and contributed to study design.
Collected and analysed data. Contributed to preparation of manuscript.
Dr Mala Panday: Contributed to study design. Contributed to preparation of manuscript.

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