

# Immediate Postpartum and Post Abortion Long Acting Reversible Contraception in Referral Level Facility: Time to Make up for lost Opportunities

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## Abstract

**Objective:** To determine the frequency and acceptance of post-partum and post-abortion long-acting reversible contraceptive methods (LARC) at Maternal and Child Health Center (MCHC), Pakistan Institute of Medical Sciences (PIMS), Islamabad.

**Methodology:** A retrospective study of postpartum and post-abortion women in MCHC unit 1 was undertaken from 1<sup>st</sup> January 2015 to 1<sup>st</sup> June 2017. The data of women who accepted LARC was retrieved from departmental registers. Their gravidity and mode of delivery was noted and frequencies calculated. Data from Family Planning Reproductive Health Services (RHS-A) center affiliated with MCHC was also collected for determining uptake of interval LARC during this period.

**Results:** Total number of deliveries in MCHC I, PIMS from January 2015 to June 2017 were 13844. Among these, 1122 (8.1%) had postpartum intrauterine device insertion (PPIUCD) and 80 (0.5%) subdermal implants were placed. Total Manual and electrical vacuum aspiration and Evacuation and curettage (E&C) were 670 over these two and half years. Among 670 women receiving postabortion care, 23 (3.4%), women had subdermal implants. No postabortion IUCD was inserted in this group of women. The uptake of postpartum LARC for Primigravidae, Multigravida and grand multigravida was 0.6%, 9.8% and 17.8%, respectively (p-value 0.001). As regards the mode of delivery, acceptance of post-partum LARC was similar for vaginal deliveries and cesarean section (p=0.790). During the period of study 13312 women visited the family planning RHS-A center and 2,227 (16.7%) had interval IUCD while 144 (1%) accepted subdermal implant.

**Conclusion:** As almost 8% women opted for LARC in the post-partum and post-abortion period, their use in referral level facilities is a timely initiative to increase the use of modern contraceptives. This can reduce the high unmet need for contraception and more women can be counseled to avail LARC at this time of contact with referral healthcare facility.

**Key Words:** LARC, PPIUCD, Subdermal implants

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## Introduction

Unintended pregnancies remain a global health issue despite considerable advances in contraceptive technologies. Each year, approximately 208 million

pregnancies occur worldwide. About 41% of these are unintended and about 21% end in elective, induced abortion.<sup>1,2</sup> Contraceptive availability and use can

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significantly decrease the rate of abortion of unwanted pregnancies. Among developed countries, the United States has one of the highest unplanned pregnancy rates.<sup>1</sup> Helping women plan on whether to have children and when to have them by increasing access to contraception results in healthier pregnancies and infants. An important time to start contraception is immediately after birth or an abortion as women are extremely motivated at this time. The choice whether to use birth control of any type is a personal one, but helping and guiding women on what, when, and how to start, assists in decision making.

Generally, young women who have low income and less education, experience higher rates of unintended pregnancies and birth due to lack of access to affordable family-planning services.<sup>2</sup> Women with at least one live birth make up 61 percent of unintended pregnancies and 75 percent of unwanted births, according to the data collected from the National Survey of Family Growth.<sup>3</sup> Therefore, any efforts to improve access to contraceptives should highlight the importance of increasing the availability of long-acting reversible contraception following birth or abortion. In Pakistan, 1 in 4 Married Women of Reproductive age (MWRA) have an unmet need for Family Planning. Most of this need is for limiting families. Women recognize it early, yet they unable to access it. Addressing the need for limiting the family is crucial and can raise the current low contraceptive prevalence rate (CPR) of Pakistan. Women with an unmet need for spacing are a distinct group who should receive wider choices of methods and improved quality of services. The Lady Health Workers can play a critical role in identifying and referring women with an unmet need for family planning to facilities in the public or private sector.<sup>4</sup>

LARCs include Injectables, Intrauterine Contraceptive devices (IUCD) and Implants that are highly effective methods of non-permanent contraception for an extended period without requiring user action.<sup>4,5</sup> In government facilities due to the subsidy, copper IUCD and Sub-dermal implants i.e. Implanon and Jadelle are available for immediate post-partum and post-abortion use.

This study was undertaken to assess the role of post-partum and post-abortion long-acting reversible contraception as an initiative for prevention of

unintended pregnancies within the existing public healthcare system.

## Methodology

A retrospective case-control study was conducted at MCH Centre, Unit-I at PIMS, SZABMU Islamabad from 1<sup>st</sup> January 2015 to 1<sup>st</sup> June 2017. During the study period of two and a half years, the total number of deliveries at the MCH center unit-1 PIMS, Islamabad were retrieved from statistics office (HMIS database) of MCH center. Convenient sampling technique was adopted. The number of clients who visited the family planning clinic (RHS-A Centre) in MCHC Outpatients during this period was collected from Family planning clinic registers. Data of postpartum LARC use was retrieved from departmental delivery and morning meeting registers. The women receiving LARC were counseled during their antenatal visits in OPD and also at the time of arrival in the emergency department for delivery. After excluding contraindications, the women were given the option to choose from the standard contraceptive techniques of postpartum LARC i.e. copper IUCD and subdermal implants. Contraindications to PPIUCD were signs of chorioamnionitis, ruptured membranes more than 16 hours and unresolved postpartum hemorrhage. Contraindications to subdermal implants were a history of thromboembolic disease, breast carcinoma, decompensated cirrhosis. Informed written consent was taken from the woman or her spouse.

Outcome measures were the frequency of uptake of postpartum LARC. Association of LARC acceptance with parity and mode of delivery was determined. The data was analyzed by SPSS software. Percentages and frequencies were calculated for categorical variables. For determining the association between mode of delivery and parity with LARC, the chi-square test was applied. A p-value of < 0.05 was considered significant.

## Results

In two and half year's duration from 1<sup>st</sup> January 2015 to 1<sup>st</sup> June 2017, there were a total of 13844 deliveries conducted in MCH Centre, Unit-I of PIMS Hospital, Islamabad. Of these, 8570 (61.9%) were vaginal deliveries and 5274 (38.1%) were cesarean sections. A total of 1122 (8.1%) women were administered postpartum LARC. Regarding the 5274 women

undergoing cesarean sections, 396 (7.5%) had PPIUCD while among the 8570 vaginal deliveries, 726 (8.4%) accepted PPIUCD (p-value, 0.790). Among these women, only 26 (0.6%) primigravidae had PPIUCD. However, 772 (9.8%) multigravidas opted for PPIUCD whereas 324 (17.8%) of grand multigravidas had PPIUCD (p-value 0.001), as shown in Table II.

**Table I: Gestational history and Mode of delivery (n=13,844)**

	n (%)	LARC
<b>Gravidity</b>		
Primigravida	4,214 (30.4%)	252 (0.6%)
Multigravida	7,808 (56.3%)	772 (9.8%)
Grand multigravida	1,822 (13.1%)	324 (17.8%)
<b>Mode of delivery</b>		
Vaginal Delivery	8,570 (61.9%)	726 ( 8.5%)
Cesarean section	5,274 (38.1%)	396 ( 7.5%)

**Table II: Distribution of LARC according to gravidity and mode of delivery (n=13,844)**

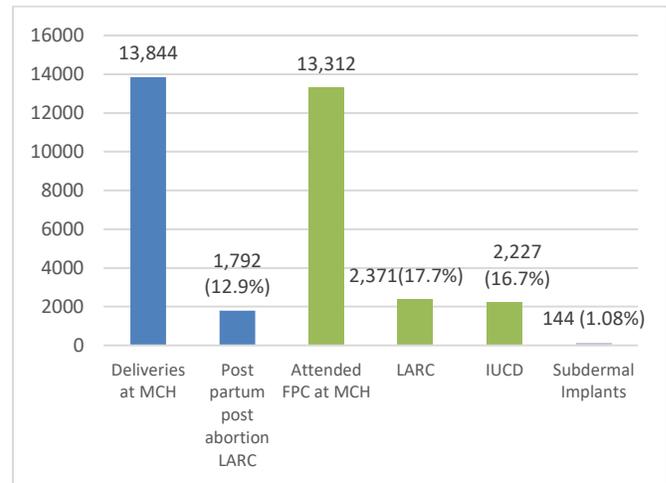
	LARC post-partum (n=1,122)	NON-LARC (n=12,722)	p-value*
<b>Gravidity</b>			
Primigravida	26 (2.3%)	4188 (32.9%)	0.001
Multigravida	772 (68.8%)	7036 (55.3%)	
Grand multigravida	324 (28.8%)	1498 (11.7%)	
<b>Mode of delivery</b>			
Vaginal Delivery	726 (64.7%)	7844 (61.3%)	0.790
Cesarean section	396 (35.3%)	4878 (38.3%)	

\*chi-square test applied with P<0.05 considered significant

Six hundred and seventy women received post-abortion care at MCH Unit I and 23 women (3.4%) had subdermal implants while no IUCD insertion was done post-abortion. The combined postpartum and post-abortion long-acting reversible contraceptive acceptance was noted in 1145 out of 14514 women (7.8%) at MCH center, PIMS Islamabad

A total of 13,312, non-pregnant clients visited Family planning clinic (RHS-A) center at MCHC, PIMS during this two and half year period. Interval LARC was given to 2371 (17.7%) women. Of these, interval copper intrauterine contraceptive device (IUCD) was placed

in 2227 (16.7%) clients while subdermal implants were fitted in in 144 (1.08%) as shown in Figure.1



**Figure I: Frequency of postpartum postabortion LARC at MCH Centre**

## Discussion

The current study found postpartum and post-abortion long acting reversible contraceptive acceptance rate of 8% at MCH center, PIMS Islamabad. This raises a question mark on the unmet contraceptive needs of these women and the counseling strategies of the concerned healthcare staff. Women with unmet needs have been defined as those who want to stop or delay childbearing but are not using any method of contraception.<sup>5</sup> In this study, we note that 92% of these women did not avail any method of contraception at this time. One similar study from India noted that (86.0%) of their cases did not accept contraception postpartum and 88% of these subsequently had unplanned pregnancies, many of them later seeking an induced abortion.<sup>6</sup> Several other studies have also reported comparable results regarding missed opportunities of contraception after delivery.<sup>7,8</sup>

Many previous studies have noted adverse maternal and fetal outcomes often related to closely spaced pregnancies. WHO has disseminated the concept of healthy timing and spacing of pregnancy (HTSP) to help women and families in delaying or spacing their pregnancies adequately to achieve the optimal health outcome for women, their newborn infants as well as their previous infants.

In the present study, only 17.7% women who visited the family planning clinic accepted interval LARC. The National Institute of Population Studies, Pakistan in

2008 reported that non-users of family planning methods were 46% and unmet need for Family planning was 24% which is very high.<sup>9</sup> In India, a higher unmet need of contraception in the first year after delivery has been witnessed at 65.0%.<sup>10</sup> According to the Pakistan Demographic and Health Survey in 2012-13,<sup>11</sup> Pakistan has a low Contraceptive Prevalence Rate (CPR) about 35% as compared to other Muslim countries like Iran and Turkey which have Contraceptive Prevalence Rates of 79% and 71% respectively.<sup>12</sup>

Postpartum LARC, in addition to being a highly effective method of contraception, has been considered exceptionally cost-effective even in the developed countries like the USA. According to USA cost estimations, if used for 5 years, the copper IUCD costs \$129 per year (including the cost of the device, pregnancies that occur despite the IUCDs use, and side effects). Similarly, the implant costs \$319 per year, and the levonorgestrel IUCD costs \$404 per year.<sup>13</sup> When compared to a low resource country like Pakistan where these services are available free of cost to the general public, the uptake still remains low.

A study conducted in the United Kingdom concluded that investment in professional education and training is needed for health professionals in general practice if the goal of increased provision of long-acting contraceptive methods is to be realized.<sup>14</sup>

Our study found that multigravidas (9.8%) and grand multigravidas (17.6%) had a higher acceptance rate of LARC as compared to primigravidas (0.6%). A study conducted in JPMC Karachi reported PPIUCD uptake in 26% of multigravidas.<sup>15</sup> In our study, the acceptance of postpartum LARC was similar for vaginal deliveries and cesarean section (p-value, 0.79).

The majority of the public sector, primary care facilities are not providing, twenty-four hours coverage of Emergency Essential Neonatal and Obstetric Care services. Often the only contact of women with health workers is at the time of delivery or when seeking post-abortion care. A dedicated counselor or healthcare worker can play a key role in assisting women in making the decision to avail Postpartum LARC in the MCH facilities. The way forward for improving the low contraceptive prevalence and reducing high unmet need of contraception is for the Obstetrics and Gynecology

referral facilities to play a leading role in promoting modern long-acting reversible contraceptive methods among women availing their services.

## Conclusion

In this study, postpartum and post-abortion acceptance of LARC was about 8% only. The use of LARC in Referral level, Obstetrics and Gynecology units is a useful initiative to increase the use of modern contraceptives thereby improving reproductive health indicators.

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