

# Immediate postnatal contraception: what women know and think

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## ABSTRACT

**Introduction** Postpartum women are at risk of rapid repeat, unplanned pregnancy with associated adverse outcomes for mother and child. We aimed to better understand their contraceptive needs to improve delivery of services and prevent unplanned pregnancies.

**Methods** A cross-sectional survey of women on the postnatal ward of an inner-city hospital was administered over a 6-week period in June and July 2017 to determine their level of knowledge, intentions and preferences regarding postnatal contraception.

**Results** 272 women were surveyed: 86% of all women on the postnatal ward during the study period. 10% (26/272) had never used any method of contraception previously and 22% (59/272) had ever used a long-acting reversible contraception (LARC) method. 18% (48/272) recalled a health professional speaking to them about contraception at any point during their pregnancy and 32% (87/272) said they needed more information to decide on their postnatal contraceptive method. 54% (147/272) of women did not think any LARC methods were safe immediately postnatally, rising to 71% (194/272) if breastfeeding. However, 47% (129/272) of women said that they would prefer to get their contraception from the ward before discharge and 46% (126/272) were likely to accept LARC, if safe, in this setting.

**Conclusions** Almost half the women in our survey would welcome provision of postnatal contraception, including LARC, on the postnatal ward but the women surveyed currently lack the knowledge to make informed choices in this setting. There is therefore a need for effective, tailored contraceptive choices discussions with every woman during pregnancy, as well as integrated planning for postnatal provision of the woman's chosen method.

## INTRODUCTION

Rapid repeat pregnancies are associated with worse outcomes for mother and child. An interpregnancy interval of less than 12

## Key messages

- ▶ Women surveyed on the postnatal ward currently lack key knowledge to enable them to make informed decisions regarding their use and choice of contraceptive method.
- ▶ The majority of women surveyed were not aware that long-acting reversible contraception (LARC) methods are safe in the immediate postnatal period and when breastfeeding.
- ▶ Almost half the women surveyed would prefer postnatal contraception provision on the postnatal ward and said that they were likely to choose LARC in this setting.

months increases the risk of preterm birth, low birth weight, stillbirth and neonatal death.<sup>1</sup> A 2016 UK study found almost 1 in 13 women presenting for abortion or delivery has conceived within 1 year of giving birth.<sup>2</sup> Recent guidance from the Faculty of Sexual & Reproductive Healthcare (FSRH) states that maternity service providers should ensure that all women after pregnancy have access to the full range of effective contraceptive methods and be able to provide these immediately after childbirth,<sup>3</sup> but this is not currently routine clinical practice in UK NHS maternity hospitals.

In order to avoid rapid unplanned pregnancy women should be offered effective contraception from Day 21 postpartum.<sup>4</sup> All progestogen-only methods, including all long-acting reversible contraception (LARC) methods (ie intrauterine methods, implants and injectables) are safe for women immediately postnatally and when breastfeeding.<sup>5</sup> However, new mothers are faced with multiple barriers to accessing effective and timely contraception in the community.<sup>6–9</sup> Providing in-hospital postnatal contraception could



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avoid these barriers and provide a unique opportunity to reach more vulnerable groups, including women with drug, alcohol or mental health problems, who may not attend for routine postnatal care or proactively seek contraception.

Given the potential benefits of reducing the rates of unplanned and rapid repeat pregnancy, there is a need to understand whether the provision of early postnatal contraception, including LARC methods, is acceptable to women on the postnatal ward. The aim of this study was to better understand the contraceptive needs of postpartum women to improve delivery of services and prevent unplanned pregnancies. The specific objectives were to determine: (i) the level of knowledge of postnatal contraception among women on the postnatal ward; (ii) women's intentions with regard to their postnatal contraception, including the proportion intending to use LARC methods and those who would choose LARC if offered before discharge from hospital; and (iii) women's views as to when, where and by whom postnatal contraception should be provided.

## METHODS

An anonymous, confidential and voluntary survey was conducted over a 6-week period, 19 June to 28 July 2017, on the postnatal ward of University Hospital Lewisham (UHL), London, UK. Approximately 4000 deliveries occur annually at UHL, which serves an inner-city London borough with a young, diverse population that has high conception and abortion rates compared with London and the rest of England.<sup>10</sup>

All women admitted to the postnatal ward, including those under the age of 16 years and non-English speakers, were eligible to participate in the survey and were given a brief information leaflet. Women were then approached by a member of the research team (all either nurses or doctors working in sexual and reproductive health (SRH) or public health) who explained the survey to them and obtained verbal consent. The questionnaire was administered verbally and documented by the health professional at the bedside or elsewhere on the postnatal ward. LanguageLine, a telephone translation service, was used where necessary. Partners and/or other visitors were present according to the wishes of the woman.

The survey was divided into sections focusing on past experience, knowledge, and future intentions and included the London Measure of Unplanned Pregnancy (LMUP).<sup>11</sup> In a pilot study of 118 women, 35% reported they would choose an implant if immediately available postnatally,<sup>12</sup> which informed the sample size calculation that 200 participants would be required to detect a similar effect on LARC uptake with a precision of  $\pm 10\%$ .

The survey data were double-entered and validated using Microsoft Access 2010 and analysed in Microsoft Excel and Stata (version 13.1). Descriptive

statistics were used for demographics and Pearson chi-squared ( $\chi^2$ ) tests for comparisons of categorical variables. Binary logistic regression was used to investigate factors associated with likelihood of choosing LARC on the postnatal ward. Crude odds ratios (ORs) were calculated and a conservative approach was adopted in which associations with a p value  $< 0.20$  were included into the multivariate regression model. Associations are reported as OR or adjusted OR (AOR) with 95% confidence intervals (95% CIs). The study was reviewed and approved by London City & East NHS Research Ethics Committee. The results will be disseminated to interested participants via the UHL Research and Development Team.

## RESULTS

317 women were admitted to the postnatal ward following delivery during the 6-week study period and a total of 272 (86%) women completed the questionnaire. 31 women declined to participate in the survey and the remaining 14 were consistently unavailable. 152 women (56%) were alone when the questionnaire was administered. 120 (44%) women had someone present, most commonly a partner (100), and 25 had a partner and/or family member or friend present. 19 women (7%) used some language translation. Sample demographics are summarised in [table 1](#).

### Past contraception use, pregnancy planning and preparation

10% (26/272) of women had never used *any* method of contraception previously (including barrier methods and withdrawal). The most commonly ever-used methods were male condom (210, 77%), the combined oral contraceptive pill (153, 56%) and emergency oral contraceptive pill (106, 40%). Previous LARC use was less common: implant (58, 21%), intrauterine device (IUD) (29, 11%), injection (28, 10%) and intrauterine system (IUS) (11, 4%). 59 women (22%) had used at least one LARC method in the past. 17% (22/131) of women who had children prior to their most recent delivery had had a rapid repeat pregnancy with another child under 2 years of age.

According to the LMUP score, 32% (87/272) of the pregnancies in our sample were unplanned (0–3) or ambivalent (4–9) ([table 2](#)), which showed good agreement with national data.<sup>13</sup> 43% (116/272) of women did not undertake *any* actions before they became pregnant to improve their health in preparation for pregnancy. The number of women reporting planned pregnancies was significantly higher in women who had someone present at the time of the survey ( $p < 0.02$ ).

48 women (18%) recalled a health professional speaking to them about contraception at any point during their pregnancy, with this most commonly being a midwife (18, 7%) or general practitioner (GP) (12, 4%). This was not associated with better knowledge scores or planning postnatally.

**Table 1** Sample demographics of the study group

Characteristic	N=272
Age (years) (median (range))	32 (17–47)
Ethnicity (n) (%)	
White British/Irish	87 (32)
White other	68 (25)
Black African	44 (16)
Black Caribbean	15 (6)
South Asian	15 (6)
Mixed	23 (8)
Other	20 (7)
World region of birth (n) (%)	
Americas	15 (5)
Asia	16 (6)
Caribbean	9 (3)
Europe (non-UK)	64 (23)
Northern Africa	1 (0.4)
Sub-Saharan Africa	38 (14)
Oceania	6 (2)
UK	122 (45)
Religion (n) (%)	
None	100 (37)
Christian	145 (53)
Muslim	15 (6)
Hindu	8 (3)
Buddhist	1 (0.4)
Other	3 (1)
Employment at beginning of pregnancy (n) (%)	
Unemployed	76 (28)
Employed	196 (72)
Years of education post age 16 years (n) (%)	
None	32 (12)
<2 years	65 (24)
>2 years	170 (63)
Still in full-time education	4 (1)
Marital status (n) (%)	
Married	149 (55)
Single with partner	109 (40)
Single (no partner)	9 (3)
Single (partner status unknown)	1 (0.4)
Separated	2 (1)
Divorced	2 (1)
Living with partner (n) (%)	
Yes	218 (83)
No	37 (14)
Some of the time	7 (3)
First-time mothers* (n) (%)	
Yes	141 (52)
No	131 (48)

Continued

**Table 1** Continued

Characteristic	N=272
Children† (n) (%)	
1	137 (50)
2	81 (30)
3	34 (13)
4	17 (6)
7	3 (1)

Data are median (range) for age or n (%) for categorical variables. Data were missing for country of birth (1) and years of education (1). Employment includes part-time work and self-employment. The total number of women considered in the 'living with partner' section is 261 excluding the 11 women who said they did not have a partner or were separated.

\*Women who answered that they had no other children.

†There were four sets of twins and no other multiple births in our sample. This accounts for the difference in the number of first-time mothers and women with one child.

### Knowledge of postnatal contraception

31% (83/272) of women correctly identified that the earliest it is possible to get pregnant after having a baby is 3–6 weeks but another third did not know or overestimated this time period. The remaining third thought you could get pregnant immediately after delivery. In addition, 118 (43%) of women did not know the recommended interpregnancy interval<sup>14</sup> or thought that this was less than 12 months.

Regarding method safety, 22% of women mistakenly responded that all contraceptive pills were safe in the immediate postpartum period. For each LARC method, a minority of women knew that they are safe in the immediate postpartum period or when breastfeeding (table 3). 20% of the sample knew the IUS is safe in the immediate postnatal period and when breastfeeding. 15% reported knowing that contraceptive injections are safe while breastfeeding and 13% knew that oral emergency contraception can be safe while breastfeeding.

More than half the women (54%; CI 48.1% to 60.0%) didn't think there were *any* safe LARC options immediately postnatally. This rose to more than two-thirds (71%; CI 65.9% to 76.7%) if breastfeeding. When considering hormonal methods (IUS, implant, injection and pills), over one-third of women (39.7%; CI 33.9% to 45.5%) thought there were no safe hormonal options immediately postnatally rising to 56% (CI 50.4% to 62.1%) if breastfeeding. Approximately one in four women (27%; CI 21.9% to 32.5%) believed there were *no* safe LARC nor hormonal options immediately postnatally if they were breastfeeding (i.e. only barrier methods were an option for them).

### Future intentions

The vast majority of women (247; 91%) were not planning a pregnancy in the next year. When asked about their contraception decisions, 8% (21/272) of women

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**Table 2** Pregnancy intention and effect of others present

LMUP category		Others present			$\chi^2$ P value
		No	Yes	Total	
Planned	%	61.18	76.67	68.01	0.005
	n/N	93/152	92/120	185/272	
Ambivalent	%	29.61	16.67	23.90	0.013
	n/N	45/152	20/120	65/272	
Unplanned	%	9.21	6.67	8.09	0.445
	n/N	14/152	8/120	22/272	

The LMUP questions are scored 0–2 with a total score of 0–12; each point increase represents an increase in pregnancy planning. LMUP scores of 0–3 are categorised as unplanned, 4–9 as ambivalent, and 10–12 as planned. LMUP, London Measure of Unplanned Pregnancy.

said they either did not need or did not intend to use contraception. 31% (84/272) had decided on their method and 32% (87/272) needed more information. The remainder had not decided or said it was not the right time for them to think about it. Data were missing for 1% (2/272).

Five women (2%) had received LARC contraception or sterilisation post-delivery (three IUS and one sterilisation at the time of elective caesarean section and one implant on the postnatal ward). 112 women (41%) had had a caesarean section (42 of these were elective and six women had had a discussion of intrauterine methods before delivery). However, 26 women (23% of those having caesarean sections) said they were likely or very likely to have accepted this offer. 111 women (41%) said they were likely or very likely to use a LARC method following this pregnancy and 126 (46%) said they were likely or very likely to use a LARC method if it was available and safe to provide it in the hospital before discharge.

In the logistic regression analysis women were more likely to choose LARC if they reported previous LARC use when compared with LARC naïve women (AOR 2.583; 95% CI 1.254 to 5.320) and no education after the age of 16 years compared with women

with less than 2 years education after 16 years (AOR 4.048; 95% CI 1.354 to 12.103) while women of white other ethnicity were less likely to report choosing LARC (AOR 0.365; 95% CI 0.168 to 0.794) (table 4). A total of 39 (14%) women were identified as being at increased risk of having a rapid repeat pregnancy (teenagers, women who reported they had a baby of less than 2 years of age and women whose recent pregnancy was unplanned with LMUP 0–3). The majority of this group (72%) were likely or very likely to choose LARC on the postnatal ward versus 42% in the rest of the sample (OR 3.506; 95% CI 1.666 to 7.381), although this was not significant at multivariate analysis (AOR 1.118; 95% CI 0.322 to 3.880).

162 women (61%) of the sample were intending to get their contraception from their GP. However almost half (129, 47%; CI 35.6% to 53.4%) said they would prefer to get it from the ward before discharge. Women who had already had children were significantly more likely to have said they would prefer to get their contraception on the postnatal ward (55.8%; CI 47.2% to 64.4%) compared with women who had just delivered their first child (44%; CI 35.6% to 52.8%) (p<0.02).

**Table 3** Knowledge of safety of contraceptive methods

Method	N	Safe in the immediate postnatal period?			Safe when breastfeeding?			
		Yes % (n)	No % (n)	Don't know % (n)	Yes % (n)	No % (n)	Don't know % (n)	
<b>LARC</b>								
IUD	271	24 (65)	30 (80)	46 (126)	270	36 (97)	6 (17)	58 (156)
IUS	270	20 (54)	23 (63)	57 (153)	270	20 (55)	13 (34)	67 (181)
Implant	271	33 (91)	14 (37)	53 (143)	270	22 (59)	15 (41)	63 (170)
Injection	271	31 (84)	15 (40)	54 (147)	270	15 (40)	19 (51)	66 (179)
<b>Oral</b>								
All pills	271	22 (59)	32 (87)	46 (125)	270	12 (32)	35 (94)	53 (144)
Some pills	271	49 (132)	12 (32)	39 (107)	270	43 (116)	9 (24)	48 (130)
Oral EC	271	28 (75)	22 (60)	50 (136)	269	13 (34)	26 (70)	61 (165)

Where N is less than 272, there are missing data where no response was recorded. EC, emergency contraception; IUD, intrauterine device; IUS, intrauterine system; LARC, long-acting 5reversible contraception.

**Table 4** Factors associated with intention to use long-acting reversible contraception if offered on the postnatal ward (N=271)

Characteristic	N	Likely to choose LARC on postnatal ward n (%)	OR (95% CI)	AOR (95% CI)
<b>Age (years)</b>				
<25	40	19 (48)	–	–
25-35	157	84 (54)	1.272 (0.635 to 2.549)	1.465 (0.571 to 3.755)
35+	75	23 (31)	0.489 (0.222 to 1.078)	0.58 (0.198 to 1.703)
P value			0.0056	0.0278
<b>Ethnicity</b>				
White British	87	43 (49)	–	–
Black African	44	25 (57)	1.346 (0.649 to 2.793)	1.315 (0.566 to 3.055)
Black Caribbean	15	13 (87)	6.651 (1.416 to 31.239)	4.027 (0.766 to 21.174)
White other	68	16 (24)	0.315 (0.156 to 0.634)	0.365 (0.168 to 0.794)
Mixed	23	15 (65)	1.919 (0.738 to 4.988)	1.576 (0.531 to 4.673)
Other	5	0 (0)	0.551 (0.201 to 1.513)	0.620 (0.195 to 1.976)
South Asian	15	7 (47)	0.895 (0.299 to 2.684)	1.187 (0.367 to 3.843)
P value			0.0002	0.0208
<b>UK born</b>				
No	149	64 (43)	–	–
Yes	122	61 (50)	1.328 (0.821 to 2.148)	–
P value			0.2474	
<b>Education after age 16 years</b>				
<2 years	65	33 (51)	–	–
>2 years	170	69 (41)	0.662 (0.373 to 1.177)	1.099 (0.537 to 2.247)
None	32	23 (72)	2.478 (0.996 to 6.164)	4.048 (1.354 to 12.103)
Still in full-time education	4	1 (25)	0.323 (0.032 to 3.272)	0.304 (0.024 to 3.907)
P value			0.0114	0.0395
<b>Employed</b>				
No	76	42 (55)	–	–
Yes	196	84 (43)	0.607 (0.356 to 1.035)	0.887 (0.454 to 1.732)
P value			0.0667	0.7254
<b>First baby</b>				
No	131	73 (56)	–	–
Yes	141	53 (38)	0.479 (0.295 to 0.777)	0.698 (0.365 to 1.335)
P value			0.0029	0.2770
<b>LMUP category</b>				
Ambivalent	65	39 (60)	–	–
Planned	185	70 (38)	0.41 (0.23 to 0.72)	0.600 (0.299 to 1.203)
Unplanned	22	17 (77)	2.27 (0.74 to 6.90)	2.581 (0.478 to 13.926)
P value			0.0002	0.1116
<b>Knowledge score*</b>				
Bottom	152	64 (42)	–	–
Middle	110	55 (50)	1.375 (0.840 to 2.252)	1.149 (0.636 to 2.076)
Top	10	7 (70)	3.208 (0.799 to 12.885)	2.109 (0.413 to 10.778)
P value			0.1527	0.6362
<b>Increased risk of rapid repeat pregnancy</b>				
No	98	233 (42)	–	–

Continued

**Table 4** Continued

Characteristic	N	Likely to choose LARC on postnatal ward n (%)	OR (95% CI)	AOR (95% CI)
Yes	39	28 (72)	3.5065 (1.666 to 7.381)	1.118 (0.322 to 3.880)
P value			0.0010	0.8608
Used LARC before				
No	213	86 (40)	–	–
Yes	59	40 (68)	3.109 (1.688 to 5.727)	2.583 (1.254 to 5.320)
P value			0.0003	0.0100

\*The knowledge questions were each scored as 0–1 or 0–2 with a total score 0–18. Scores are categorised as follows: 0–5 as bottom, 6–12 as middle and 13–18 as top.

AOR, adjusted odds ratio; LARC, long-acting reversible contraception; LMUP, London Measure of Unplanned Pregnancy.

## DISCUSSION

While there is some evidence on how receptive women are to postnatal contraception, there is less discussion in the literature about what influences their choices. To our knowledge this is the first article from the UK to examine knowledge of contraception among postpartum women in hospital. This study has shown poor knowledge levels across key basic areas of postnatal contraception. Misconceptions around the time of return to fertility, recommended pregnancy spacing, breastfeeding and safety of hormonal and LARC methods mean women are ill-prepared to make informed choices as to when to start contraception, how long to continue and which methods best suit their needs. However, women themselves may not recognise they have poor knowledge nor identify this as a barrier to effective and timely contraceptive use.<sup>15</sup> As less than one in five women surveyed recalled any conversation with a healthcare professional on contraception at any point during pregnancy, there is a need to improve contraceptive knowledge during antenatal care. Similar shortfalls have been evidenced elsewhere in the UK.<sup>16 17</sup>

Despite poor knowledge and inexperience with LARC methods (22% of previous LARC use in our cohort whereas current national estimates of LARC use are 39%<sup>18</sup>), just under half the women surveyed said they were likely or very likely to use a LARC method if it was available and safe to provide it in the hospital before discharge. This agrees closely with findings of a recent Scottish study.<sup>2</sup> Just under half the women in our study also said they would prefer to get their contraception on the postnatal ward and this was significantly higher in those who had children already, perhaps reflecting their experience and the practical difficulties of attending appointments. Our results also highlight the potential for contraception provision on the postnatal ward to reduce inequalities in access to contraceptive services as 10% of our sample had never used any contraception. Moreover, women with lower levels of education were significantly more likely to have said they would choose LARC methods in this setting.

Postnatal contraception is not routinely or universally available in UK NHS maternity hospitals. The

commissioning landscape in England presents significant challenges to the development of these services with responsibilities for contraception currently divided between local authorities, NHS England and Clinical Commissioning Groups (CCGs).<sup>19 20</sup> Trained SRH specialists are employed mainly in community clinics funded by local authorities, and CCG-funded maternity services are not funded nor staffed to provide postnatal contraception. Despite efforts at UHL to introduce postnatal implants and intrauterine methods at caesarean section, these were not offered to all women and our results suggest are being under-used. Postnatal opportunities for effective counselling are also being missed. For example, there is widespread confusion around the safety of methods when breastfeeding despite daily breastfeeding sessions taking place on the ward. Integration with and training of breastfeeding professionals may be one avenue to enhance consistent and timely messages on postnatal contraception to women.<sup>21</sup>

The high uptake of the survey by women on the postnatal ward is a key strength of this study, minimising selection bias. As the survey was verbally administered, the amount of missing data was also extremely low. An important limitation is the potential influence of partners and others present and the subsequent possibility of social desirability bias in the responses.<sup>22</sup> Despite this constraint, it was felt unethical to ask visitors to leave at this time. The proportion of women reporting planned pregnancies was higher in women who had someone present at the time of answering the survey. This could be a genuine association or the result of bias. However the key outcome measures in this study were contraceptive knowledge, which would not be influenced by the presence of others, and likelihood of choosing LARC methods on the postnatal ward, which did not show a difference between women alone and those with someone present. As this study was undertaken in an inner-city area of London, it is not known to what extent the findings may be generalisable throughout the UK.

## CONCLUSIONS

This study shows that knowledge about postnatal contraception among postnatal women surveyed is poor, placing them at inherent risk of rapid repeat, unplanned pregnancy and consequent missed opportunities to optimise preconception health in future pregnancies. Current antenatal counselling is inconsistent and ineffective with regard to increasing knowledge or facilitating women's plans. Despite poor knowledge and lack of previous LARC use, almost half the women in our survey would welcome contraception provision on the postnatal ward and said that they would opt for LARC methods, if safe, in this setting. This suggests that the major challenges are changing women's awareness and access to contraception, not their views or preferences. Our results also highlight the opportunity of immediate postnatal contraception to reduce inequalities in access to contraception. There is therefore a pressing need to pilot a dedicated service in England to provide *all* methods of contraception including LARC to *all* women postnatally. This should adopt a consistent and integrated approach with antenatal information and planning and postnatal provision and support.

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