

# Perspectives of obstetricians and midwives on the provision of immediate postpartum intrauterine devices: a qualitative service evaluation

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## ABSTRACT

**Background** Immediate postpartum intrauterine device (PPIUD) insertion is safe and effective but largely unavailable in Europe. Data on maternity staff views on the provision and implementation of PPIUD services are limited. The objective of this qualitative evaluation was to explore the views and experiences of obstetricians and midwives providing PPIUD within a UK maternity setting, in order to identify areas for improvement and inform service provision in other areas.

**Methods** Qualitative health services research within two public maternity hospitals in Lothian (Edinburgh and surrounding region), UK. Interviews with 30 maternity staff (obstetricians n=8; midwives n=22) involved in PPIUD provision. Data were analysed thematically.

**Results** Maternity staff were positive about the benefits of PPIUD for women. Midwives reported initial concerns about PPIUD safety, and the impact on workload; these views shifted following training, and as PPIUD was embedded into practice. Having a large pool of PPIUD-trained staff was identified as an important factor in successful service implementation. Having PPIUD ‘champions’ was important to address staff concerns, encourage training uptake, and advocate for the service to ensure continued resourcing.

**Conclusions** PPIUD in maternity services can help address unmet need for effective contraception in the immediate postpartum period. We emphasise the importance of widespread engagement around PPIUD among all healthcare professionals involved in the care of women, to ensure staff are informed and supported. Clinical champions and leaders play a key role in amplifying the benefits of PPIUD, and advancing organisational learning.

## Key messages

- Postpartum intrauterine device (PPIUD) provision can help address unmet need for effective contraception in the postpartum period. PPIUD-trained obstetricians and midwives recognised the benefits for women, and in enhancing holistic maternity care.
- Concerns around PPIUD were identified among maternity staff during the implementation process, but shifted over time as benefits to women, staff and services were realised.
- PPIUD ‘champions’ play an important role in engaging maternity staff in PPIUD training and service delivery, and in advocating for continued resourcing of the service.

## INTRODUCTION

Short inter-pregnancy intervals (<12 months) are linked to poor outcomes for mother and child.<sup>1</sup> Research evidence suggests that conception within 1 year of childbirth is common, with one UK study finding that around 1 in 13 women giving birth or presenting for abortion had conceived within the last 12 months.<sup>2</sup> The importance of providing women with immediate postpartum contraception, including long-acting reversible contraception (LARC), is supported by evidence that demonstrates it can reduce the incidence of short inter-pregnancy intervals and unintended pregnancy.<sup>3 4</sup> The COVID-19 pandemic has underscored the benefits of provision of immediate

postpartum contraception; disruptions in access to contraception in the community, and reductions in face-to-face appointments, demonstrate the importance of encounters with maternity staff who can provide effective postpartum contraception.<sup>5</sup>

In the UK, contraception and maternity care are provided free-of-charge by the National Health Service (NHS); however, challenges with integrating services persist, particularly for contraceptive methods such as intrauterine devices (IUDs) that require insertion by trained healthcare providers. Women choosing an IUD typically have the device inserted no sooner than 4 weeks after giving birth, and the requirement to attend a clinic for insertion creates a potential barrier to access.<sup>6</sup> The option of IUD insertion within 48 hours of childbirth – immediate postpartum intrauterine device (PPIUD) insertion – offers women an alternative, and has consistently been shown to be a safe<sup>7–9</sup> and convenient option.<sup>10</sup>

In July 2015, PPIUD at caesarean delivery was introduced across NHS Lothian maternity services (Edinburgh and surrounding region), UK. In this region, there were 8350 births in the year 2018/2019.<sup>11</sup> Antenatally, all women receive contraceptive counselling from a community midwife, including the option to receive a copper IUD or levonorgestrel intrauterine system (IUS) immediately after vaginal or planned caesarean birth. Vaginal PPIUD insertion, performed by both midwives and obstetricians, was introduced in 2017.<sup>12</sup> The feasibility and acceptability to women of providing PPIUD, and the process of service implementation, are reported elsewhere.<sup>10 12–14</sup>

This article reports on a qualitative evaluation exploring the perspectives of maternity staff involved in providing PPIUD, with the aim of informing PPIUD provision in maternity services in the UK and other countries.

## METHODS

The qualitative evaluation explored two key research questions: What are the views of maternity staff towards PPIUD, and their role in its implementation? What areas for service improvement do staff identify in relation to PPIUD service provision?

Between August 2017 and October 2018 we recruited 30 maternity staff (midwives and obstetricians) from the two public maternity hospitals in NHS Lothian. A phased approach to recruitment was used to capture staff views at different points during PPIUD implementation. We purposively sampled to provide representation across occupational groups and grades. Maternity staff involved in PPIUD were provided with information on the study, and invited to participate in an interview using an ‘opt-in’ approach.

Sixteen individual interviews were conducted. Staff were offered the option of a group interview where this was more convenient; 14 staff participated in three group interviews. Interviews were conducted by one

of the authors (NB), a female qualitative researcher (not clinically trained). A topic guide was used, which covered: the role of staff in, and experience of, PPIUD provision; perceived barriers and facilitators to PPIUD implementation within maternity services; and areas for service improvement (online supplemental table S1). Interviews were conducted in the participant’s workplace (n=26) or by telephone (n=4), lasted on average 50 min, and were digitally recorded and transcribed.

The qualitative data were analysed thematically<sup>15 16</sup> by two of the authors (NB and JH), both medical sociologists with extensive experience of conducting research on sexual and reproductive health. Transcripts were read repeatedly, following which a coding scheme was developed that encapsulated the original research questions and issues identified through engagement with the data. NVivo Qualitative Data Analysis Software<sup>17</sup> was used to facilitate data coding and retrieval. Data were then cross-compared to identify recurrent themes. These two authors met frequently to discuss findings and compare analytic interpretations. They also reflected on how their ‘non-clinical status’ influenced interviews and analysis; checking language and understandings during interviews, and discussing interpretations with the wider study team (all healthcare providers).

The study received favourable ethical opinion from the Usher Research Ethics Group at the University of Edinburgh (12 July 2017). Consent for study participation was obtained prior to interview.

## Patient and public involvement

A steering group, including patient and public involvement (PPI) representatives, provided guidance on both the study and PPIUD service development. A summary of the research findings was offered to all participants.

## RESULTS

The final sample comprised 30 maternity staff (22 midwives and 8 obstetricians) outlined in table 1. We present three thematic areas from our analysis: (1) views on the benefits of PPIUD; (2) staff experiences

**Table 1** Sample of maternity staff by occupational group

Occupational group	n
Junior midwives*	14
Senior midwives†	8
Trainee obstetrician	5
Consultant obstetrician	3
Total	30

\*Includes newly qualified midwives and junior charge midwives.

†Includes midwives working at a more senior level (eg, advanced practitioners, midwives managing a team, midwives in leadership and management roles, etc).

of implementing and providing PPIUD; and (3) views on areas for service improvement.

### Views on the benefits of PPIUD

#### Benefits of PPIUD for women

A primary motivation for staff in supporting PPIUD provision were the benefits to women in enabling them to leave hospital with the knowledge that they had effective ‘contraceptive cover’. IUDs were understood to be highly effective, reliable and ‘non-user dependent’. Furthermore, staff noted that many women were anxious about ‘normal’ (interval) IUD insertion, and were less focused on contraception in the postnatal period. PPIUD at the time of birth was perceived as helping to overcome concerns around pain at interval insertion, and reduce the need for additional appointments. As such, PPIUD was understood to remove barriers to uptake of effective contraception.

#### Benefits of PPIUD for health service provision

Staff noted several benefits of PPIUD related to health service provision. PPIUD was understood to create opportunities for service improvements by reducing the ‘burden’ of missed postnatal appointments. PPIUD was also described as having public health benefits; use of effective contraception was understood to play a critical role in addressing pregnancy spacing and reducing abortion rates. Lastly, staff noted that regardless of whether women opted for PPIUD, providing the option encouraged conversations around topics

such as pregnancy spacing, resuming sex and return of fertility, and thus raised awareness of the benefits of postnatal contraception (table 2).

### Staff views and experiences of providing PPIUD

#### Expanding staff skills and supporting holistic maternity care

The ability to insert PPIUD was understood by staff, especially midwives, as expanding their skill set and contributing to their ongoing professional development. Midwives also highlighted PPIUD as enhancing their satisfaction in providing a holistic service, and caring for women through their maternity journey: labour, birth and provision of postpartum contraception. Nevertheless, some midwives argued that PPIUD training may not be appropriate for all (ie, those nearing retirement, or newly qualified).

#### Role and workload extension

Understanding of professional roles and expectations around workload shaped staff views on PPIUD provision. In the early stages of implementation, midwives articulated unease around the issue of ‘role extension’; specifically, taking on responsibility for a procedure typically undertaken by obstetricians. This was often linked to concerns around increased workload, and that PPIUD would add to midwives’ already busy workload, which could undermine the care provided to women. These concerns were mitigated for some, as they began to practise PPIUD insertion. However, midwives noted that these views continued to circulate

**Table 2** Verbatim quotes – views on the benefits of postpartum intrauterine device (PPIUD) insertion

Thematic areas	Verbatim quotes
Views on the benefits of PPIUD	
Benefits of PPIUD for women	<ul style="list-style-type: none"> <li>▶ “...the benefits of [PPIUD] is that it’s much more convenient for women to have it inserted just after they’ve delivered, especially when you’ve got a young baby going home with as well.” [Senior Midwife]</li> <li>▶ “I think it’s ideal because, you know, the sort of fit and forget idea about it, you know, postnatal women have got so much more on their mind than contraception, and as I said, like, they’ll be busy after having the baby and it’s one more thing to remember to go and get fitted, whereas if you can do that all at the time then they’re kinda covered leaving the hospital.” [Midwife Group]</li> <li>▶ “...it’s non-user dependent, you’re going to have better efficacy. If they go away on condoms or the pill they’ve got a one in eight chance of being back within the year, of being pregnant, often that’s an unplanned pregnancy and we know that inter-pregnancy intervals should ideally be at least a year in terms of impact on the neonatal and maternal health. So I just think, if you take away the user dependency of it, that’s a good thing, and equally it’s about giving them choice.” [Senior Midwife]</li> <li>▶ “...from a medical point of view, from my point of view it’s extremely satisfying that somebody will come in, have their baby, get this put in and away they go; it feels efficient.” [Consultant Obstetrician]</li> <li>▶ “Women are very anxious about having a coil put in, they think it’s going to hurt, it’s going to be sore, so actually the benefit of when, particularly if someone’s got an epidural in, they’ve literally just had a baby and that’s a wee small time to insert it and it shouldn’t be sore.” [Consultant Obstetrician]</li> </ul>
Benefits of PPIUD for health service provision	<ul style="list-style-type: none"> <li>▶ “...having to find an appointment that’s going to fit and be able to get your brand new baby there and get yourself there and then sit and have it fitted [...] I just think it is really difficult to get intrauterine contraception after you’ve had a brand new baby.” [Consultant Obstetrician]</li> <li>▶ “I see as an obstetrician, a lot of young women coming back with either a pregnancy, an unplanned pregnancy within a very short period of having had a baby, and I think these girls often go home with a ‘speak to your GP’ and it doesn’t happen within that time through whatever matter they become pregnant again and then we’re confronted with a very difficult situation of either them feeling duty bound to continue with that pregnancy or ending up at the abortion clinic.” [Consultant Obstetrician]</li> </ul> <p>MW 1: And people are more likely to go to that appointment, rather than just going to get a coil, ‘cause it’s already in.  MW 2: And it’s not easy to get a coil, you know, a lot of GPs don’t do it now, they were doing it and they’ve stopped it [Integrated Sexual Health Service] isn’t an easy place to get to, you know, parking and all that, and especially if you’ve got a newborn, I don’t think many women are going to opt for that.” [Midwife Group]</p>

GP, general practitioner; MW, midwife; PPIUD, postpartum intrauterine device.

and, for some, acted as a barrier to engaging in PPIUD training and delivery.

#### Concerns about potential drawbacks of PPIUD

Concerns around potential drawbacks (and risks) of PPIUD circulating among staff were identified during the pre-implementation phase and early stages of service introduction.<sup>10</sup> These included: women's experience of pain during vaginal PPIUD; potential complications of IUD insertion; and the impact of immediate insertion at vaginal birth on mother–baby bonding and breastfeeding initiation. Extant research on PPIUD was presented during staff training sessions, and staff reported this as going some way towards addressing such concerns. Furthermore, the clinical research team supported 'feedback loops' to share experiences of PPIUD practice as implementation progressed. As PPIUD became established, staff reported observing benefits to women and midwives noted that widespread concerns around PPIUD insertion pain, and impact on breastfeeding, did not materialise. Indeed, midwives reported no negative impact on the women's birth experience, and noted that women tended to experience less pain than a 'normal' insertion. Furthermore, staff described the advantages of PPIUD insertion taking place soon after birth as this reduced logistical challenges, such as finding a suitable space and equipment for insertion. Taken together, this led to a shift towards increasingly positive views on the benefits of PPIUD over the course of the evaluation.

Some staff expressed concerns about expulsion rates (following vaginal PPIUD) as a potential disadvantage of immediate IUD insertion, and a barrier to uptake of PPIUD in the long term. Obstetricians noted that the benefits of PPIUD were contingent on expulsions/partial expulsions being identified at follow-up review, and a new device inserted (or alternative contraception provided). They reflected on potential challenges for women in accessing follow-up review at their general practitioner (GP) practice in the postpartum period. Similarly, midwives reported emphasising the importance of attending for follow-up during discussions with women (at the time of insertion) as a way of addressing concerns around expulsion (table 3).

#### Staff views on areas for PPIUD service improvement

##### Leading the 'culture shift'

The extent to which staff 'bought into' the rationale for PPIUD in the context of maternity care was reported by participants as being critical to their engagement in service delivery. Staff emphasised the importance of leadership by senior obstetricians and midwives in championing PPIUD, and leading a 'culture shift' in which PPIUD was prioritised within maternity care.

##### Reaching a 'critical mass' of PPIUD-trained staff

Having a pool of PPIUD-trained staff large enough (relative to the size of the maternity unit) to facilitate

full service cover for all women wanting PPIUD was identified by midwives and obstetricians as an important factor in successful service implementation. Staff articulated their belief that once a 'critical mass' of trained staff were available, challenges to service delivery, such as delays to insertion after vaginal birth, would be reduced, if not eliminated.

##### PPIUD information provision and support

Staff, particularly midwives, reported encountering some women who had not discussed, or been offered, PPIUD during the antenatal period; they emphasised the importance of raising awareness of PPIUD antenatally. Staff noted that women often share experiences of pregnancy and birth and so addressing misconceptions about IUDs and insertion could help address barriers to uptake.

Staff, particularly obstetricians providing PPIUD at caesarean section, emphasised the need for consistent post-insertion information provision and support (ie, what to expect after insertion, contraceptive cover, and attending for follow-up review). Without this, staff noted the risk that IUD expulsion would not be identified and women could experience unintended pregnancy. To mitigate this risk, many noted that a comprehensive approach to raising awareness of PPIUD was required, among all healthcare professionals involved in women's care antenatally, around birth and postnatally.

##### Resourcing and sustaining PPIUD services

The cost of PPIUD was perceived as a potential barrier to the sustainability of service provision. Although the long-term benefits of PPIUD were recognised, staff across occupational groups expressed the view that the sustainability of PPIUD provision at vaginal birth was contingent on increased resources to support training, funding for IUD devices, and patient follow-up. Some senior midwives and obstetricians with responsibility for managing maternity budgets highlighted the cost of PPIUD as an issue that could be a drawback for service provision (table 4).

## DISCUSSION

A growing body of evidence suggests women desire access to, value and benefit from immediate postpartum contraception<sup>2 7 12 13 18–21</sup>; this emphasises the role maternity services can (and should) play in providing contraception prior to discharge.<sup>22 23</sup> There is limited evidence relating to healthcare professionals' views, specifically in relation to PPIUD, which requires direct support from maternity professionals to be successful.

Midwives and obstetricians identified PPIUD as a positive development, linking it to 'holistic' care for women around the time of childbirth, and reducing barriers to contraceptive access and subsequent intended pregnancy. However, concerns were also

**Table 3** Verbatim quotes – staff views and experiences of postpartum intrauterine device (PPIUD) provision

Thematic areas	Extract
Staff views and experiences of providing PPIUD	
Expanding staff skills and supporting holistic maternity care	<ul style="list-style-type: none"> <li>▶ "I'm really excited about being able to do coils. I think it's a great thing to add to my set of skills." [Junior Midwife]</li> <li>▶ "MW 1: It's just good for continuity and the woman knows you, you know the woman, you've been with her all day. MW 2: Holistic care [...]. MW 1: It's more satisfying doing it yourself and not having to delegate for other people or to ask other people to get you things, you go home feeling more... MW 2: Aye, for your own sense of... MW 1: Job satisfaction. MW 2: Aye, job satisfaction, you've done it. MW 1: Holistically." [Midwife Group]</li> <li>▶ "...it's always good to be upskilled. I think if [PPIUD] is a service that's going to be rolled out and introduced it's good to be able to do it yourself, you don't have to delegate and wait and you feel a bit more autonomous in your practice, so that's rewarding." [Junior Midwife]</li> </ul>
Role and workload extension	<ul style="list-style-type: none"> <li>▶ "I feel like it's just another thing to add onto the list of jobs that midwives have to do." [Junior Midwife]</li> <li>▶ "I think it could actually be one of the barriers to why people might not want to do the training, because they'll be able to see that potential for 'Oh yeah, if I do that that just means that I'll be the person that gets called on to do more work'." [Midwife Group]</li> <li>▶ "...change I think is difficult and also I suppose there's so much pressure put on midwives, we've got all this other stuff that we need to be doing and we've got a lot of time constraints [...] I feel like it's just another thing to add onto the list of jobs that midwives have to do [...] I've spoken to some of them and said 'Oh, are you going to do it?' and they're like 'Oh no, I've got plenty to be doing without doing that as well', so I think that potentially is something that would be a challenge in our team." [Junior Midwife]</li> </ul>
PPIUD concerns	<ul style="list-style-type: none"> <li>▶ "I'll judge it based on the women's testimonies, the women that it has worked for they are delighted with it and I think that's the main thing." [Junior Midwife]</li> <li>▶ "...there were some concerns about this service provision, I think some of the information that we got about the background to it and why, I think if that was out there first it might dispel some of the anxieties or ... although, we've had enough people, it's not like we've had to twist people's arms up their back to get them to come and volunteer to do [PPIUD], but again I think that's because we all recognise the many benefits for the women." [Midwife Group]</li> <li>▶ INT: Did you anticipate that women might have had more discomfort? "I know that dragging on the cervix is very uncomfortable but the women don't experience that pain at all because the cervix is a lot floppier and it's so easy to visualise." [Senior Midwife]</li> <li>▶ [In response to question around potential negative impact on mother-child bonding and/or breastfeeding] "MW 1: It takes a minute or 2/3 minutes. And you can have the baby in for skin-to-skin while you're doing it. VARIOUS: Yeah. MW 2: Sorry, I just think that's rubbish! MW 3: You're not taking mum away from baby at any point. MW 2: No, the baby can be in the room on her skin-to-skin breastfeeding while she's doing it. MW 4: That's a distraction. MW 5: If anything you're making sure it's an only child for 3 years so it's very good [laugh]." [Midwife Group]</li> <li>▶ "I don't know whether or not there's a potential for someone slipping through the cracks there [...] at least if they've had a baby they are going for a 6-week check and one would hope that part of that conversation would involve 'What are you thinking of for contraception?'. They say 'Oh I had a coil put in in the hospital' and then the GP would be like 'right we want to check the threads'. INT: But if it doesn't? I think there does become a point, so first the letter should go out from hospital, the second safe point is that they go for their 6-week check. The third is that there is a point at which they have to take responsibility for themselves, so I do talk to women about checking their own threads as well as getting their 6-week check." [Trainee Obstetrician]</li> </ul>

GP, general practitioner; INT, interviewer; MW, midwife; PPIUD, postpartum intrauterine device.

articulated by staff, particularly midwives, about: role expansion and increased workload; safety of PPIUD; and impact of immediate insertion on mother-baby bonding. Some of these concerns have been identified in other research.<sup>7 24 25</sup> Our findings suggest that many concerns dissipate following training in, and practise of, PPIUD. This underscores the importance of evidence-based training, and the challenges for implementing PPIUD when this is lacking.<sup>25 26</sup> Despite the impact of effective training, some concerns persisted among midwives, highlighting challenges associated with shifting the culture around provision of immediate postpartum contraception, and emphasising the need for continuing education.

In this study the average time between giving birth and insertion was 6.6 hours, with almost one-third (28.2%) of insertions taking place within 1 hour of

giving birth and 77.0% within 6 hours.<sup>12</sup> As the study progressed, and PPIUD started to become embedded into practice, staff increasingly emphasised the benefits of PPIUD, ideally in the birthing room. Staff recognised that logistical issues (eg, other clinical demands, space and equipment for insertion, and the availability of a trained inserter) impacted on the birth-to-insertion interval time, but highlighted the advantages of shorter intervals for services and women (contributing to a positive PPIUD experience).

Clinician 'champions' have been identified as central to shifting cultures around PPIUD.<sup>27-30</sup> These are frequently individuals, operating at a local or national level, who demonstrate leadership by extolling the benefits of PPIUD and advancing learning and practice developments. Our findings provide further support for this critical role in shifting mindsets, and

**Table 4** Verbatim quotes – staff views on areas for postpartum intrauterine device (PPIUD) service improvement

Thematic areas	Extract
Staff views on areas for PPIUD service improvement	
Leading the 'culture shift'	<ul style="list-style-type: none"> <li>▶ "I think that's just a change in mindset [...] that comes from having people in senior roles who are, yeah, championing the cause." [Trainee Obstetrician]</li> <li>▶ "I think even going back a few years when this whole immediate postpartum contraception wasn't really something that you thought about and I think working with certain Consultant Obstetricians, every single patient I see in antenatal clinic it is a question that comes up now, you know, 'What about contraception?' and I think that's just a change in mindset. But yeah I think that comes from having people in senior roles who are, yeah, championing the cause." [Trainee Obstetrician]</li> <li>▶ "...things seem to go more smoothly if, as you say, the higher up strategic things are involved in it, you get less people digging their heels in I suppose if it's come from high, 'This is an important thing that we all need to do'." [Consultant Obstetrician]</li> </ul>
Reaching a 'critical mass' of trained staff	<ul style="list-style-type: none"> <li>▶ "The gold standard would be to have everybody trained and then it wouldn't be an issue, they wouldn't move on [to postnatal ward] without the coil being inserted, it would be inserted with the midwife that was looking after them." [Trainee Obstetrician]</li> <li>▶ "I think for the postpartum coil because so much timing is around once the baby's just out, that's where the training of the right people to get them in, but it will be once you have critical mass in each unit, it's just getting that critical mass of people who can then train others because you need it to be a 24-hour service." [Trainee Obstetrician]</li> <li>▶ "...there'll be a critical mass and once there is enough of us here permanently on the shop floor there'll always be enough people around to supervise others to learn to then do it, I think it's just in this initial set up phase when we don't have enough." [Trainee Obstetrician]</li> </ul>
PPIUD information provision and support	<ul style="list-style-type: none"> <li>▶ "I think discussion at the antenatal period, I think it needs to start antenatally and certainly the women that have been very keen to have it put in we've generally found they've been counselled antenatally by the community midwives or by us in clinic here and they're very up for it before they come to hospital [...] I think antenatal education is definitely key." [Trainee Obstetrician]</li> <li>▶ "I think it has to come from all levels, you've got to have, you know, you've got to have the awareness it's going on so everyone's got to know about it, it's got to be spread out to the community staff so they're introducing the idea of it and giving the information antenatally, then the actual staff in the hospital need to know how to go about it, who can do it and then trying to get as many people to do it, so it kinda covers all levels." [Midwife Group]</li> <li>▶ "...the drawback is that you might then be leaving somebody, you know, it gets expelled and either they haven't noticed or they haven't then got the energy or the motivation to go and get something else sorted." [Consultant Obstetrician]</li> </ul>
Resourcing and sustaining PPIUD services	<ul style="list-style-type: none"> <li>▶ "I think breaking that down and breaking down funding barriers in particular 'Who's going to pay for the coils, who's going to pay for the training?'" [Consultant Obstetrician]</li> <li>▶ "Maybe as a service provider it could be perceived that initially there might be some negatives in that it'll come with a cost implication, but in the long term if it avoids these unplanned pregnancies, but it's that short-term investment for a longer-term gain but sometimes we're not always very long-sighted, you know, so it could be perceived as a negative because it is going to come at a cost, but hopefully in the long term it will save." [Midwife Group]</li> <li>▶ "I was going to say about commissioning, about where the funding comes from. So I suspect that a lot of centres will say 'Well look, this isn't our remit, we deliver babies here, we don't stop babies being born' do you know what I mean, it's like a bit of a shift from my view of where it's all part of the process, contraception is part of having a baby, planning your next pregnancy, to people saying 'That's nothing to do with us, that's a completely separate specialty, that's a completely separate thing'. So I think breaking that down and breaking down funding barriers in particular 'Who's going to pay for the coils, who's going to pay for the training?'" [Consultant Obstetrician]</li> </ul>

PPIUD, postpartum intrauterine contraception.

supporting new services to become established. This shift can encourage more staff to become involved in service delivery, which is important because having a large pool of PPIUD-trained staff was identified as a factor in successful service implementation.

While PPIUD has been demonstrated to be cost effective,<sup>31</sup> there may be concerns around the upfront costs of resourcing PPIUD services (eg, staff training, cost of IUD devices, and patient follow-up in primary care settings). Champions can play a leading role in advocating for the service.

### Strengths and limitations

This robust qualitative study, the first of its kind in the UK and Europe, contributes evidence on health-care professionals' views on PPIUD. A strength of the study is that it incorporates the views of obstetricians and midwives at different grades, and at different time points, thereby illuminating changes to staff views on

PPIUD as the service was being established. Our findings, from a large UK maternity service, may not be generalisable to other health systems and contexts of PPIUD provision, particularly where there are differences in PPIUD funding and follow-up. Furthermore, the introduction and evaluation of vaginal PPIUD service provision happened concurrently; the findings may not reflect staff views and experiences when a PPIUD service is fully embedded.

### CONCLUSIONS

PPIUD in maternity services can help address unmet need for effective contraception in the immediate postpartum period. Changing the hearts and minds of staff towards PPIUD is possible as staff become familiar with the benefits to women and maternity care, and through evidenced-based training. Clinical champions

and leaders play a key role in amplifying the benefits of PPIUD, and advancing organisational learning.

**Twitter** Nicola Boydell @NBW80, Michelle Cooper @CoopMhc and Jeni Harden @JeniHarden

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**Contributors** STC, JH, AG, FMcG, SC: original idea and overall study design. NB, JH: qualitative study design, data collection and analysis. MC, STC: led/directly involved in clinical service implementation. NB, JH: initial manuscript preparation. MC, SC, STC, AG: manuscript editing. All authors reviewed the final draft.

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**Competing interests** None declared.

**Patient and public involvement** Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Further details are provided in the Methods section.

**Patient consent for publication** Not required.

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**Table S1. Interview topic guide for qualitative study of obstetricians and midwives perspectives on PPIUD**

Domain	Topic Probes (outline)
<b>Role in PPIUD provision</b>	<ul style="list-style-type: none"> <li>• Current role; length of time in this role; grade/experience</li> <li>• Current role of in PPIUD provision</li> </ul>
<b>Views on the provision of PPIUD</b>	<ul style="list-style-type: none"> <li>• Potential benefits of PPIUD</li> <li>• Potential drawbacks of PPIUD</li> <li>• Are there any groups of women that you think might particularly benefit from PPIUD? Or that should be excluded from PPIUD?</li> <li>• Views on PPIUD prior to start of service/implementation <ul style="list-style-type: none"> <li>○ Challenges – anticipated</li> <li>○ Challenges – barriers encountered</li> </ul> </li> </ul> <p>‘During’ and ‘After’ Questions</p> <ul style="list-style-type: none"> <li>• Since you began providing PPIUD service have you taken any steps to changes workflow/practice? <ul style="list-style-type: none"> <li>○ Used, adapted, created new procedures</li> </ul> </li> <li>• Has there been collective ‘buy-in’ to the importance of PPIUD service provision?</li> <li>• How is PPIUD different from your current ways of working?</li> <li>• What does PPIUD require of you in your role (individual requirements)?</li> <li>• Do other HCPs (midwives, obstetricians) involved agree about the purpose of providing PPIUD (collectively agree purpose)? <ul style="list-style-type: none"> <li>○ If not, why not? Divergent views?</li> </ul> </li> <li>• Do you agree that PPIUD should be part of your job role? <ul style="list-style-type: none"> <li>○ Midwives?</li> <li>○ Obstetricians?</li> </ul> </li> <li>• PPIUD in relation to staff role/grade; views on who should undertake PPIUD</li> </ul>
<b>Time/Timing</b>	<ul style="list-style-type: none"> <li>• Views on the provision of IUD immediately after delivery (timing)</li> <li>• Benefits and drawbacks to IUD insertion <ul style="list-style-type: none"> <li>○ Immediately after delivery of placenta</li> <li>○ 1-2 hours after delivery</li> <li>○ Within 48 hours</li> </ul> </li> <li>• Time pressures (relating to other aspects of job role)</li> <li>• Time for insertion; sufficient/insufficient</li> </ul>
<b>Training and leadership</b>	<ul style="list-style-type: none"> <li>• Motivations to participate in PPIUD training</li> <li>• Views on who should be trained in PPIUD <ul style="list-style-type: none"> <li>○ All grades? More experienced?</li> </ul> </li> <li>• Views on what should be included on training for HCPs on benefits of LARC (generally) PPIUD (specifically)</li> <li>• Views on timing of training (depending on job role; midwife or obstetrician)</li> <li>• Experience of the training</li> <li>• Experience of supervised practice <ul style="list-style-type: none"> <li>○ More/longer supervised practice needed?</li> <li>○ Confidence around insertion/fitting of IUD?</li> </ul> </li> <li>• Further/other training needs identified</li> <li>• Views on PPIUD leadership; leadership roles in implementation and service development?</li> </ul>
<b>Pre-procedure information</b>	<ul style="list-style-type: none"> <li>• What information do you as HCP(s) routinely provide women with prior to the procedure?</li> <li>• How are the potential benefits/risks communicated?</li> <li>• Use of checklist for insertion?</li> <li>• Do you think women are given sufficient time to decide whether they want PPIUD?</li> </ul>

<b>Fitting/Insertion of PPIUD</b>	<ul style="list-style-type: none"> <li>• Revisiting consent for insertion with women <ul style="list-style-type: none"> <li>○ When? How? Who?</li> </ul> </li> <li>• Logistical issues: bed space on labour ward; availability of IUS/IUD</li> <li>• Staffing levels: <ul style="list-style-type: none"> <li>○ Trained staff available for insertion/supervision of insertion?</li> </ul> </li> <li>• Movement of women between antenatal, labour and maternity/postnatal wards – implications for service delivery</li> </ul>
<b>Birth experience</b>	<ul style="list-style-type: none"> <li>• Views on the effect of IUD insertion on women's birth experience</li> <li>• Views on possible impact of delays to insertion on women</li> <li>• If/how IUD insertion immediately following delivery affects the time women can spend with baby ('golden hour')?</li> </ul>
<b>Bonding and breastfeeding</b>	<ul style="list-style-type: none"> <li>• Do you feel that PPIUD could affect mother's ability to bond with their baby after the birth?</li> <li>• Do you feel that PPIUD could have/has an effect on mother's ability to breastfeed?</li> </ul>
<b>Post-procedure information</b>	<ul style="list-style-type: none"> <li>• Role in information provision for women following insertion</li> <li>• Views on provision of information for women about what to expect after insertion of IUD</li> <li>• Views on provision of information for women about when and how to seek help after PPIUD</li> <li>• What other information do you think women need in the post-procedure period?</li> <li>• Communication with other services (i.e. primary care (GP), specialist services)</li> </ul>
<b>Delivery of the service</b>	<ul style="list-style-type: none"> <li>• Views on the way in which PPIUD service has been introduced within NHS Lothian</li> <li>• Would you change anything about PPIUD service provision?</li> <li>• What would support PPIUD at SVD (and C-Section) to become embedded as a 'day-to-day service'?</li> </ul> <p>'After' questions</p> <ul style="list-style-type: none"> <li>• Have you as a [midwife/obstetrician] been able to judge the effectiveness of the intervention? <ul style="list-style-type: none"> <li>○ How? [Probe mechanisms]</li> </ul> </li> <li>• How have you collectively [midwives/obstetricians] judge the effectiveness of the intervention?</li> <li>• Have you collectively [midwives/obstetricians] been able to modify the intervention based on evaluation and experience? <ul style="list-style-type: none"> <li>○ In what ways?</li> </ul> </li> <li>• Issues around funding and budgets? <ul style="list-style-type: none"> <li>○ Cost/funding implications of going from implementation to 'normal practice'</li> </ul> </li> </ul>
<b>Service development</b>	<ul style="list-style-type: none"> <li>• Do you think that PPIUD service should be available to women in other regions across Scotland? Why/why not?</li> <li>• If this service was to be offered in other health boards/regions, are there any issues that need to be addressed? What? Why?</li> <li>• What resources are needed to support PPIUD implementation beyond Lothian?</li> <li>• What are they? How can they be addressed?</li> </ul>