


Barriers to Uptake of Postpartum Long-Acting Reversible Contraception: Qualitative Study of the Perspectives of Ugandan Health Workers and Potential Clients

Merlin Willcox , Emma King, Emma Fall, Vincent Mubangizi, Julius Nkalubo, Silvia Natukunda, Haeven Nahabwe, Clare Goodhart, and Jonathan Graffy

Health workers have received training on delivering postpartum long-acting reversible contraceptives (LARCs) through several projects in Uganda, yet uptake still remains poor. To understand the reasons, and to gather suggestions for improving uptake, we conducted individual semi-structured interviews with a total of 80 postpartum parents, antenatal parents, health workers, and village health teams in rural south-west Uganda. Interviews were recorded, transcribed, translated, and analyzed using qualitative thematic analysis. Specific barriers to uptake of immediate postpartum contraception for women included: the need to discuss this option with their husband, the belief that time is needed to recover before insertion of a LARC, and fear that the baby might not survive. Furthermore, social consequences of side-effects are more serious in low-income settings. Suggestions for improving uptake of postpartum contraception included health education by “expert users,” couples counseling during antenatal care, and improved management of side-effects.

Although most women in low-income countries want to delay or prevent future pregnancies after giving birth (Pasha et al. 2015; Dasgupta, Zaba, and Crampin 2016), only 25–34 percent report using any contraception in the 3–12 months postpartum (Keogh et al. 2015; Rutaremwa et al. 2015; Sileo et al. 2015). They most commonly use relatively short-acting methods such as injections, which have high discontinuation rates (Keogh et al. 2015; Dasgupta, Zaba, and Crampin 2016).

Merlin Willcox is Academic Clinical Lecturer, Department of Primary Care and Population Sciences, University of Southampton, Aldermoor Health Centre, Aldermoor Close, Southampton, UK SO16 5ST, and member of the Royal College of General Practitioners, London, UK. Email: M.L.Willcox@soton.ac.uk. Emma King, Emma Fall, and Clare Goodhart are members of the Royal College of General Practitioners, London, UK. Vincent Mubangizi is Acting Head of the Department of Family Medicine and Community Practice and Silvia Natukunda is Researcher, Mbarara University of Science and Technology, Uganda. Julius Nkalubo is Director Clinical Services and Haeven Nahabwe is Assistant Community Health Coordinator, Bwindi Community Hospital, Uganda. Jonathan Graffy is a general practitioner in Sandy, Bedfordshire, UK.

Long-acting reversible contraceptives (LARCs), namely contraceptive implants and intrauterine devices (IUDs), can safely be placed within 48 hours of delivery (Royal College of Obstetricians and Gynaecologists 2015; Averbach et al. 2017). In spite of slightly higher expulsion rates, postpartum IUD insertion allows women to have family planning in place before they leave the hospital, increases IUD use at six months (Lopez et al. 2015), and improves patient satisfaction (Lester et al. 2015). Offering women the option of immediate postpartum insertion of contraceptive implants also increases use of highly effective contraception at six months and improves patient satisfaction, with no serious side-effects (Averbach et al. 2017). This is particularly important in rural settings in low-income countries such as Uganda, where women have difficulty returning for family planning services.

With this in mind, several organizations have trained health workers in Uganda to deliver postpartum contraception, with a particular focus on IUDs (Jacobstein et al. 2012; Rodgers and Atuhairwe 2012). Despite this training, uptake of postpartum contraception remains low: only 16 percent of Ugandan women who give birth in a health facility say they receive counseling about family planning before discharge (UBS and ICF International 2012). Use of LARCs has increased slightly, but is still very low: only 1.5 percent and 6.3 percent of married women aged 15–49 have an IUD or implant, respectively (UBS and ICF International 2017). Two types of implants are available in Uganda: Jadelle, effective for five years (two rods each containing Levonorgestrel 75 mg), and Implanon, effective for three years (a single rod containing Etonorgestrel 68mg). The commonly available IUD is the copper T 380A, which has an intrauterine life of 12 years. These methods are supplied at no charge in both public and private institutions, or at a heavily subsidized price of less than one pound sterling (US\$1.3).

Qualitative studies have identified the general barriers to use of contraception in East Africa: desire for large family size, inconsistent availability, and fear of side-effects (Morse et al. 2014; Farmer et al. 2015). Limited availability has been a specific barrier to uptake of LARCs (Farmer et al. 2015; Robinson et al. 2016; Tibaijuka et al. 2017), but this does not explain low levels of use in areas where LARCS have been made more widely available. The need to attend a health facility during menstruation and undress has been identified as a barrier to choosing the IUD, but this does not apply immediately after delivery, when many women are in a health facility already and this should be an ideal time for IUD insertion (Robinson et al. 2016). Lack of knowledge about the IUD is still prevalent and itself forms a barrier (Robinson et al. 2016), as does fear of side-effects and myths about cancer and infertility (Kakaire et al. 2014; Morse et al. 2014; Robinson et al. 2016; Tibaijuka et al. 2017).

A survey of women attending antenatal or family planning clinics in Uganda found that a common reason for not choosing a LARC was women's desire to be able to control the method themselves, without involving a health provider (Tibaijuka et al. 2017). A qualitative study of women seeking post-abortion services in Kampala found that other important barriers to use of LARCs were the views of other family members and misinformation from health workers (Kakaire et al. 2014). However, there have been no qualitative studies exploring rural Ugandan patients' and health workers' experiences of postpartum contraceptive services or their views on how to improve these services. Therefore, this study aimed to understand the reasons for poor uptake of postpartum long-acting reversible contraceptives in Uganda, in an area where many health workers have already been trained to provide postpartum LARCs, and to explore ideas for improvement.

CONTEXT OF THE STUDY

The total fertility rate in Uganda is 5.4 children per woman (UBS and ICF International 2017) and has declined very slowly from 6.9 in 2000 to 6.7 in 2006, and 6.2 in 2011 (UBS and ICF International 2012). On average, rural women will have two more children than urban women. Only 35 percent of married women and 47 percent of sexually active unmarried women are using any form of modern contraception, and the majority of these women are using the 3-month injection or male condoms. Currently more than 30 percent of women in rural Uganda have an unmet need for family planning (UBS and ICF International 2017), although there is wide variation between regions. Unmet need is an avoidable factor in many child deaths that result from unwanted pregnancies and inadequate spacing between births (Willcox et al. 2018). In Uganda, under-five mortality is 64 per 1,000 and infant mortality is 43 per 1,000 live births. As in many low-resource settings, women in Uganda are at high risk of unintended pregnancy soon after giving birth: 25 percent of births in Uganda occur within 24 months of the previous birth (UBS and ICF International 2012), which leads to increased risks of maternal and infant morbidity and mortality (Conde-Agudelo and Belizán 2000; Conde-Agudelo, Rosas-Bermudez, and Kafury-Goeta 2006).

METHODS

Study Site

This study was conducted in the catchment area of Bwindi Community Hospital (BCH), located in Kanungu district, in rural south-west Uganda (Kigezi region). BCH, a 112-bed facility with 76 clinical staff, satellite clinics, and community outreach services, provides health care to over 100,000 people, mainly residing in Kanyantorogo, Kayonza, and Mpungu sub-counties. In 2012, a survey of 2,382 local households found that 35 percent of women had unmet need for family planning. Since 2013, BCH has adopted the USHAPE (Uganda Sexual Health and Pastoral Education) whole-institution approach to family planning training for health workers, who then cascade their training to community health workers and perform outreach visits in the surrounding community (Graffy et al. 2016).

Conceptual Themes and Research Design

In 2015, we interviewed three broad categories of participants: potential clients, health workers, and village health teams (VHTs), to understand their varying experiences and perspectives. Potential clients were asked about their previous experiences discussing family planning with their partner and with health workers, and previous experiences of postpartum contraception, before being asked their current general views on contraceptive implants and IUDs, and postpartum contraception (Box 1). We also asked about their partner's views on family planning, and whether anyone else influences their decisions on family planning. Health workers and VHTs were asked about their views on contraceptive implants and IUDs, and postpartum provision of these methods, before being asked how families could be encouraged to talk to a health worker about postpartum family planning.

Box 1. Interview guide (adapted for different respondent groups)

- General experience of family planning: discussion with partner, choice of method.
- Experiences of and views on family planning, including postpartum.
- IUDs: Barriers to use; views on use immediately postpartum or after six weeks.
- Implants: Barriers to use; views on use immediately postpartum or after six weeks.
- How can we improve postpartum family planning services?
- *For parents:* Apart from your partner, who else influences your decisions on family planning? What do they think about the use of family planning after delivery? Do they have any concerns about family planning after delivery? How can we address these concerns?
- *For health workers/VHTs:* How can we encourage women or couples who have recently had a baby to discuss family planning with a health care worker?

Recruitment of Participants

Potential clients were selected from the community nurses' records of women who had delivered within the last six months and from attendees at antenatal clinics. We used maximum-variation purposive sampling to include all age groups, ethnic groups (specifically including participants from the minority Batwa group), religions, and different locations across the catchment area, including women who had delivered at home. We asked VHTs to provide information about the study, and to make appointments with potential participants and their partners, if available. VHTs are lay members of the community who volunteer to act as health promoters. Health workers who provided family planning were identified at BCH and almost all primary care clinics in the catchment area. The community nurses identified VHTs involved in promotion or delivery of family planning. We continued recruiting participants until data saturation was reached (until no new themes emerged for at least two consecutive interviews) in each of the three subgroups of participants.

Interviewers

Potential female clients and VHTs were interviewed in the local language (Rukiga) by an experienced female Ugandan qualitative researcher, while their male partners were interviewed by a male Ugandan interviewer, who had no prior experience of qualitative research but was trained by the research team and received formative feedback on his interviews. Most health workers were interviewed in English by a British male doctor, who had prior experience of qualitative research. The interviewers had not established any relationship with the interviewees prior to the interviews.

Data Collection

Potential clients were interviewed in a quiet location on their own. Women and men were interviewed separately, to ensure that the views of both partners were heard. Health workers were interviewed at their place of work, on their own, in a quiet location. Interviewers used

TABLE 1 Characteristics of participants interviewed, Uganda, 2015

Category	Total	Gender		Age				Religion				
		F	M	Teenagers	20s	30s	≥40	Catholic	Protestant	Pentecostal/ "born again"	Muslim	Unknown
Antenatal parent	9	6	3	5	3	1	0	1	2	4	2	0
Postpartum parent	36	22	14	13	11	6	6	10	16	6	1	3
Health worker	17 ^a	10	7	0	9	1	1	5	11	0	0	1
Village health team member ^b	18	13	5	0	1	7	10	5	11	1	0	1
Total	80	51	29	18	24	15	17	21	40	11	3	5

^aAge of six of the health workers was unknown.

^bIncluding one Traditional Birth Attendant.

semi-structured interview guides, adapted for different respondent groups (Box 1). Interviews were recorded on a digital voice recorder, transcribed, and then translated into English.

Analysis

The transcripts were analyzed using qualitative thematic analysis (Braun and Clarke 2006). Three researchers coded the interviews and 50 (62.5 percent) of the interviews were coded twice, independently by two researchers. The researchers met to discuss and agree upon a coding framework. Interviews were coded using a combination of deductive and inductive approaches to determine the major categories of barriers and suggestions for improving postpartum contraception services. When a new theme was identified, we went back to look for it in other interviews. Codes were then aggregated to form subcategories and abstraction was used to generate major categories. When couples had been interviewed, we compared the responses of both partners. NVivo (Version 11) was used to manage the analysis.

Ethics

Potential participants were given a participant information sheet and time to consider whether to participate. If they agreed, they were asked to sign a consent form or make a thumbprint. The interviewer made clear that participants were free not to answer specific questions or to withdraw at any time. Participants were compensated for their time with a small gift worth about 8,000UGX (US\$2.50). Because of the logistics of finding participants, it was not possible to later ask them to provide feedback on their interview transcripts or the study findings. Ethical approval was granted by the Oxford Tropical Research Ethics Committee, Mbarara University Ethics Committee, and the Uganda National Council of Science and Technology.

RESULTS

Participant Characteristics

We interviewed 80 participants from November to December 2015 (9 antenatal parents, 36 postnatal parents, 17 health workers, and 18 VHTs; see Table 1). Most of the health workers were nurses or midwives, with four nursing assistants, one laboratory technician, and one doctor. Of the 26 postpartum mothers identified by community outreach workers, only

three could not be found and one declined to participate. Most of the parents were young (under 30 years of age), and from the Bakiga ethnic group (the predominant ethnic group in this area and the fourth most populous in Uganda, comprising 7 percent of the country's population). We also interviewed 6 individuals from the Batwa group (a small and vulnerable indigenous pygmy ethnic group). Most of the participants were Christians (mainly Anglicans and Catholics, with a few Pentecostals and "born again"), with only three Muslim respondents. Four of the parents had received no schooling, 27 had received at least some primary education, and 10 had some secondary education.

Uptake of Postpartum Contraception

Of the 22 postpartum women interviewed, only one had received immediate postpartum contraception, which was a tubal ligation. Another said that she had an IUD inserted during a previous cesarean section, though she had been unaware of this. Several health workers confirmed that uptake of postpartum contraception was still low.

For us at least a month we happen to deliver like 30 mothers. Around like 4 can go with family planning. ... It is rare ... to be given postpartum IUDs. (Midwife in Health Centre III)

Perceived Barriers to Adoption of Postpartum LARCs for Potential Users

Barriers cited by potential users fell into several overarching themes: barriers to use of contraception in general, experience or hearsay about side-effects, and concerns about use of contraception in the immediate postpartum period.

General Barriers

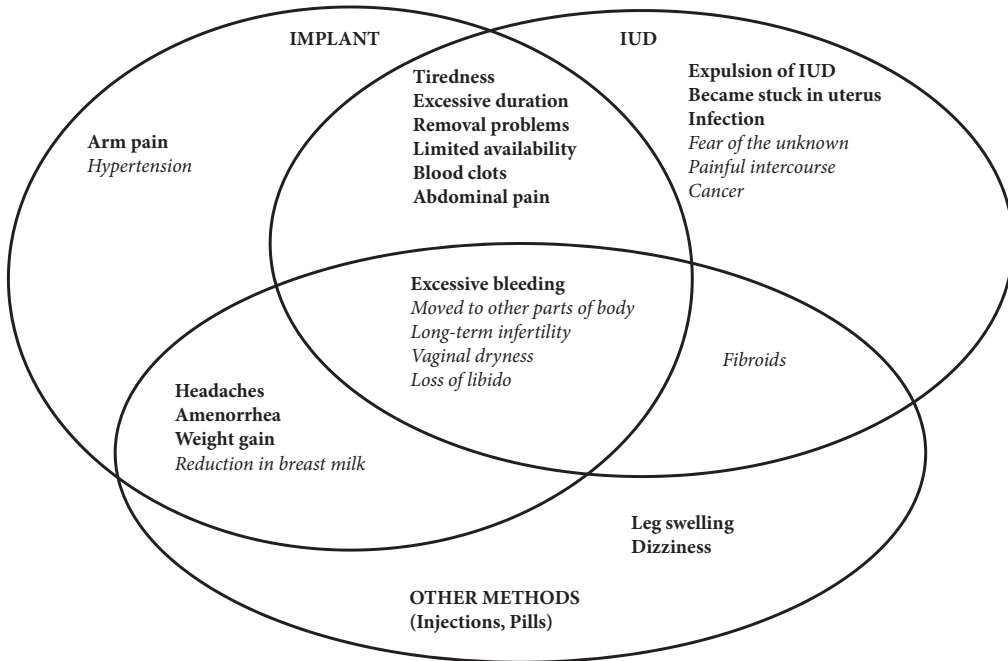
The first general barrier to use of any method of contraception was the desire to have many children, which was expressed especially by interviewees from the minority Batwa ethnic group:

When they notice that their wives have taken long without conceiving, they ask them whether they were secretly using family planning, so they begin to beat them up until they get pregnant and have some peace at home. Most Batwa men like many children. (32-year-old Batwa woman, ninth pregnancy, antenatal)

However, even among our six Batwa respondents, five of whom were aged 18–19, all wanted to use family planning. Although almost all participants were Christian, very few expressed specific religious beliefs against the use of any family planning. Those who did were not from the mainstream Church of Uganda.

Our catholic religion teaches that when we use family planning, it's like murder. (32-year-old female, Catholic, VHT)

I don't want to tell her to use family planning because to me this is against the Lord and it is sin in heaven. ... I can't stop giving birth because God said you should produce and fill the world! (23-year-old male, Pentecostal)

FIGURE 1 Side-effects experienced, and hearsay, about various methods of contraception

NOTE: Side-effects experienced are in bold, hearsay is in italics.

Side-effects: Personal Experience and Hearsay

Figure 1 summarizes side-effects that women or their partners had experienced or had heard about for various contraceptives. There were more concerns about LARCs than short-term methods. Several younger people wanted to space their pregnancies but did not want a method that would last a long time, as they hoped for another pregnancy within two or three years.

Although few women had experienced serious side-effects, stories of these were widespread, especially about the IUD. A few cases led to rumors about IUDs disappearing and moving to other parts of the body.

She kept going to the hospital, and the people she was seated with told the health workers to work on her because she was in much pain. So when she was tested they found out that the IUD had gotten lost in the uterus. They looked for it and when it was found, they realized that it had joined in the flesh and she was beginning to rot inside. So it was removed. I paid a lot of money and she was given different medicines. Slowly by slowly she healed, and after some time she conceived again this our last baby. (46-year-old male)

There is one who was operated, and I hear that IUD went to the head. I don't know how it went there, or it moves in the blood, I'm not sure. (22-year-old male)

The fact that few women had used IUDs in the study area and that the IUD is invisible to the user also led to a “fear of the unknown,” simply because many women did not know anyone who had used one.

Health workers tell us that it’s the best, but most people fear it because it’s inserted in a place you cannot see, and that service is far away in Bwindi [hospital]. (26-year-old female, VHT)

The most commonly experienced side-effects expressed by the women interviewed were menstrual disturbances, particularly prolonged bleeding or amenorrhea, especially with implants and injections. Prolonged bleeding is particularly problematic in the context of a low-income country where women cannot afford sanitary products, and where the bleeding interferes with their sexual relationship.

They say that they bleed a lot for a month and you find that they begin to dislike themselves. They can’t have sex with their husband and because they are poor they can’t even have sanitary towels, so you find they have to use old clothes and they don’t have soap to wash those clothes. (30-year-old male, VHT)

Conversely, amenorrhea was also feared because of the belief that the blood must be building up inside the body.

When they are on family planning, and they don’t join their menses, they even get what they think, blood is remaining inside. (Midwife at a Health Centre III)

Some worried that they would not be able to look after their baby properly as a result of impaired lactation, believed to be caused by the implant and injection. They also feared that management of side-effects would be costly, and that LARCs would not be readily removed if a problem were to arise. Some women said they experienced arm pain, tiredness, or weakness after having an implant. This led to a concern that they would not be able to do the work expected of them. The issues of prolonged bleeding, weakness, perceived effects on libido, and the belief that the IUD strings might cause pain to the man during intercourse, all contributed to a deeper fear that family planning would lead to relationship problems, as exemplified by the quotes below:

It’s the women who suffer with work so they think that family planning will make them weak and they do not do the work well. Men in this village are always drinking and they leave the work to be done by women. (42-year-old female, VHT)

Women listen to a lot of myths. I heard some saying that when one is on family planning their sexual urge gets interrupted and their husbands may leave them due to that insensitivity to sex. (42-year-old female, VHT)

There are women I know who got the three-months’ injection, and they started bleeding for all the three months and their husbands left them. Their husbands started cheating because they could not stand such a woman who bleeds like that. (18-year-old mother)

She might go with an IUD, then it results into like domestic violence. Before she discusses it with the husband, then she inserts an IUD. Then when the husband discovers, it becomes violent between them. (Male outreach nurse at BCH)

Concerns About Use of Contraception in the Immediate Postpartum Period

Even women who had positive experiences with the implant or injection mostly believed it would be better to wait until six weeks after delivery before using these methods. The first main reason for this was the societal expectation that women should consult their husbands before agreeing to any method of contraception, even though husbands were often absent during antenatal clinics and at the time of delivery.

Sometimes they deliver before they have made a plan with their spouses, because finally in this place mothers can come alone to deliver when there are no husbands. (Midwife at BCH)

Now you see at times, they can discharge you when your husband is not around, and so you cannot just use family planning without his consent. In our family, all men are very complicated: he may even cut off your arm. (18-year-old postpartum mother)

The second main reason was widespread belief from many users and VHTs that the mother needed time to recover from the delivery before using a method of family planning, including the IUD or implant.

They teach us that after six weeks that is when they are OK, because there are those who deliver and get sick before end of six weeks. But they teach us that after six weeks it's when they should go and they insert the coil. (62-year-old male, VHT)

I think that when women put implants immediately, they may not allow all the blood as a result of giving birth to completely come out. (17-year-old mother)

I think if it's inserted in a woman who has recently delivered before six weeks, this woman may faint and even bleed a lot because her body is not yet strong. (19-year-old mother)

They should let the woman first heal. I think if it's inserted before healing it may reach far in the uterus and cause serious damage to the uterus. (40-year-old mother)

This was coupled with the belief that the woman did not actually need any contraception until she started menstruating again.

I think she will continue breastfeeding and when she sees her menstrual period that is when she will come here to get the implant. (43-year-old male)

An additional reason was the fear that their baby might not survive:

These primigravidas—it is hard for them to immediately tell you the method they want to use. They tell you, “Maybe after delivery.” Sometimes they tell you, “Now, if I tell you this—a certain method—and the baby dies, do you think I shall use it or not?” So they first say, “Let us first deliver, then after we will tell you.” (23-year-old midwife at BCH)

Access Issues

Although contraception is provided free in the hospital, a trained health worker is not always available to provide it. Level III Health centres (HCIIIs) are supposed to provide postpartum family planning, and this was the case in three of the four HCIIIs where we interviewed, but the HCIIIs cover a wide area, so access is also difficult and expensive for patients who live far away. Health Centre IIs are more accessible but most did not provide LARCs or immediate postpartum family planning. VHTs are most accessible, but only a few have been trained to provide injections, from six weeks after delivery, and most feel that they need more incentives to undertake this. Therefore the many women who had not delivered in a hospital faced significant barriers to accessing postpartum family planning. Although BCH provides an outreach service to surrounding clinics, patients did not know when it would take place and consequently did not know whether to wait for it, or travel to the hospital.

She has decided to use the implant and that is the one she wants to use, but I don't know whether we shall go to Bwindi or wait for them to come here.

Interviewer: So you don't know where to access the service?

Respondent: “Yes.” [43-year-old male]

The expense and time of going to the hospital was a significant barrier for some:

We get many people who need, but we don't offer. We get many we refer, and some they don't manage the transport to Bwindi [hospital]. (Midwife working at a Catholic Health Centre II)

The one who wants it [the implant] has to spare a day to come here [hospital] and receive it. (43-year-old male)

Several people cited difficulties they (or others) had faced in having an implant removed. The reluctance of health workers to remove implants discouraged some women from choosing this method.

Most women say when they put it [the implant] and they get sick, they go to the hospital to have it removed and they refuse to remove it. They tell them that it's not yet time so they end up regretting why they put it. (40-year-old postpartum female)

Although the contraception itself is free, managing side-effects is not. This was also a deterrent.

Another thing they say that family planning is free and when one gets side effects and needs treatment they have to pay money, so this discourages many. Like when my wife fell sick, she spent two weeks at home, and I needed a vehicle to take her to a health center and money to pay for treatment. (46-year-old male)

Issues for Providers

General barriers articulated by the health care staff interviewed included religious beliefs and also the belief that it was wrong to provide family planning to unmarried teenagers.

It's not allowed in a Catholic church. We could be having, but they don't allow it. (Protestant midwife, working at a Catholic Health Centre II)

If we can teach family planning to those teenagers, I think we would be encouraging them to start playing sex before marriage, which is not good. (55-year-old male Protestant nursing assistant at a Health Centre III)

Specific Barriers to Providing LARCs

Insertion of implants and IUDs requires additional training, which some health workers, especially in peripheral clinics, had not received. In general, more health workers were confident fitting implants than IUDs because they had had more opportunity to gain experience. Even in the hospital, although many staff had been trained to fit IUDs, few had gained the experience to become confident in this. The few confident staff were not always present when needed.

After delivery I counsel them about family planning methods. If they accept IUDs, I call [the senior midwife] to come because I'm not confident enough to pass an IUD. [Midwife at BCH]

When we have one only in a department it's a problem, because she has to cover somewhere, she has to have annual leave, she has off days, she has to work late duty, so we need everyone to be involved. (Male nursing assistant, BCH)

An additional challenge in peripheral clinics was insufficient supply of the long-acting contraceptives and of the additional equipment needed for their insertion.

We had a training of postpartum IUDs but we failed to get the equipment so we are not inserting IUDs. ... It [the implant] is good, only that it is expensive. We have no lignocaine, the lignocaine we use we buy, so we are planning to ask some money from them. (23-year-old midwife, HCII)

We don't have this Norplant. ... After the person completes the ... Norplant and says they want to remove it, there we need some. ... We don't have sterilizer. Here we normally heat those equipments for removing Norplant; it needs a good sterilization like autoclave. ... We don't have electricity here, we don't have a solar, so we are just in a dilemma. (Male certificate-level nurse, in charge of HCII)

Concerns About Use of Contraception in Immediate Postpartum Period

Although most health workers, especially those at BCH, had no concerns about the use of immediate postpartum contraception, some health workers in peripheral clinics shared some of the concerns expressed by potential users.

The implant ... can lead to a decrease in breast milk. And for a mother who has just given birth, she is just feeling pain. And that implant—it normally brings headache to the mother—and that mother, she has pain from delivery and again you inject another headache! (Nurse, HCII, trained in fitting implants)

It could not be appropriate I think, because when the uterus is cleaning itself after delivery, there are a lot of things that are being shed and they can as well come out with the device. (Lab technician, HCII, received no formal training on family planning)

Normally for a mother to first get healed we normally give six weeks. (Male nurse, HCII, trained in providing short-term methods of contraception only)

Suggestions Offered by Study Participants for LARC Delivery and Adoption

Respondents suggested many ways in which uptake of postpartum family planning could be improved (Figure 2).

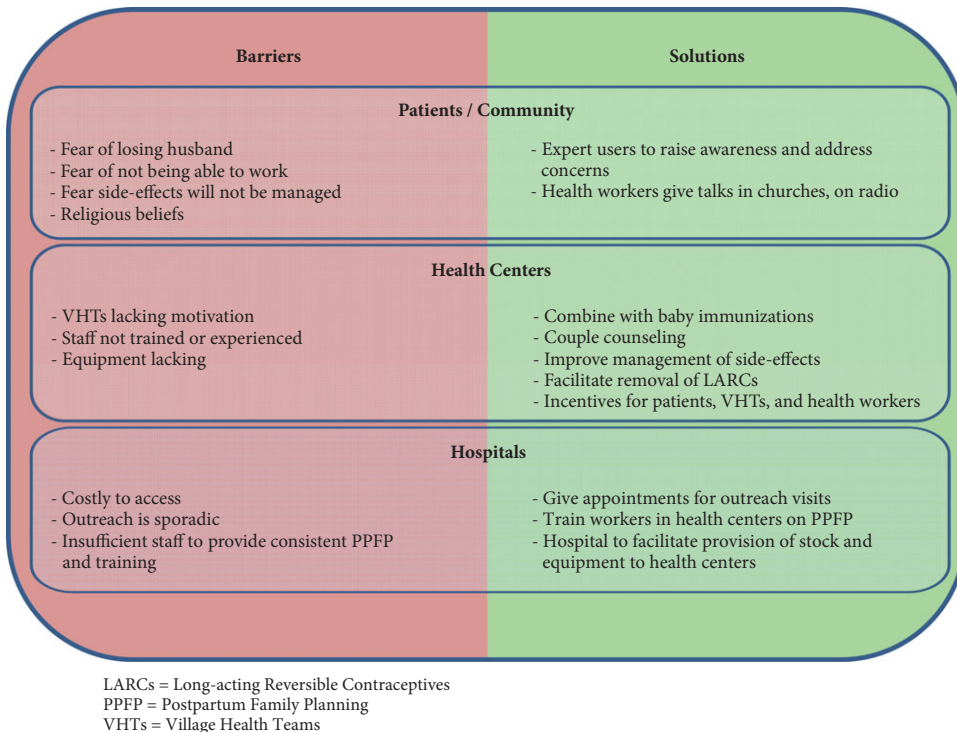
Overcoming Fears of Potential Users

There were many suggestions for general awareness-raising in the community, on the radio, and in churches, as well as for individual counseling of potential users, both antenatally and postnatally. Although VHTs have been in charge of health promotion, some suggested that they would prefer to work more closely with health workers on this task.

As VHTs, we know about the women very well, because we know women who are pregnant, women who have recently delivered, because we normally give a report and in case you need them we can easily identify them and call them for you to talk about family planning. When they hear a message from the health workers themselves, it may have a bigger impact than from us as VHTs. (42-year-old female, VHT)

However, others felt that it would be more effective to ask “expert users,” both women and their partners, to share their experiences.

I believe health workers have talked to these women and they still have these myths, so the only thing to do is for us fellow women to go and talk to them. Especially if I have used a particular method and it worked well for me, I can go and talk to others about it and they try it out. And if they fail, another person who used a different method can also go and tell them about it, and maybe in the process one might get the most appropriate method to use. (19-year-old mother)

FIGURE 2 Summary of suggestions for improving uptake of postpartum family planning

Even us who are already using it, we can teach others and people will know that, “Eh! A . . . and his wife are using it, and they are happy!” So they can also use it.
 (30-year-old Muslim male)

Several health workers, but no potential users, suggested offering incentives to encourage patients to attend postnatal clinics, and combining postpartum family planning with other services such as baby immunizations.

If there can be a way of creating something, some sort of—let’s say maybe a gift or incentive—like I believe it may increase the turn up for postnatal clinic.
 (BCH outreach nurse)

Improving and Integrating Services in Primary Care

Couples counseling was the major suggestion emerging from the analysis of couples’ interviews. This suggestion was made by a number of men and health workers, and several women mentioned the need to communicate with their husbands before starting any method of contraception. Most women feared making a decision without their husband, and most men expected to be involved in the decision, if not to be given the final say. VHTs are probably the best placed to provide initial counseling to couples because they can visit the family at home

and are more likely to have an opportunity to speak to both partners together. VHTs felt this also needed to be followed up in health facilities.

A couple is a man and woman, so I go to their home and teach them so as to avoid instances where a woman goes to the health center alone, causing disagreements among the families. When I teach a woman alone I always make sure I go back to that family and find both the man and woman, and I teach them again. (45-year-old male VHT)

Role of Village Health Teams

Some VHTs were keen to be trained to provide contraceptives themselves, while others suggested that they should at least be empowered to manage side-effects such as menstrual disturbances.

If they train us as VHTs, we may help to offer those services, because some of them come at night and we refer them but they cannot go to the referral place because it's late. So they can train more people so that if a woman needs a family planning service any time they can get them. (35-year-old female, VHT)

If possible they should get us some drugs to stop the bleeding to give those women especially who are hiding from their husbands, so that if they get problems of bleeding we can give them those drugs secretly so that they don't have to go to the hospital. (40-year-old female, VHT)

However, many felt that it was better to leave the work to professional health workers.

Even though they trained us, you know training of old people—we may not do the work very well like the qualified health workers, because for us we have a lot on our minds. (40-year-old female, VHT)

Many potential users felt they should be able to access free services in health centers, including the management of side-effects and removal of LARCs, rather than having to go to the hospital.

The most important thing is that they should bring the services here so that the health workers can do it from here. ... Also for people to know that they inserted the implants from here and if they want to remove them they will still come here to remove them—not coming here and they tell you, “Go back to the person who inserted it to remove it.” (43-year-old male)

So when the services are free, even if one gets side-effects they should still be free, because women get badly off within a short time and they bleed a lot. So if the health center is not near, more challenges happen. (46-year-old male)

To achieve this, some health workers in peripheral health centers needed more training.

Sincerely, I like to be trained, like installing these implants, IUDs, like for that I don't know how to. (42-year-old male nurse at a Health Centre II)

Some of this training could be provided by hospital staff. It was also recommended that the hospital could give patients appointments for outreach clinics and could help health centers to obtain supplies and equipment. Another suggestion was that family planning provision be integrated with other services, particularly baby immunizations.

The Bwindi people take long before coming here, but they can book people who need particular methods and they bring them on appointment. (43-year-old man)

There was a common misperception among potential users that blood tests could help in the selection of the best method for the patient, and several suggested that health centers should offer such tests.

I think we have different blood types, but before giving out any family planning method to anyone, health workers should test their blood to see which method suits. (26-year-old female, VHT)

Although such tests do not exist, a more realistic suggestion was that health workers should make it easier for patients to change to a different method of contraception if they find that a particular one does not suit them.

I would want to [talk to a health worker about family planning], so that the health worker can give me advice. Like if my wife got challenges with Injecta-plan [contraceptive injection], I would ask to know which other method to use. (38-year-old male)

DISCUSSION

Our study uncovered previously unreported barriers to the fitting of LARCs immediately after delivery. First, the fact that women feel they need the consent of their husbands, who are often absent at the time of delivery, and the lack of prior discussion about postpartum family planning, probably constituted the most important barrier. Prior discussion between partners to agree on a method of contraception before delivery is therefore even more important in Uganda than in Europe and America. Second, there is a widespread belief that a woman's body needs time to recover from the delivery before an IUD or implant is fitted. In addition, since neonatal mortality remains high in Uganda (UBS and ICF International 2017), as in most other low-income countries, a very real fear exists that babies may not survive the first month of life, contributing to reluctance to accept contraception immediately after delivery.

Although fears and myths about side-effects of contraception have been reported by previous studies, our study provides a deeper understanding of their social causes and consequences, which are more serious in low-income countries like Uganda than in high-income countries. Persistent bleeding is much more problematic when women cannot afford to buy sanitary products, when their husbands view this as a barrier to a sexual relationship, and when the consequent break-up of a marriage may have disastrous economic consequences for the woman, who is often financially dependent on her husband. Although the cost of contraceptives themselves was not mentioned as a barrier (as they are usually provided free), the

cost of transportation to a hospital and the potential costs of managing side-effects deterred some potential users. Added to this, many patients were reluctant to try LARCs because of the fear that if they had problems, they would not easily get help. Several reported difficulties in getting health workers to remove LARCs. Although serious side-effects are rare, stories of these spread rapidly and facts are easily corrupted in a population with low levels of education, leading to widespread fears and misconceptions.

Comparison with the Published Literature

The necessity-concerns framework proposes that patients balance their perceived need for medicines against their concerns about side-effects; this has been shown to explain patients' adherence to medication for chronic diseases (Horne and Weinman 1999). It has more recently been shown that patients' concerns about side-effects are linked with nonadherence to oral contraceptives (Molloy, Graham, and McGuinness 2012). Our findings are consistent with this theory, namely that for many women the concerns about the side-effects of contraception outweigh the perceived necessity, particularly in the immediate postpartum period when most women believe they are not at risk of becoming pregnant and need time to recover. Other research in Uganda has shown that men also fear relationship difficulties as a consequence of family planning (Kabagenyi et al. 2014). This highlights the importance of addressing concerns in order to increase uptake.

A study on a Postpartum Inter-Uterine Device (PPIUD) delivery program was carried out in the Mbarara district of south-west Uganda in 2010–11 (Rodgers and Atuhairwe 2012). This program in four hospitals demonstrated a keen interest in health workers and resulted in 425 PPIUD insertions. However, our study suggests this level of uptake has not been sustained; if such programs are to achieve a population-level impact, availability will need to be extended into other maternity facilities and maintained beyond the timeframe of individual projects, with provision for follow-up and management of side-effects.

For women who do not wish to use contraception immediately after delivery or who do not deliver in a hospital, the suggestion to provide family planning alongside infant immunization clinics has already been evaluated in neighboring Rwanda. Integrating contraceptive services into infant immunization services was effective, acceptable, and feasible without negatively affecting immunization uptake (Dulli et al. 2016).

Implications for Policy and Practice

Postpartum family planning programs to date have focused mainly on training health workers in hospitals (Rodgers and Atuhairwe 2012; Graffy et al. 2016), and health education activities have mainly relied on radio programs and VHTs. This is necessary but is not sufficient to achieve high levels of uptake. A randomized-controlled trial of VHTs providing prenatal counseling to women showed no impact on uptake of postpartum contraception in Uganda (Ayiasi et al. 2015). In addition to these activities, programs should consider involving successful users of postpartum contraception and LARCs (both women and their husbands) to encourage others. Health workers should also provide accurate information about possible side-effects, help to dispel myths, and explain that while blood tests cannot predict which method will work best for a woman, if she is not satisfied with one method it can be changed

to an alternative. Follow-up and management of side-effects should be improved and provided free of charge, and women should be given a “no-quibble guarantee” that if they no longer want the LARC, it will be removed, if possible at their local health center (therefore more health workers should be trained to remove LARCs). Family planning needs to be incorporated in the curricula of nurse and midwife training schools, including practical skills and competence assessment (which is not currently the case), so that health workers in all facilities have the necessary skills. Health centers should provide counseling about postpartum contraception to couples, and this could be combined with couples’ counseling on other antenatal topics such as birth planning.

This study was part of the USHAPE project (Uganda Sexual Health and Pastoral Education), which is training health workers in four facilities in south-west Uganda in promoting and providing family planning. Findings from this study are now being incorporated into the training programs. Audit data suggest that more women are now accepting IUDs or implants before leaving the hospital.

Strengths and Limitations of This Study

To our knowledge, this is the only qualitative study to have been conducted in rural Uganda on the views of potential users and health workers on postpartum contraception. It provides a valuable insight into the reasons for the failure of many LARC training projects to achieve their desired effect, and provides useful suggestions for improving uptake of postpartum contraception. The main limitation is that the study was confined to one geographical area of Uganda, and since the sample reflected the local population it included only two ethnic groups and had few Muslim participants. Many of the factors are likely to be similar in other areas of rural Uganda, however it is possible that experiences and attitudes may differ in other ethnic and religious groups. The region of this study has one of the highest rates of use of modern contraception in Uganda (43 percent of married women), so findings may not be applicable in areas with much lower contraceptive prevalence such as West Nile (19 percent) and Karamoja (7 percent). Analysis might have been improved had we been able to ask participants to check their transcripts and to provide feedback on results, but we did not have the opportunity to do this.

Unanswered Questions and Future Research

More research is needed to understand barriers to use of contraception in regions of Uganda with the lowest rates of use (such as West Nile and Karamoja). It is likely that different factors may also be at play in these areas.

The suggestion to ask “expert users” to educate other community members needs to be further evaluated. Although respondents probably envisaged that this would be through face-to-face discussions, it would be interesting to study whether recordings of “expert users” on mass media (radio or films, documentaries or dramas) would be effective, as this has the potential to reach a far wider audience and to be more cost-effective. A future study is underway to develop locally acceptable health-education films to address concerns about contraception that were expressed by the participants in this study.

On the provider side, it would be useful to evaluate training of health workers in primary care (Health Center IIs in Uganda) in provision of LARCs, to improve accessibility. While most work on couples' counseling has focused on HIV testing (Darbes et al. 2014), it would also be worth assessing the feasibility of integrating counseling on postpartum contraception with antenatal HIV counseling sessions for couples.

CONCLUSIONS

The main barriers to uptake of postpartum LARCs for potential users were: the lack of prior agreement from the absent partner about an acceptable contraceptive method, the belief that the mother needs time to recover from the delivery before a LARC can be fitted, fears that the baby may not survive, coupled with the lack of any immediate need for contraception.

In addition to previous reports of fears and myths about side-effects, this study provides a deeper understanding of the much more serious social consequences of side-effects such as persistent bleeding in a low-income setting, including lack of sanitary wear, the threat to marriages, and the costs of obtaining medical treatment. The perception that health workers are reluctant to remove LARCs further discourages women from trying them. Access to postpartum contraception, and management of side-effects, was difficult for those who lived a long distance from a hospital, as most peripheral health centers did not provide these services.

The main suggestions for improving uptake of postpartum contraception were health education run by "expert users," counseling of couples during antenatal care, and increasing the numbers of health workers trained to insert and remove LARCs and manage side-effects. Different approaches are needed to promote LARCs in the immediate postpartum period than those needed during subsequent weeks. Antenatal clinic staff should raise the topic of postpartum LARCs, possibly at the same time as they are counseling couples about birth planning. Maternity-unit staff need the confidence and training to offer this counseling. In contrast, efforts to promote family planning in the weeks after birth need better follow-up, training of community health staff, and perhaps integration with immunization programs.

REFERENCES

- Averbach, Sarah et al. 2017. "Immediate versus delayed postpartum use of levonorgestrel contraceptive implants: A randomized controlled trial in Uganda," *American Journal of Obstetrics & Gynecology* 217(5): 568.e1–568.e7. <https://doi.org/10.1016/j.ajog.2017.06.005>.
- Ayiasi, Richard Mangwi, Christine Muhumuza, Justine Bukunya, and Christopher Garimoi Orach. 2015. "The effect of prenatal counselling on postpartum family planning use among early postpartum women in Masindi and Kiryandongo districts, Uganda," *Pan African Medical Journal* 21: 138. <https://doi.org/10.11604/pamj.2015.21.138.7026>.
- Braun, Virginia and Victoria Clarke. 2006. "Using thematic analysis in psychology," *Qualitative Research in Psychology* 3(2): 77–101. <https://doi.org/10.1191/1478088706qp063oa>.
- Conde-Agudelo, Agustin and José M. Belizán. 2000. "Maternal morbidity and mortality associated with interpregnancy interval: Cross sectional study," *British Medical Journal* 321(7271): 1255–1259. <https://doi.org/10.1136/bmj.321.7271.1255>.
- Conde-Agudelo, Agustin, Anyeli Rosas-Bermudez, and Ana Cecilia Kafury-Goeta. 2006. "Birth spacing and risk of adverse perinatal outcomes: A meta-analysis," *Journal of the American Medical Association* 295(15): 1809–1823. <https://doi.org/10.1001/jama.295.15.1809>.

- Darbes, Lynae A., Heidi van Rooyen, Victoria Hosegood, Thulani Ngubane, Mallory O. Johnson, Katherine Fritz, and Nuala McGrath. 2014. "Uthando Lwethu ('Our Love'): A protocol for a couples-based intervention to increase testing for HIV: A randomized controlled trial in rural KwaZulu-Natal, South Africa," *Trials* 15: 64. <https://doi.org/10.1186/1745-6215-15-64>.
- Dasgupta, Aisha N.Z., Basia Zaba, and Amelia C. Crampin. 2016. "Postpartum uptake of contraception in rural northern Malawi: A prospective study," *Contraception* 94(5): 499–504. <https://doi.org/10.1016/j.contraception.2016.05.007>.
- Dulli, Lisa S., Marga Eichleay, Kate Rademacher, Steve Sortijas, and Théophile Nsengiyumva. 2016. "Meeting postpartum women's family planning needs through integrated family planning and immunization services: Results of a cluster-randomized controlled trial in Rwanda," *Global Health: Science and Practice* 4(1): 73–86. <https://doi.org/10.9745/GHSP-D-15-00291>.
- Farmer, Didi Bertrand et al. 2015. "Motivations and constraints to family planning: A qualitative study in Rwanda's Southern Kayonza District," *Global Health Science and Practice* 3(2): 242–254. <https://doi.org/10.9745/ghsp-d-14-00198>.
- Graffy, Jonathan, Sarah J. Capewell, Clare Goodhart, and Birungi Mutahunga Rwamatware. 2016. "Creating a whole institution approach to in-service training in sexual and reproductive health in Uganda," *Journal of Family Planning and Reproductive Health Care* 42(1): 52–58. <https://doi.org/10.1136/jfprhc-2014-100977>.
- Horne, Robert and John Weinman. 1999. "Patient's beliefs about prescribed medicines and their role in adherence to treatment in chronic physical illness," *Journal of Psychosomatic Research* 47(6): 555–567.
- Jacobstein, Roy, Eva Lathrop, Paul Blumenthal, and Enriquito Lu. 2012. "I153 Panel: Underutilized: Post-Partum Contraception with a focus on post-partum IUDs," *International Journal of Gynecology & Obstetrics* 119(Suppl. 3): S198–S199. [https://doi.org/10.1016/S0020-7292\(12\)60183-0](https://doi.org/10.1016/S0020-7292(12)60183-0).
- Kabagenyi, Allen, Larissa Jennings, Alice Reid, Gorette Nalwadda, James Ntozi, and Lynn Atuyambe. 2014. "Barriers to male involvement in contraceptive uptake and reproductive health services: A qualitative study of men and women's perceptions in two rural districts in Uganda," *Reproductive Health* 11(1): 21. <https://doi.org/10.1186/1742-4755-11-21>.
- Kakaire, Othman, Janet Nakiggude, John C. Lule, and Josaphat K. Byamugisha. 2014. "Post abortion women's perceptions of utilizing long acting reversible contraceptive methods in Uganda. A qualitative study," *Open Journal of Obstetrics and Gynecology* 4: 1087–1097. <https://doi.org/10.4236/ojog.2014.416150>.
- Keogh, Sarah C., Mark Urassa, Yusufu Kumogola, Samwel Kalongoji, Daniel Kimaro, and Basia Zaba. 2015. "Postpartum contraception in northern Tanzania: Patterns of use, relationship to antenatal intentions, and impact of antenatal counseling," *Studies in Family Planning* 46(4): 405–422. <https://doi.org/10.1111/j.1728-4465.2015.00040.x>.
- Lester, Felicia, Othman Kakaire, Josaphat Byamugisha, Sarah Averbach, Jennifer Fortin, Rie Maurer, and Alisa Goldberg. 2015. "Intrauterine insertion of the Copper T380A versus 6 weeks postcesarean: A randomized clinical trial," *Contraception* 91(3): 198–203. <https://doi.org/10.1016/j.contraception.2014.12.002>.
- Lopez, Lauren M., Alissa Bernholz, David Hubacher, Gretchen Stuart, and Huib A. Van Vliet. 2015. "Immediate postpartum insertion of intrauterine device for contraception," *Cochrane Database of Systematic Reviews* 6: CD003036. <https://doi.org/10.1002/14651858.CD003036.pub3>.
- Molloy, Gerard J., Heather Graham, and Hannah McGuinness. 2012. "Adherence to the oral contraceptive pill: A cross-sectional survey of modifiable behavioural determinants," *BMC Public Health* 12(1): 838. <https://doi.org/10.1186/1471-2458-12-838>.
- Morse, Jessica E., Tami S. Rowen, Jody Steinauer, Josaphat Byamugisha, and Othman Kakaire. 2014. "A qualitative assessment of Ugandan women's perceptions and knowledge of contraception," *International Journal of Gynecology & Obstetrics* 124(1): 30–33. <https://doi.org/10.1016/j.ijgo.2013.07.014>.
- Pasha, Omrana et al. 2015. "Postpartum contraceptive use and unmet need for family planning in five low-income countries," *Reproductive Health* 12(2): S11. <https://doi.org/10.1186/1742-4755-12-s2-s11>.
- Robinson, Nuriya, Mosa Moshabela, Lydia Owusu-Ansah, Chisina Kapungu, and Stacey Geller. 2016. "Barriers to intrauterine device uptake in a rural setting in Ghana," *Health Care for Women International* 37(2): 197–215. <https://doi.org/10.1080/07399332.2014.946511>.
- Rodgers, Ampwera and Susan Atuhairwe. 2012. "Revitalization of PPIUD insertion in Uganda: Integrating delivery and family planning services," *International Journal of Gynecology and Obstetrics* 119(Suppl. 3): S573. [https://doi.org/10.1016/S0020-7292\(12\)61324-1](https://doi.org/10.1016/S0020-7292(12)61324-1).
- Royal College of Obstetricians and Gynaecologists. 2015. "Best practice in postpartum family planning, Best Practice Paper No. 1." London.

- Rutaremwya, Gideon, Allen Kabagenyi, Stephen O. Wandera, Tapiwa Jhamba, Edith Akiror, and Hellen L. Nviiri. 2015. "Predictors of modern contraceptive use during the postpartum period among women in Uganda: A population-based cross sectional study," *BMC Public Health* 15: 262. <https://doi.org/10.1186/s12889-015-1611-y>.
- Sileo, Katelyn M., Rhoda K. Wanyenze, Haruna Lule, and Susan M. Kiene. 2015. "Determinants of family planning service uptake and use of contraceptives among postpartum women in rural Uganda," *International Journal of Public Health* 60: 987–997. <https://doi.org/10.1007/s00038-015-0683-x>.
- Tibaijuka, Leevan et al. 2017. "Factors influencing use of long-acting versus short-acting contraceptive methods among reproductive-age women in a resource-limited setting," *BMC Womens Health* 17(1): 25. <https://doi.org/10.1186/s12905-017-0382->
- Uganda Bureau of Statistics (UBS) and ICF International. 2012. *Uganda Demographic and Health Survey 2011*. Kampala, Uganda.
- . 2017. "Uganda Demographic and Health Survey 2016: Key Indicators Report." Kampala, Uganda. <http://www.ubos.org/2017/03/15/uganda-demographic-and-health-survey-2016-key-indicators-report/>.
- Willcox, Merlin L. et al. 2018. "Circumstances of child deaths in Mali and Uganda: A community-based confidential enquiry," *Lancet Global Health* 6(6): e691–e702. [https://doi.org/10.1016/s2214-109x\(18\)30215-8](https://doi.org/10.1016/s2214-109x(18)30215-8).

ACKNOWLEDGMENTS

This work was carried out as part of a Health Partnership Scheme between the Royal College of General Practitioners (UK) and Bwindi Community Hospital (Uganda), funded by UKAID, through the Tropical Health Education Trust (THET). We would like to thank Luke Arineitwe who conducted interviews with the male participants, and all the participants who agreed to be interviewed.