

Sustainable and effective methods to increase long-acting reversible contraception uptake from the ACCORd general practice trial

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Long-acting reversible contraceptives (LARC) are the most effective form of reversible contraception, and LARC users have the lowest rates of unplanned pregnancy and abortion.^{1,2} In Australia, the most recent representative surveys indicated that an estimated one in three pregnancies are unintended and of these, one in three are terminated.^{2,3} More effective contraception uptake could reduce these rates. Despite their effectiveness, there is a low uptake (6%) of LARCS in Australia.^{2,4} Previously identified barriers to LARC include the lack of trained LARC inserters and misconceptions about the safety and suitability of LARCs for women at all stages of their reproductive life.⁵

Family physicians (GPs) are responsible for most contraceptive counselling and prescription in Australia.⁶ ACCORd was a cluster randomised controlled trial in family practice that aimed to assess whether a complex GP intervention improved the uptake of LARCs.⁷ In brief, the intervention delivered online training on structured effectiveness-based contraceptive counselling to GPs and provided them with rapid referral pathways to LARC insertion clinics. The trial resulted in significantly increased LARC uptake in the intervention

Abstract

Objective: Most Australian women access contraception through general practitioners (GPs) but choose oral methods rather than long-acting reversible contraceptives (LARCS). The Australian Contraceptive ChOice pRoject (ACCORd) successfully tested a complex intervention for LARC uptake. We aimed to explore the critical elements of this intervention to increase LARC uptake.

Design: ACCORd was a cluster randomised control trial conducted in 57 GP clinics in Melbourne, Australia. To explore intervention impact, fidelity checks (n=21 GPs) and interviews with 37 GPs and 40 patients were undertaken 12 months after initial consultations. Data were inductively coded, thematically analysed and mapped to Normalization Process Theory constructs.

Results: Doctors understood the importance of effectiveness-based contraceptive counselling (EBCC). GPs demonstrated cognitive engagement in the promotion of LARC and some appreciated the rapid referral pathways. GPs and women valued the effectiveness approach. GPs held varying views about having a rapid referral pathway, with many already having established pathways in place. Some GPs viewed intrauterine device insertion costs or insertion training as barriers to ongoing practice. Most GPs and women saw the ACCORd model as effective and sustainable.

Conclusions: GP training in EBCC and the use of rapid referral pathways were critical features of an effective sustainable model for successful uptake of LARCs in primary care.

Implications for public health: Improving Australian women's access to and use of LARCs is sustainable with EBCC training and support for general practitioners.

Key words: process evaluation, general practice, long-acting reversible contraception, normalisation process theory, randomised controlled trial

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compared with the control group and has the potential to reduce rates of unintended pregnancies and abortions.⁷

This paper reports a process evaluation conducted to better understand the critical elements of ACCORd and why the ACCORd intervention was successful, using Normalization Process Theory (NPT) – a theory explicitly designed to enhance health provider and health system change.⁸ NPT is a socio-behavioural theory focused on the social organisation of health work to embed practices into routine care, and the features required to integrate and sustain the embedded practices in their social contexts⁸⁻¹¹ (<http://www.normalizationprocess.org/>).

Methods

ACCORd was a cluster randomised control trial in Melbourne, Australia (25 intervention and 32 control GPs recruited a total of 307 and 433 women participants, respectively).⁷ ACCORd was approved by the Monash University Human Research Ethics Committee: CF 14/3990-2014002066 and CF 16/188-2016000080.

This study included three levels of data collection:

1. Interviews with GPs

Each GP (intervention n=17, control n=20) participated in a semi-structured telephone interview with research staff regarding ACCORd and its impact on their practice 12 months after enrolment. The interview schedule is shown in Supplementary File 1.

2. Interviews with women participants

Twelve months after enrolment, the research staff conducted semi-structured telephone interviews with 40 women participants to assess their ACCORd experience. We stratified recruitment by group allocation; age; previous live birth(s); and median household income. We consecutively sampled in each

category until the desired sample was acquired. The telephone interview schedule is found in Supplementary File 2.

All interviews were audio-recorded, transcribed verbatim, imported into NVivo 11 and thematically analysed. Following coding consensus,¹² the NPT constructs were mapped to the ACCORd model.

3. Fidelity check

We undertook a fidelity check (Supplementary File 3) to monitor the effective implementation of evidence-based contraceptive counselling (EBCC). Checks were undertaken according to upcoming ACCORd appointments involving consenting patients and coinciding with researcher availability. A researcher blinded to allocation conducted random visits to 21 GPs in both arms to observe a single consultation and complete a checklist. During the fidelity check, if doctors initiated a discussion of the most effective methods of contraception, they were considered to have provided EBCC. If all methods were discussed, but not the evidence behind LARC first,⁷ research staff considered that EBCC did not occur.

Results

Most ACCORd GPs were female and aged 25–34 years. An equal proportion in both arms reported currently inserting LARCs, but while the majority inserted contraceptive implants and had more than ten years practice, fewer than half had family planning certificates or practised IUD insertion.⁷

Below we report GP and women's feedback and fidelity checks, according to the four NPT constructs mapped to the ACCORd intervention outlined in Table 1.

NPT CONSTRUCT 1: Coherence (sense-making work)

Intervention GPs in the ACCORd study undertook online training in effectiveness-

based contraceptive counselling. We expected that these would help 'make sense' of the work. Most intervention GPs reported understanding both the rationale and the value of the learning and the new way to practise. Women participants also expressed appreciation for providers who understood the evidence and were better informed about effective contraception.

a) GPs' understanding of contraceptive effectiveness and LARC suitability

GPs reported increased understanding about contraceptive effectiveness, and many reported becoming more aware of LARCs as a first-line contraceptive for all women, irrespective of women's age.

It [ACCORd training] provided more of a structure for contraceptive counselling and perhaps a stronger background of factual knowledge that I could back my counselling up with. (GP No.26, Intervention)

I'm no longer scared to suggest Mirenas for nullips and the younger girls. (GP No.34, Intervention)

b) Comprehension of ACCORd compared with previous practice

Many GPs expressed increased confidence in conducting effectiveness-based contraceptive consultations.

I feel more empowered to talk about LARCs. (GP No.49, Intervention)

It made me discuss LARCs more than usual, especially if they weren't coming in for contraception during recruiting. Lots took it up. (GP No.24, Intervention)

In contrast to this effectiveness-based approach, one control GP felt that although she spent more time promoting LARCs during ACCORd, she did not see any resultant increase.

I think I expected because I spent more time talking about LARCs, that there would be more uptake ..., but it seems they are still stuck to the Pill... I felt I would have more influence. (GP No.59, Control)

Table 1: Application of Normalisation Process Theory (NPT) constructs to the ACCORd intervention.

NPT constructs			
Coherence (Sense Making Work)	Cognitive Participation (Relationship Work)	Collective Action (Enacting Work)	Reflexive Monitoring (Appraisal Work)
<ul style="list-style-type: none"> Did GPs understand the purpose of the ACCORd intervention? Did they comprehend the difference between ACCORd contraceptive counselling and current practice? Did GPs see the sense of increasing uptake of long-acting reversible contraceptives (LARCs)? 	<ul style="list-style-type: none"> Did GPs actively promote LARCs within their practice? Did GPs recognise the potential for secondary referral for LARC insertion in the clinic 	<ul style="list-style-type: none"> Did GPs use the LARC first counselling/ inserting LARCs / referring for LARC insertion? Did GPs have sufficient skills or training for LARC counselling / insertion / referral? Did the practices or systems support LARCs? 	<ul style="list-style-type: none"> Did GPs monitor or reflect on the way the clinic implemented ACCORd? How did GPs assess their LARC insertion practices? Did they see potential sustainability of LARC practice/s Will GPs continue to promote LARCs even when the intervention is complete?

Women wanted GPs who were confident with contraceptive expertise and expressed the desire for informed choice prior to making decisions about contraceptive methods.

I think GPs probably need to have more confidence in putting forward the medical position ..., so I think there needs to be a bit more ... training. (Woman No.71, Control)

c) GPs saw the value of increasing uptake of long-acting reversible contraceptives (LARCs)

ACCORd training appears to have given more legitimacy to LARC counselling and provision:

Certainly ... I feel I've put a lot more on the LARCs since I've done the ALM [training] than prior and I think it's because I've got more confidence in ... I guess I'm convinced of the benefits. (GP No.85, intervention)

I mentioned LARCs in every consult, and also talking about why they wanted to continue with the combined pill. (GP No.69, Intervention)

Some GPs came to understand that they had a responsibility to talk to women about LARC, otherwise women would go on being ignorant about it, which was a barrier to LARC promotion.

It was surprising how many women haven't heard about LARCs, or no one had talked to them about LARCS, even though they had been coming for years for repeat prescriptions. That was an eye-opener. (GP 82, Intervention)

NPT CONSTRUCT 2: Cognitive participation (relationship work)

This construct examined whether GPs used resources and drove the intervention further to assimilate it into their and their colleagues' work.

a) Promotion of effectiveness-based contraceptive counselling as GP work?

Some GPs became quasi 'LARC evangelists':
[I became] ... much more conscious of LARCs and ... I broached the rest of the GPs in the practice. (GP 81, Intervention)

I think every GP should have to do it. [re ACCORd online education] (GP No.34, Intervention)

Others highlighted the visual effectiveness table, which was provided online to intervention GPs.

I'm more systematic in discussing LARCs options with ... pictorial diagrams, so it's more structured with the most to least effective chart. (GP No.72, Intervention)

b) Appraisal of rapid referral pathway to LARC insertion

For some GPs, the ACCORd referral pathway was very useful but for others already enthusiastic about LARCs, there were alternative pathways for LARC insertion already in place.

[If the LARC clinic was not available] I would still have referred all eligible and consented patients for IUD insertion. (GP No.78, Intervention)

NPT CONSTRUCT 3: Collective action (enacting work)

ACCORd provided GPs with the skills and tools they needed and most took up the recommended model as the desired mode of good practice and enacted it. Below we highlight the most valued aspects and perceived barriers to sustained practice.

a) Sufficiency of skills for LARC counselling/insertion/referral

Fidelity check data revealed that ACCORd GPs, when provided with online education about how to conduct EBCC, conducted it at a higher rate than control GPs (44%: 4/9 vs. 8%: 1/12).

I think that they probably found that I've got good knowledge because ... I use the sheet [about] efficacy of contraception during consult quite a lot, and I think that was quite mind-blowing for some patients. (GP No.47, Intervention)

Women wanted to consult GPs with contraceptive knowledge so that they could make an informed decision. Online education gave their GPs the opportunity to provide this effectively.

I had no idea about the Mirena at all until the [GP] mentioned about the study ... so that was personally interesting to know there are other options ... I have been on the same contraceptive pill for 20 years ... If something has a higher efficacy, I think it's always worth exploring those options. It also got me talking to other girlfriends. (Woman No.454, Intervention)

b) Utility of the LARC insertion clinics

Some GPs found the LARC insertion clinic invaluable, while others either did not use it or didn't think it made a difference.

Providing the ACCORd LARC clinics made a big difference to my referrals. If I am referring women as young as 16, I want to make sure that the procedure is as painless as it can be. I usually use a great gynaecologist, but it is a bit expensive. (GP No.87, Intervention)

Fidelity check data revealed that ACCORd GPs, when provided with online education about how to conduct EBCC, conducted it at a higher rate than control GPs (44%: 4/9 vs. 8%: 1/12).

Some women reported that the ACCORd LARC clinic was a positive, while others had GPs who used alternative LARC insertion pathways.

I chose an IUD. My GP referred me because she couldn't do it, so I just went and saw a different GP in the same clinic ... it was pretty simple really. (Woman No.526, Intervention)

c) Practice or system-level support for LARC insertion

GPs were aware that costs were a significant factor in LARC uptake. GPs acknowledged that despite the higher initial cost, LARC was more cost-effective than other, shorter-acting, contraceptives.

If they have the LARC, they don't have to come back for the pill renewal. It saves the patient money in the long run. (GP No. 64, Control)

However, some GPs felt that if they were unable to insert LARCs themselves, the alternative – a private gynaecologist – resulted in additional patient costs. Some developed more cost-effective pathways, such as referring their patients to other GPs or other practices, or to a more affordable private option where fees are set according to need.

IUD training was expensive and involved supervised sessions. Additional disincentives included inadequate government reimbursement for implant removal, as well as the lack of subsidised copper IUDs.

By far and away the biggest [barrier] is the Mirena insertion and the availability of gynaecologists and costs associated with that. Then the waiting list associated with places who don't charge as much. (GP 81, Intervention)

NPT CONSTRUCT 4: Reflexive monitoring (appraisal work)

Generally, most GPs saw the ACCORd model as sustainable depending on their access to affordable ongoing referral pathways.

a/b) Appraisal of access to LARC insertion

It was pretty easy doing it through a designated referrer. That made the process very simple. I don't insert IUDs ... for GPs it's finding a pathway. (GP No.87, Intervention)

I was going to learn to put them [LARCs] in myself so it wouldn't cost them anything

... but you had to go and do a whole lot of sessions and Family Planning charge you \$700. (GP No. 83, Control)

c/d) Sustainability and continued LARC practice/s

Some GPs found that EBCC was opportune and had no difficulties incorporating it into their consulting practice.

I think the counselling is more efficient, so time management is not a problem so it's certainly sustainable. (GP No.82, Intervention)

Some reflected on the difficulty of recommending LARCs, without the ability to offer insertion in a cost-effective and timely manner.

Ongoing referral for LARC insertion may be a problem, then there's the cost too. Some gynaecologists insist on insertion under GA. Then there's accessibility. I can do insertions so it's not a problem. (GP No. 24 Intervention)

There was qualified support for the continuation of LARC insertions, but the costs of referral weighed heavy for some GPs, reflected in quotes below.

... since the study has finished, I have since gone onto put many more of my patients onto LARCs. Getting access is sometimes interesting, but we've managed to do it and it's been a really good thing. (GP 85, Intervention)

In reflecting on barriers, GPs mentioned:

The inconvenience of having to go elsewhere to get it done, the time delay, the cost involved. (GP No. 85, Intervention)

Additionally:

The problem is that LARCs are not commonly done in family practice. I insert Implanon, not IUDs. I would insert IUDs but the cost of set up is ... um ... moderate. Like, you need supplies, rooms, training. (GP No. 57, Control)

Well, I think [LARC referral] would fall off a little bit. I think it would increase the number of women still who would choose to get a LARC. Not having the easy referral clinic would make a bit of difference but I would still do it, perhaps not as often. (GP 31, Intervention)

Discussion

The ACCORd trial was the first to demonstrate that training GPs in effectiveness based contraceptive counselling (EBCC) and providing the ability to make a rapid referral to insertion resulted in increased LARC uptake by women.⁷ Our process evaluation of ACCORd using NPT has identified clear critical factors to increase LARC uptake in

primary care. These include training in EBCC for GPs; a recognition of the critical role GPs play in promoting LARCs; a recognition of the importance of an ongoing referral pathway and the removal of financial disincentives. Some factors have been previously identified.^{5,13}

Both GPs and women valued contraceptive counselling training, including the ability to educate women to compare contraceptive options using the online effectiveness table developed in the US Contraceptive CHOICE study.^{13,14} This evaluation highlighted the importance of education and training in EBCC for GPs, and many GPs reported that they felt more empowered to confidently discuss effectiveness-based contraception, and many did so with enthusiasm. For some GPs, the value of training lay in a structure for contraceptive counselling; for others, increased knowledge about LARCs gave them the confidence to discuss LARCs with women of all ages and promote them as a contraceptive option. The fidelity check demonstrated that although some control GPs conducted EBCC without having received the training, a higher proportion of intervention GPs used it.

The lack of available LARC inserters has been previously well documented.⁵ There was considerable variability of views among GPs regarding the importance of the availability of the free rapid referral clinic provided by ACCORd for LARC insertion. Alternatively, the greater uptake of LARC amongst women attending intervention GPs might be due to the training rectifying misconceptions (as noted in the quotes) or GPs discussing LARC with a wider range of women. However, costs – both those incurred by women or by GPs – remained the most significant barrier to good sustainable practice.

Although there is a reduction in the cost of PBS-listed devices for Health Care Card (HCC) holders, the insertion cost charged by the practitioner varies. For example, if a GP chooses to bulk bill a HCC holder, she may only pay the PBS price of \$6.80 for the LARC (usually Implanon). Without bulk-billing, the average out-of-pocket (OOP) costs for GPs range from \$15 to \$50 (approximately). As most IUDs are fitted by a specialist, even if she is a HCC holder, a woman is likely to incur some OOP costs for the medical consultation as well as the \$6.80 for the IUD (Mirena). OOP costs for specialists are higher than those charged by GPs and more variable. In 2016-17 the average OOP costs for specialist

consultations varied between \$37 and \$97. The Copper IUD is the same price regardless of HCC or Medicare status, \$80. If a patient does not have Medicare, Mirena costs \$213.31; Implanon: \$170.41.

This study identified important policy levers around costs that are systemic and individual barriers to evidence-based care, such as the lack of subsidies and potential costs of insertion training or referring women to an alternative provider for insertion.^{13,15,17}

Strengths and limitations

This study was based on a rigorously designed cluster randomised control trial, within which a process evaluation was planned from the outset.¹⁶ It used post 12-month interviews with both GPs and their female patients, together with fidelity checks to examine components of the complex intervention. Despite the analysis being post hoc, the use of a rigorous and validated theory – NPT – to investigate factors enhancing the sustainability of the intervention is a further strength.

These qualitative data were drawn from interviews with GPs and their women patients from Australia; therefore, our conclusions are limited to this participant group. Our findings, however, concur with other studies that support the effectiveness of structured contraceptive counselling.¹⁴ The strength of our study is that through the voice of the GPs and their patients, a context is provided for this effectiveness.^{6,13}

Conclusions

This study provided insights into which aspects of the ACCORd intervention GPs found helpful for improving LARC uptake. GPs found the educational intervention, and especially the EBCC training, to be a critical and sustainable change to practice. Rapid referral clinics for LARC insertion may be valuable to some GPs. There is now a growing body of trial evidence that LARC insertion rates can and should be increased through primary care, offering a variety of strategies that could be tailored to specific country contexts.

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Clinical Trial Registration

Australian New Zealand Clinical Trials Registry ANZCTR 12615001346561; date of registration: 10/12/2015.

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Supporting Information

Additional supporting information may be found in the online version of this article:

Supplementary File 1: GP fidelity check.

Supplementary File 2: GP telephone interview schedule.

Supplementary File 3: Women's 12 month interview schedule.