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# CLINICAL EXPERIENCE OF TRAINEES OF THE ROYAL AUSTRALIAN AND NEW ZEALAND COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS IN INSERTION OF LONG-ACTING REVERSIBLE CONTRACEPTIVES

## Abstract

### Background

Long-acting reversible contraceptives – LARCs- include both progestogen-containing implants, and intra-uterine devices releasing either a progestogen or copper, provide highly effective contraception. Increasing uptake of LARCs is advocated by governments and professional organisations as an important strategy to reduce unintended pregnancy; such uptake requires, among other measures, adequate training of doctors in the areas of obstetrics and gynaecology and women's health.

### Aims

To assess The Royal Australian and New Zealand College of Obstetricians and Gynaecologists trainees' (Fellowship, Diploma or Certificate of Women's Health) experience and training in inserting and removal of LARCs.

### Materials and Methods

An invitation email to participate in an anonymous survey approved by the Continuing Professional Development Committee of RANZCOG was sent to all current RANZCOG trainees in the three categories. Responses were categorised and analysed.

### Results

Of 1686 invited trainees 294 (17.4%) responded: 250 in Australia and 44 in New Zealand; 127 undertaking Fellowship training (8.3% of those invited) and 166 (100% of those invited) undertaking training for the Diploma (either DRANZCOG and DRANZCOG Advanced) or the Certificate of Women's Health. Significant numbers of all categories of trainees had no or limited experience of insertion or removal of LARCs of all types, and/or lacked self-confidence in LARC provision.

### Conclusion

RANZCOG needs to address this training deficiency in order to continue as a leader in Australia in the provision of women's reproductive health care.

## Introduction

Long-acting reversible contraceptives– LARCs- include both progestogen-containing implants, and intra-uterine devices, releasing either a progestogen or copper. Once in place LARCs provide highly effective contraception, by slowly releasing a hormone or copper. They can last for three, five or ten

years and sometimes longer, depending on the particular device and when in a women's reproductive life-stage it is inserted.<sup>1,2,3</sup> This therefore makes them more reliable in practice than other hormonal methods of contraception, including the combined oral contraceptive pill (COCP), the progestogen-only pill (POP), the vaginal ring, and the injectable medroxyprogesterone acetate, which require active regular participation by women choosing these methods.<sup>1</sup>

A recent population-based survey found that 1 in 4 Australian women experienced an unintended pregnancy in the last 10 years and that the majority of these women were either not using contraception at all or were using a method with relatively low typical use effectiveness such as condoms or a contraceptive pill.<sup>4</sup> Increasing uptake of LARCs is advocated by governments and professional organisations as a key strategy to reduce unintended pregnancy around the globe. However, uptake of LARCs among Australian and New Zealand women has to date been low in comparison to similar countries.<sup>5-9</sup> In Australia, the single rod etonogestrel implant, the 52 mg levonorgestrel (LNG) intrauterine system (LNG IUS), and since March 2020 the 19.5mg LNG IUS, are government subsidised while copper IUDs are not, which is reflected in the relatively higher uptake of the hormonal devices; conversely in New Zealand both copper IUDs and hormonal devices as well as the two rod implant (Jadelle) are subsidised.<sup>7</sup>

Whilst there is no routine national data collection on contraception usage, the most recent Australian survey data suggests that IUDs and implants are chosen by approximately 11% of people using a method of contraception, an increase from 2.4% in 2001-2002.<sup>5</sup> In New Zealand the 2014/15 Health Survey found 15 % percent of women aged 16–24 and 12% of women aged 35-44 used a LARC.<sup>7</sup> Uptake of LARCs is dependent upon community awareness and availability of trained primary care and specialist practitioners to provide the insertion. However, in both countries there remains little awareness of the existence and advantages of LARCs among women, and also among clinicians, particularly in relation to the safety and suitability of IUDs for young nulliparous women.<sup>10</sup>

While IUD and implant insertion primarily occurs in general practice and family planning clinics, obstetricians and gynaecologists play a vital role in providing rapid referral pathways for general practitioners (GPs) e.g. for IUD insertions in medically complex patients such as those with cardiac disease. The 52 mg levonorgestrel IUS (Mirena) is also indicated for the management of heavy menstrual bleeding and for endometrial protection as part of menopausal hormone replacement therapy; obstetricians and gynaecologists also play a critical role in this context.<sup>11</sup>

The ability to offer LARC insertion to women depends on appropriate training being available and accessible, to GPs, obstetricians and gynaecologists, and other practitioners working in women's health. Ideally such training should be offered during initial post-graduate training, and also be available to clinicians already in practice who want to increase their scope, so they can offer LARCs to women requesting them.

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) is the main provider of training in obstetrics and gynaecology for specialists, who complete six years of accredited training. It also provides training for GPs who undertake Diploma (DRANZCOG) examinations requiring six or twelve months of training, or three months for the Certificate of Women's Health (CWH). The training requirements around contraception and LARCs for candidates for DRANZCOG and CWH state that trainees should 'be able to independently insert and remove IUDs and sub-dermal implants.'<sup>12</sup>

For Fellowship trainees the expectation is that they 'demonstrate a contemporary evidence-based knowledge of contraception in order to discuss with a woman and her partner family planning and contraceptive issues, and assess and manage contraception.'<sup>13</sup>

However, anecdotal reports have suggested that many trainees at all levels are not gaining the required experience, and that hospitals accredited for general training in obstetrics and gynaecology often do not provide dedicated contraception services. To assess the provision of training opportunities in clinical settings, the Sexual and Reproductive Health Committee (SRHC) of RANZCOG resolved to conduct an anonymous survey of all current RANZCOG trainees regarding their experience of LARC insertion. It was hoped this research would provide clarity around the issue of contraceptive method teaching in public hospital RANZCOG training programs.

## **Materials and Methods**

This was a cross sectional survey of the experiences of RANZCOG trainees. A survey (see Appendix A), taking an estimated ten minutes to complete, was drawn up by members of the SRHC, and piloted among practitioners in the members' various institutions. Approval for the study was obtained from the Continuing Professional Development Committee of RANZCOG, and the Human Research Ethics committee of James Cook University (approval no H7910).

Email addresses were provided by RANZCOG and an invitation was sent by RANZCOG staff in Melbourne to all trainees registered for both specialist and Diploma/CWH training by the College (1528 Fellowship trainees including 37 recently elevated to Fellowship, and 166 Diploma/CWH or

RANZCOG PreVocational Pathway trainees) inviting them to use a link to the survey on SurveyMonkey. The survey was conducted between 1<sup>st</sup> May and 1<sup>st</sup> July 2020. Data were entered into an Excel spreadsheet, and imported into SPSS v25. Descriptive univariate analyses were used to report participant characteristics and experience. Chi Square tests were performed to analyse experience of LARC insertion based on type of RANZCOG training (fellowship vs diploma), and post hoc z tests were used to examine specific differences between groups. Independent samples t-tests were performed to compare trainee type and self-reported confidence levels in insertion of LARCs in outpatient settings.

## Results

Of the 1686 invited trainees 294 (17.4%) responded: 250 in Australia and 44 in New Zealand. Among the Australian trainees a majority were in New South Wales and Victoria; the remainder were proportionally from other states. There were 127 trainees undertaking Fellowship training (8.3% of those invited), with 166 (100% of those invited) undertaking training for the Diploma (either DRANZCOG and DRANZCOG Advanced) or the Certificate of Women's Health, and including one trainee undertaking the RANZCOG PreVocational Pathway. A majority were aged 26-35 and identified as female.

The small response rate of Fellowship trainees meant that no meaningful statistical analysis comparing responses with those of Diploma/CWH trainees could be performed. However Table 1 gives a breakdown of the various types of LARC insertion reported by those Fellowship trainees who did respond, in both inpatients and outpatients..

Table 2 reports the responses from the whole cohort of Diploma/CWH trainees, and compares Australian with New Zealand responses.

A significantly greater proportion of Australian Diploma/CWH trainees have had no experience with insertion of LNG IUS and copper IUDs without sedation or general anaesthesia and copper IUDs with sedation or general anaesthesia in their training compared with New Zealand trainees. Significantly more New Zealand Diploma/CWH trainees have had extensive experience (30+) inserting LNG IUS with or without sedation or general anaesthesia in their training compared with Australian trainees.

Trainees were asked questions about self-reported confidence in LARC insertion. Among Diploma/CWH trainees in an outpatient setting, New Zealand trainees ( $M = 2.89$ ) reported significantly more confidence in insertion of LNG IUSs in an outpatient setting than Australian trainees ( $M = 2.51$ ),  $t(292) = -3.48$ ,  $p < .001$ . New Zealand trainees ( $M = 2.30$ ) also reported significantly more confidence with insertion of copper IUDs in an outpatient setting than their

Australian counterparts ( $M = 1.83$ ),  $t(292) = -3.61$ ,  $p < .001$ . However, there was no difference in reported confidence with insertion of an implant device between Australian ( $M = 2.74$ ) and New Zealand trainees ( $M = 2.61$ ),  $p = .171$ .

Asked about experience removing LARCs, 239 (81.3%) trainees, reported they did have this experience and 55 (18.7%) did not. However this question did not distinguish between implant and IUD/IUS removal. Trainees were also asked about experience inserting LARCs in the previous five years, outside of their training setting. For Diploma/CWH combined, results are shown in Table 3. 'Outside sites' included part of GP training, as house officers or unaccredited registrars, in a sexual health or family planning clinic, as medical students or through prevocational training workshops, while on rural electives and during overseas electives.

- Participants answered two questions around situations in which they had inserted LARCs. Immediate postpartum insertion of implants was reported by 259 (88.1%) trainees, and of IUD/IUS by 83(28.2%); six week postpartum insertions of implants 146(49.6%) and IUD/IUS 205 (69.7%); post-termination of pregnancy implants 145(49.3%) and IUD/IUS 137(46.6%); and during caesarean section 93 (31.6) insertions of IUD/IUS.

## **Discussion**

The ability to confidently insert and remove copper IUDs, LNG IUSs and progestogen-releasing implants is a core competency of all obstetricians/gynaecologists, and of those wishing to provide women's health care in general practice by completing a DRANZCOG or CWH. It is therefore essential that all trainees receive sufficient exposure to these clinical skills. Our survey has not been able to determine the adequacy of Fellowship trainees' experience in LARC insertion but it does show that while some Diploma/CWH trainees are gaining very adequate experience of LARC insertion and removal in training, others are not. Much of the reported experience of these trainees has been outside the training setting and it is evident that Fellowship trainees also have outside experience. When the experiences of Fellowship trainees and Diploma trainees was examined, a significant minority reported no or little experience in IUD/IUS insertions in the outpatient setting. A closer look at the experience of Diploma trainees reveals that those training in New Zealand report greater numbers of LARC insertions compared to those training in Australia. Differences were particularly marked for exposure to copper versus hormonal releasing intrauterine contraceptives,

which may reflect the differences in government subsidies of IUD/IUS methods between Australia and New Zealand.

The small number of Fellowship trainees completing the survey was disappointing, and a limitation to our conclusions about the LARC experience of this group. It suggests that these trainees do not consider procedural skills in contraception provision to be an important part of their training. On the other hand, the 100% response rate from DRANZCOG/CWH trainees has given a very comprehensive picture of their experience.

It is important for obstetricians/gynaecologists to develop expertise in insertion (and removal) of LARCs as it allows them to provide both a full suite of services to their own patients and also support to primary care clinicians in a range of settings, including GPs, nurses and midwives, and for complex clinical scenarios. For clinicians entering general practice, provision of contraception and contraceptive advice is a key skill. In an analysis of general practice consultations in Australia, contraceptive problems (general or emergency) were managed at a rate of 6.1 per 100 consultations (95% CI, 5.9–6.3).<sup>14</sup> The highest rate of management for general contraception was amongst women aged 18–24 years and this is the group of women who benefit most from use of LARC methods.<sup>1</sup>

Currently, RANZCOG, directly or indirectly, encourages the provision of contraception, including LARCs, in public hospitals (where most training takes place). There is also an expectation on the part of Fellowship, Diploma and CWH trainees that RANZCOG will equip them with proficiency in LARC insertion, yet it appears this promise of training is not being fulfilled. There is a range of reasons for this, including a lack of public hospital services in which to train doctors and a lack of clarity about what is required of trainees. Queensland for example provides no dedicated contraceptive services in public hospital anywhere in the state. Increased availability and provision of LARCs has the potential to lower Australia's high rate of unplanned pregnancies, and so all trainees should have experience of insertion and removal of all LARC types, as not all women can or want to use a hormonal or other method of contraception. Our survey suggests that many trainees are having to rely on gaining exposure to LARC training through external avenues. RANZCOG needs to address this training deficiency in order to continue as a leader in Australia in the provision of women's reproductive health care.

Table 1. RANZCOG Fellowship trainees' experience of LARC insertion

Experience of LARCs	Fellowship		
Country- any experience of LARCs	n, %		
Australia	99 (78.0)		
New Zealand	28 (22.0)		
In training, experience inserting copper IUDs (without sedation or general anaesthesia)			
0	49 (38.6)		
0-10	64 (50.4)		
10-20	7 (5.5)		
20-30	5 (3.9)		
>30	2 (1.6)		
In training, experience inserting LNG IUSs (without sedation or general anaesthesia)			
0	7 (5.5)		
0-10	22 (17.3)		
10-20	30 (23.6)		
20-30	18 (14.2)		
>30	50 (39.4)		
In training, experience inserting copper IUDs (with sedation or general anaesthesia)			
0	78 (61.4)		
10-20	46 (36.2)		
20-30	1 (0.8)		
>30	2 (1.6)		
In training, experience inserting LNG IUSs(with sedation or general anaesthesia)			
0	5 (3.9)		
10-20	26 (20.5)		
20-30	19 (15.0)		
>30	77 (60.6)		
In training, experience inserting contraceptive implants			
0	8 (6.3)		
1-10	39 (30.7)		
10-20	26 (20.5)		
20-30	19 (15.0)		
>30	35 (27.6)		




Table 2

Table 2 Comparison of New Zealand and Australian Diploma/CWH trainees' experience with insertion of LARCS

Diploma/CWH trainees (N = 166)	Australian N = 150 n (%)	New Zealand N = 16 n (%)	P value
Number of Copper IUDs inserted without sedation or general anaesthesia			
None	87 (58.0)	0	<
0-10	50 (33.3)	6 (37.5)	.001
10-20	8 (5.3)	6 (37.5)	.728
20-30	3 (2.0)	4 (25.0)	<
30+	2 (1.3)	0	.001
			<
			.001
			.646
Number of LNG IUSs inserted without sedation or general anaesthesia in training			
None	30 (20.0)	0	.048
0-10	32 (21.3)	0	.039
10-20	16 (10.7)	1 (6.3)	.582
20-30	25 (16.7)	3 (18.8)	.834
30+	47 (31.3)	12 (75.0)	.001
Number of Copper IUDs inserted with sedation or general anaesthesia in training			
None	110 (73.3)	4 (25.0)	<
0-10	0	0	.001
10-20	35 (23.3)	11 (68.8)	-
20-30	4 (2.7)	1 (6.3)	<
30+	1 (0.7)	0	.001
			.424
			.741
Number of LNG IUSs inserted with sedation or general anaesthesia in training			
None	25 (16.7)	0	.077
0-10	0	0	-
10-20	57 (38.0)	1 (6.3)	.011
20-30	9 (6.0)	1 (6.3)	.968
30+	59 (39.3)	14 (87.5)	<
			.001
Number of contraceptive implants inserted in training			
None	14 (9.3)	0	.201
0-10	41 (27.3)	6 (37.5)	.389

10-20	29 (19.3)	4 (25.0)	.589
20-30	17 (11.3)	3 (18.8)	.384
30+	49 (32.7)	3 (18.8)	.254

Table 3. Experience outside training

Outside of RANZCOG training, experience inserting IUDs (of any type) in last 5 years	
Yes	43 (25.9%)
No	123 (74.1%)
Outside of RANZCOG training, how many IUDs inserted in last 5 years	
0	117 (70.5%)
1-10	21 (12.7%)
10-20	8 (4.8%)
20-30	3 (1.8%)
>30	17 (10.2%)
Outside of RANZCOG training, experience in implant insertions (of any type) in last 5 years	
Yes	51 (30.7%)
No	115 (69.3%)
Outside of RANZCOG training, how many implants inserted in last 5 years	
0	105 (63.3%)
1-10	36 (21.7%)
10-20	6 (3.6%)
20-30	9 (5.4%)
>30	10 (6.0%)

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