The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Excellence in Women's Health

Long acting reversible contraception

This statement has been developed and reviewed by the Women's Health Committee and approved by the RANZCOG Board and Council.

A list of Women's Health Committee Members can be found in Appendix A.

Disclosure statements have been received from all members of this committee.

Disclaimer This information is intended to provide general advice to practitioners. This information should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The document has been prepared having regard to general circumstances.

First endorsed by RANZCOG: July 2014
Current: July 2017
Review due: July 2020

Objectives: To provide advice on long acting reversible contraception.

Options: For the purposes of this statement Long acting reversible contraception (LARC) includes the contraceptive implants, intrauterine contraception including the copper containing devices and the levonorgestrel intrauterine system.
Outcomes: Information about effective, reversible non user dependent contraception.

Target audience: All health practitioners providing gynaecological care and contraceptive advice and device insertion and removal to women.

Evidence: Medline was searched for randomised trials, prospective cohort studies, and selected retrospective cohort studies examining the safety and efficacy, advantages and disadvantages of LARC methods over user dependent methods.

Values: The evidence was reviewed by the Women's Health Committee (RANZCOG), and applied to local factors relating to Australia and New Zealand.

Validation: This statement was compared with guidance published by ACOG,[1] NICE,[2] WHO,[3] and Sexual Health and Family Planning Australia.[4]

Background: This statement was first developed by RANZCOG in July 2017.

Funding: The development and review of this statement was funded by RANZCOG.

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1. Patient summary

Long acting reversible contraception (LARC) includes the contraceptive implants (Implanon NXT in Australia and Jadelle in New Zealand), the copper containing intrauterine devices (Cu-IUDs), and the lev+-onorgestrel intrauterine system (IUS).While uptake of LARC methods is increasing, rates in Australian and New Zealand still lag behind other similar countries.

LARC methods have the following advantages for women

- Are the most effective reversible methods available; are more effective at reducing unintended pregnancy than shorter acting methods.
- Have high rates of user satisfaction as indicated by high continuation rates
- Are set and forget methods that do not require daily adherence
- Require fewer visits to health services than many other methods
- Compared to using the pill for one year, LARC methods are more cost effective for women and governments because of the reduction in unplanned pregnancy. [5, 6]
- Are easily reversible
- Are suitable for women of all ages including young nulliparous women
- Do not affect fertility after removal

The methods also have some non-contraceptive benefits such as reduction in menstrual bleeding and pain with the IUS and a reduction in dysmenorrhoea and pelvic pain with the implants.

2. Summary of recommendations

Recommendation 1	Grade and reference
LARC methods are the most effective reversible methods of contraception available and have high continuation and satisfaction rates amongst users.	Evidence based recommendation Reference 3
Recommendation 2	**Grade and reference**
There are very few contraindications to use of LARC methods and according to the World Health Organization, the majority of women are eligible for implants and intrauterine contraception (IUC) including young and nulliparous women.	Consensus-based recommendation
Recommendation 3	**Grade and reference**
It is important that the barriers to LARCs uptake are addressed through improved health practitioner knowledge and training.	Consensus-based recommendations
Recommendation 4	**Grade and reference**
When discussing contraception with women, health care practitioners should discuss the risks and benefits of LARCs with women of all ages and parity and recommend them as a first line method.	Consensus-based recommendation

3. Introduction

3.1 Overview

Long acting reversible contraceptive methods included the progestogen-only subdermal implants (the 3 year Implanon NT containing etonorgestrel and the 5 year Jadelle two rod implant containing levonorgestrel), intrauterine contraceptive (IUC) methods — the hormonal levonorgestrel intrauterine system and copper intrauterine devices, which provide highly effective contraception for up to 5 and 10 years, respectively. Injectable contraception is no longer considered a LARC method because it is less effective than IUC and implants and is user-dependent (requires the user to return every 12 weeks for a repeat dose).A US study found that compared to women using contraceptive pills, patches or rings, the risk of unintended pregnancy in users of IUC and implants is reduced 20-fold.[7]

LARC are proven to be an effective strategy in preventing unintended pregnancy. Despite evidence showing many benefits, the uptake of LARC in Australia and New Zealand is relatively low. The evidence shows up to 50% of pregnancies in Australia are unintended and this rate could significantly reduce if access to LARC methods is improved. Improved LARC access is supported by Family Planning Alliance Australia and internationally, since 2005, by the National Institute for Health and Care Excellence (NICE; formerly the National Institute for Health and Clinical Excellence) in the UK. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) endorses the view that there is both a convincing health argument and an economic argument to expand LARC usage.

3.2 What LARC are currently available?

LARC methods are those contraceptives that are not user dependant. Currently available intrauterine devices include the copper containing Cu T380 and Load Cu 375, and the levonorgestrel intrauterine systems (Mirena or Jaydess). The implant available in Australia is the etonorgestrel one rod system (Implanon NXT) and in New Zealand the two rod levonorgestrel implants (Jadelle).

4. Discussion and Recommendations

4.1 What are the advantages of LARC methods?

Women using LARC methods have less chance of unintended pregnancy compared to women using user dependent methods. LARCs do not require daily adherence and are the most effective reversible methods available. They are also equally or more effective than female sterilisation. They have higher continuation rates than the oral contraceptive pill and very high satisfaction rates.[8] All LARC methods are very cost-effective both in terms of the money spent by the patient (which may be high initially but is low over a one year period) and bring cost savings to governments in terms of the public health impact on reducing unintended pregnancies.[9] Importantly, LARC methods are suitable for women of all ages and parity. In addition, IUC methods and implants are easily reversible and do not affect fertility after removal.

Recommendation 1	Grade and reference
LARC methods are the most effective reversible methods of contraception available and have high continuation and satisfaction rates amongst users.	Evidence-based recommendation Reference 3

4.2 How is patient suitability for a LARC method assessed?

There are very few contraindications to use of LARC methods and according to the World Health Organization,[3] the majority of women are eligible for implants and intrauterine contraception (IUC) including young, nulliparous women and those immediately postpartum. Guidance on assessment prior to IUC can be found in the RANZCOG statement "Intrauterine Contraception". The only absolute contraindications to IUD use are pregnancy, insertions after puerperal sepsis or septic abortion, unexplained vaginal bleeding, Gestational trophoblastic disease (GTD) with rising βhcg, endometrial cancer, distortion of the uterine cavity from fibroids or congenital abnormality, and current Pelvic Inflammatory Disease (PID).

The only absolute contraindication to use of implants is current breast cancer but the risks of use outweigh the benefits with severe cirrhosis, unexplained vaginal bleeding, past history of breast cancer.

Recommendation 2	Grade and reference
There are very few contraindications to use of LARC methods and according to the World Health Organization, the majority of women are eligible for implants and intrauterine contraception (IUC) including young, nulliparous women and those immediately postpartum.	Consensus-based recommendation

4.3 What are the current barriers to LARC provision?

There appears to be a lack of accurate knowledge among providers and women about LARC methods, as well as insufficient training in LARC insertion and removal procedures and management of complications. A lack of appropriate remuneration for these procedures in general practice remains a barrier in Australia. Some women and providers have little awareness of the benefits of LARCs and hold misperceptions about the risks of infection and infertility and concerns about the potential side effects such as irregular bleeding.[10] Modern IUC methods are not associated with infertility nor increased rates of PID (beyond the first 20 days) and are suitable for use in young and nulliparous women and continuity and satisfaction rates with all LARC methods are high, indicating that their side effects are acceptable for most users.[7, 8]

4.4 How can the low uptake of LARC methods be addressed?

Health professionals should update their knowledge of LARC methods and when discussing contraception, should provide information about the benefits of LARCs methods to all women including young women. LARC should be recommended as a first line method. Implant and IUD insertion requires specific skills, training and ongoing practice to maintain competence. These services are likely to be undertaken by obstetricians and gynaecologists, family planning clinics, trained general practitioners (GPs) and selected pregnancy termination clinics.

Recommendation 3	Grade and reference
It is important that the barriers to LARCs uptake are addressed through improved health practitioner knowledge and training.	Consensus-based recommendation
Recommendation 4	**Grade and reference**
When discussing contraception with women, health care practitioners should discuss the risks and benefits of LARCs with women of all ages and parity and recommend them as a first line method	Consensus-based recommendation

4. References

1. American College of Obstetricians and Gynecologists Long-Acting Reversible Contraception Working Group. ACOG Committee Opinion no. 450: Increasing use of contraceptive implants and intrauterine devices to reduce unintended pregnancy, Obstetrics & Gynecology. 2009;114(6):1434-8.
2. National Institute for Health and Clinical Excellence. Long-acting reversible contraception. London: National Institute for Health and Clinical Excellence, 2005 October, 2005. Report No.
3. World Health Organization, Reproductive Health and Research, . Medical Eligibility Criteria for Contraceptive Use- 4th edition. Geneva: WHO, 2009.
4. Sexual Health and Family Planning Australia. Time for a change: increasing the use of long acting reversible contraception methods in Australia Sydney: FPNSW, 2013.
5. Black AY, Guilbert E, Hassan F, Chatziheofilou I, Lowin J, Jeddi M, et al. The Cost of Unintended Pregnancies in Canada: Estimating Direct Cost, Role of Imperfect Adherence, and the Potential Impact of Increased Use of Long-Acting Reversible Contraceptives, J Obstet Gynaecol Can. 2015;37(12):1086-97.
6. Heitmann RJ, Mumford SL, Hill MJ, Armstrong AY. Estimated economic impact of the levonorgestrel intrauterine system on unintended pregnancy in active duty women, Mil Med. 2014;179(10):1127-32.
7. Winner B, Peipert JF, Zhao Q, Buckel C, Madden T, Allsworth JE, et al. Effectiveness of long-acting reversible contraception, New England Journal of Medicine. 2012;366(21):1998-2007.
8. Peipert JF, Zhao Q, Allsworth JE, al. e. Continuation and satisfaction of reversible contraception. , Obstet Gynecol 2011;117:1105-13.
9. I. M. LARC Guideline Development Group. The cost-effectiveness of long-acting reversible contraceptive methods in the UK: analysis based on a decision-analytic model developed for a National Institute for Health and Clinical Excellence (NICE) clinical practice guideline., Hum Reprod. 2008;23:1338-45.
10. Black KI, Sakhaei T, SM. G. A study investigating obstetricians and gynaecologist management of women requesting an intrauterine device, Australian and New Zealand Journal of Obstetrics and Gynaecology. 2010;50(2):184-8.
11. National Health and Medical Research Council. NHMRC additional levels of evidence and grades for recommendations for developers of guidelines. Canberra2009.

5. Links to other College statements

Intrauterine contraception (C-Gyn 03)

6. Patient information

A range of RANZCOG Patient Information Pamphlets can be ordered via:

https://www.ranzcog.edu.au/Womens-Health/Patient-Information-Guides/Patient-Information-Pamphlets

Appendices

Appendix A Women's Health Committee Membership

Name	Position on Committee
Professor Yee Leung	Chair
Dr Joseph Sgroi	Deputy Chair, Gynaecology
Associate Professor Janet Vaughan	Deputy Chair, Obstetrics
Associate Professor Ian Pettigrew	EAC Representative
Dr Tal Jacobson	Member
Dr Ian Page	Member
Dr John Regan	Member
Dr Craig Skidmore	Member
Associate Professor Lisa Hui	Member
Dr Bernadette White	Member
Dr Scott White	Member
Associate Professor Kirsten Black	Member
Dr Greg Fox	College Medical Officer
Dr Marilyn Clarke	Chair of the ATSI WHC
Dr Martin Byrne	GPOAC Representative
Ms Catherine Whitby	Community Representative
Ms Sherryn Elworthy	Midwifery Representative
Dr Amelia Ryan	Trainee Representative

Appendix B Overview of the development and review process for this statement

i. Steps in developing and updating this statement

This statement was originally developed in July 2014 and most recently reviewed in July 2017. The Women's Health Committee carried out the following steps in reviewing this statement:

- Declarations of interest were sought from all members prior to reviewing this statement.
- Structured clinical questions were developed and agreed upon.
- An updated literature search to answer the clinical questions was undertaken.
- At the July 2017 WHC meeting, the existing consensus-based recommendations were reviewed and updated (where appropriate) based on the available body of evidence and clinical expertise. Recommendations were graded as set out below in Appendix B part iii). This statement was approved by RANZCOG Board on 1 August 2014.

ii. Declaration of interest process and management

Declaring interests is essential in order to prevent any potential conflict between the private interests of members, and their duties as part of the Women's Health Committee.

A declaration of interest form specific to guidelines and statements was developed by RANZCOG and approved by the RANZCOG Board in September 2012. The Women's Health Committee members were required to declare their relevant interests in writing on this form prior to participating in the review of this statement.

Members were required to update their information as soon as they become aware of any changes to their interests and there was also a standing agenda item at each meeting where declarations of interest were called for and recorded as part of the meeting minutes.

There were no significant real or perceived conflicts of interest that required management during the process of updating this statement.

iii. Grading of recommendations

Each recommendation in this College statement is given an overall grade as per the table below, based on the National Health and Medical Research Council (NHMRC) Levels of Evidence and Grades of Recommendations for Developers of Guidelines.[11] Where no robust evidence was available but there was sufficient consensus within the Women's Health Committee, consensus-based recommendations were developed or existing ones updated and are identifiable as such. Consensus-based recommendations were agreed to by the entire committee. Good Practice Notes are highlighted throughout and provide practical guidance to facilitate implementation. These were also developed through consensus of the entire committee.

Recommendation category		Description
Evidence-based	A	Body of evidence can be trusted to guide practice
	B	Body of evidence can be trusted to guide practice in most situations
	C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
	D	The body of evidence is weak and the recommendation must be applied with caution
Consensus-based		Recommendation based on clinical opinion and expertise as insufficient evidence available
Good Practice Note		Practical advice and information based on clinical opinion and expertise

Appendix C Full Disclaimer

This information is intended to provide general advice to practitioners, and should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient.

This information has been prepared having regard to general circumstances. It is the responsibility of each practitioner to have regard to the particular circumstances of each case. Clinical management should be responsive to the needs of the individual patient and the particular circumstances of each case.

This information has been prepared having regard to the information available at the time of its preparation, and each practitioner should have regard to relevant information, research or material which may have been published or become available subsequently.

Whilst the College endeavours to ensure that information is accurate and current at the time of preparation, it takes no responsibility for matters arising from changed circumstances or information or material that may have become subsequently available.