MINISTRY OF HEALTH
MANATŪ HAUORA

New Zealand Government

New Zealand Aotearoa's guidance on contraception

December 2020

ACKNOWLEDGEMENTS

This work was undertaken by Allen + Clarke Limited on behalf of the Ministry of Health. The Contraception Guidelines Project team (Anna Gribble, Joanna Clarke, Monique Tuifao, Marion Clark, and Dr Sue Tutty) wish to acknowledge and thank the National Contraception Guidelines Steering Group for their advice and guidance on the wide range of topics discussed in this analysis and final guidance:

- Annette Milligan
- Dr Beth Messenger (New Zealand Family Planning, NZFP)
- Briony Raven (New Zealand College of Midwives, NZCOM)
- Carmen Timu-Parata
- Dr Debbie Hughes (Royal New Zealand College of GPs, RNZCGP)
- Eunique Kitiseni
- Dr Fionna Bell (Pasifika Medical Association)
- Dr Helen Paterson (New Zealand College of Sexual and Reproductive Health)
- Jesse Solomon
- Lizzie Earles
- Dr Ruth Swarbrick (Royal Australia and New Zealand College of Obstetricians and Gynaecologists, RANZCOG).

We would also like to thank the Ministry of Health and its library services for support throughout this project. We would also like to thank the 29 submitters who provided written feedback, and all those who contributed to that feedback, with special thanks to those organisations that sought and collated feedback on behalf of their members including the NZCOM, the New Zealand Medical Association, the RNZCGP and the RANZCOG.

Previous input from 600+ health practitioners, organisations and service providers across New Zealand has been also invaluable in informing the development of national contraception guidance. Together, your insights and advice have been invaluable in supporting the development of consistent advice on New Zealand Aotearoa's guidance on contraception counselling and contraceptive options.

Citation: Ministry of Health. 2020. *New Zealand Aotearoa's guidance on contraception.* Wellington: Ministry of Health.

Published in December 2020 by the Ministry of Health
PO Box 5013, Wellington 6140, New Zealand

ISBN 978-1-99-002969-1 (online)
HP 7542

MINISTRY OF HEALTH
MANATŪ HAUORA

This document is available at health.govt.nz

CONTENTS

GLOSSARY

95%CI	95 percent confidence interval
ALO	Actinomyces-like organisms
BBT	Basal body temperature
BMI	Body mass index
CHC	Combined hormonal contraception
COC	Combined oral contraceptive pill
Cu-IUD	Copper intrauterine contraceptive device
DHB	District health board
DMPA	Depot medroxyprogesterone acetate (Depo-Provera)
DSG	Desogestrel
EC	Emergency contraception

ECP	Emergency contraceptive pill
ENG	Etonogestrel
FSRH	UK Faculty of Sexual and Reproductive Healthcare
FSH	Follicle-stimulating hormone
GTD	Gestational trophoblastic disease
hCG	Human chorionic gonadotrophin
HIV	Human immunodeficiency virus
HPV	Human papillomavirus
IUC	Intrauterine contraception
IUS	Intrauterine system
LAM	Lactational amenorrhea method
LARC	Long-acting reversible contraception
LNG	Levonorgestrel
LNG implant	Subdermal levonorgestrel implants
LNG-IUS	Levonorgestrel intrauterine system (52mg or 13.5mg)
MI	Myocardial infarction
NCGSG	National Contraception Guidelines Steering Group
NSAIDs	Non-steroidal inflammatory drugs
NZCOM	New Zealand College of Midwives
NZFP	New Zealand Family Planning
OR	Odds ratio
LNG-EC	Levonorgestrel 1.5mg or 3mg (the emergency contraceptive pill)
PID	Pelvic inflammatory disease
POP	Progestogen-only pill
PSO	Practitioner's Supply Order
PVSA	Post-vasectomy semen analysis
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists

RCT	Randomised controlled trial
RNZCGP	Royal New Zealand College of General Practitioners
SGA	Small for gestational age
STI	Sexually transmitted infection
UKMEC	UK Medical Eligibility Criteria for contraception use
UPSI	Unprotected sexual intercourse
VTE	Venous thromboembolism
WHO	World Health Organization

SUMMARY OF KEY PRACTICE POINTS FOR NEW ZEALAND AOTEAROA

Effective contraceptive counselling

Guidance on effective counselling has been incorporated throughout this document. It is recommended Section 1.1 is read in full because this information is relevant to most individuals who require contraception, or advice about contraception.

Contraception after pregnancy

The United Kingdom's Faculty of Sexual and Reproductive Healthcare (FSRH) guideline, *Contraception After Pregnancy*,[1] forms the basis for New Zealand Aotearoa's guidance on the use of contraception after pregnancy. Method specific recommendations relating to contraception are included in other FSRH guidelines. Health practitioners should ensure that they are familiar with these documents.

It is recommended that contraception counselling be a routine part of antenatal care. Health practitioners should offer pregnant individuals the opportunity to discuss and document a contraception plan prior to birth (including the option to not use contraception). Contraception counselling should identify the individual's preference for contraception and include advice based on all contraceptive options, from the most to least efficacious method. Individuals who request tubal ligation to be performed at the time of caesarean birth should be advised of the possible increased risk of regret. Health practitioners should advise individuals that:

- an interpregnancy interval of less than 12 months between birth and next conception is associated with an increased risk of preterm birth, low birthweight, and small for gestational age babies and a longer interpregnancy interval is especially important after caesarean section
- additional contraceptive precautions are required if contraception is started 21 days or more after birth
- most methods can be safely initiated immediately after birth, with the exception of the combined oral contraceptive (COC) pill
- Intrauterine contraception (IUC) can be safely inserted within 10 minutes of placental delivery or up to 48 hours after birth. While expulsion rates are higher during this period, contraception continuation rates are higher at six-months post-partum and potential post-partum access barriers are reduced. If IUC cannot be inserted within 48 hours of birth, insertion should be delayed until 28- days post-partum
- progestogen-only methods of contraception have no adverse effects on lactation, infant growth or development and can be safely used while breastfeeding, and
- breastfeeding individuals should wait until 6 weeks after birth before initiating the COC pill.

Services should ensure that there are enough numbers of staff able to insert long acting reversible contraception (LARC) immediately post-partum so that those who choose these methods and are medically eligible can initiate them immediately after birth. Where this is not possible, individuals should be referred to a provider who can insert the subdermal levonorgestrel implant (LNG implant) as soon as possible or insert an IUC at 28 days. Individuals should be offered a temporary contraceptive method to use meantime.

All health practitioners should be aware that:

- insertion of LARC (LNG implants and IUC) soon after birth or at the time of abortion is convenient and highly acceptable to users, and has been associated with high continuation rates and a reduced risk of unintended pregnancy, and
- those who choose to commence LARC immediately after abortion have a significantly reduced likelihood of undergoing another abortion within 2 years, compared with those provided with medium-acting, short-acting, or no contraceptive methods.

Contraception counselling should be provided by services providing care to individuals with ectopic pregnancy or miscarriage. If an individual wants to delay or prevent a further pregnancy, effective contraception should be initiated as soon as possible as sexual activity and ovulation may resume very soon after ectopic pregnancy or miscarriage.

Individuals who have been treated with methotrexate should be advised that effective contraception is recommended during, and for at least 3 months after, treatment because of the teratogenic effects of this medication.

Individuals should be advised that additional contraceptive precautions are required if hormonal contraception is started 5 days or more after miscarriage, abortion, or surgical treatment or administration of methotrexate for ectopic pregnancy.

Long-acting reversible contraception

The following FSRH and Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) guidelines form the basis of New Zealand Aotearoa's guidance:

- *Intrauterine contraception* (FSRH guideline)[2]
- *Progestogen-only implants*[3]
- *Contraception after pregnancy*[1]
- *Long-acting reversible contraception*,[4] and
- *Intrauterine contraception* (RANZCOG guideline).[5]

Advice on etonogestrel (ENG) implants are not part of New Zealand Aotearoa's guidance. Individuals should be advised that with typical use, LARC are more effective at preventing pregnancy than other forms of reversible contraception.

The UK Medical Eligibility Criteria for contraception use (UKMEC)[6] provides robust and current guidance on the indications and contraindications for the use of levonorgestrel intrauterine systems (LNG-IUS) and LNG implants. Unless contraindicated, LNG implants and IUC are suitable for use in all individuals, including adolescents and nulliparous individuals. Where appropriate, LARC should be considered as a first-choice contraceptive.

LARC is a suitable alternative option to tubal ligation: it is as efficacious, may provide additional health benefits such as control of menstrual irregularities, does not risk later regret and avoids the need for a general anaesthetic.

Practitioners should inform LNG implant users of the small incremental decrease in efficacy observed during the 5th year of use (although this results in a pregnancy rate that is still lower than many other contraceptives). LNG implants should be removed/replaced by the end of year 5.

There should be localised referral pathways to ensure that individuals seeking IUC insertion can be referred to a provider in a timely manner.

An appropriately trained assistant who can assist in an emergency should be available during insertion of IUC.

Information about funded LARC is available at www.nzformulary.org.

Depot medroxyprogesterone acetate (DMPA)

These FSRH guidelines form the basis of New Zealand Aotearoa's guidance:

- *Progestogen-only Injectable contraception*[7]
- *Quick starting contraception*,[8] and
- *Contraception after pregnancy*.[1]

Individuals should be advised that with typical use, depot medroxyprogesterone acetate (DMPA) is less effective at preventing pregnancy compared to LARC.

There can be a delay of up to one year in the return of fertility after discontinuation of DMPA: DMPA use is not recommended for individuals planning pregnancy in the short-term.

The UKMEC[6] provides robust and current guidance on the indications and contraindications for the use of DMPA. In individuals aged under 18 years, DMPA can be used after consideration of alternative methods. DMPA is not recommended for individuals with significant risk factors for osteoporosis. Individuals are generally advised to switch to another contraceptive method at age 50 years. If an individual does not wish to stop using DMPA, consideration may be given to continuation, providing the benefits and risks have been assessed and they are informed of the potential risks.

Health practitioners should monitor weight gain in individuals using DMPA because of its association with weight gain, particularly in individuals under 18 years of age with a body mass index (BMI) ≥30 kg/m^2. Individuals who gain more than 5% of their baseline body weight in the first 6 months of DMPA use are likely to experience continued weight gain and should be offered alternative contraception.

Health practitioners should review individuals receiving DMPA injections every two years to reassess the benefits, risks, and ongoing suitability of continued DMPA use.

There should be localised referral pathways to ensure that high-risk individuals are referred to an appropriate clinical setting if providers have concerns about providing treatment in a home or community setting.

Information about funded DMPA is available at www.nzformulary.org.

The combined oral contraceptive pill

These FSRH guidelines form the basis of New Zealand Aotearoa's guidance:

- *Combined hormonal contraception*[9]
- *Quick-starting contraception*[8]
- *Problematic bleeding with hormonal contraception*[10]
- *Recommended actions after incorrect use of combined hormonal contraception*,[11] and
- *Contraception after pregnancy*.[1]

Recommendations about the COC pill are relevant to New Zealand Aotearoa. Other types of combined hormonal contraception (CHC) are currently not available here.

Health practitioners must be aware of the contraindications for the use of the COC pill. The UKMEC[6] provides robust and current guidance on the indications and contraindications for the use of the COC pill. The COC pill is not safe for those with cardiovascular/venous thromboembolism (VTE) risk or current or previous disease, current breast cancer, migraine with aura, high blood pressure (systolic over 160 mmHg or diastolic over 100 mmHg), or individuals aged over 35 years who smoke.

For individuals with no other risk factors for cardiovascular disease or VTE, the COC pill can be started at six weeks post-partum for those who are breastfeeding or at three weeks post-partum for those who are not breastfeeding.

Individuals should be advised that with typical use, the COC pill is less effective at preventing pregnancy compared to LARC.

Health practitioners should advise individuals that using a tailored regime (extended or continuous) reduces the chance of unintended pregnancy and reduces the impact of potential side effects associated with the hormone free interval. Specific information about not using the inactive pills during a hormone free interval is needed to avoid confusion and increased pregnancy risk, especially if this advice is likely to be different from that presented on the packet. Health practitioners should provide advice on how to manage missed pills at the time the COC pill is prescribed and dispensed.

When starting the COC pill, individuals do not need to wait until the first day of a natural menstrual cycle if they are reasonably certain that they are not pregnant and if they use another form of contraception or avoid unprotected sexual intercourse (UPSI) for the first seven days of use and have a pregnancy test after 21 days.

Irregular menstrual bleeding usually improves with use of the COC pill. A COC pill does not need to be changed within the first 3 months of use as bleeding disturbances often settle in this time. If irregular bleeding is persistent (more than three months), health practitioners should consider irregular pill taking, other medication use, malabsorption, uterine or cervical pathology, pregnancy, or sexually transmitted infections (STI).

Information about funded COC pills is available at www.nzformulary.org.

The progestogen-only pill

These FSRH guidelines form the basis of New Zealand Aotearoa's guidance:

- *Progestogen-only pills*[12]
- *Quick-starting contraception*[8]
- *Problematic bleeding with hormonal contraception*,[10] and
- *Contraception after pregnancy*.[1]

The UKMEC[6] provides robust and current guidance on the indications and contraindications for the use of the progestogen-only pill (POP).

The POP is safe to use for individuals for whom oestrogen use is contraindicated.

Patients with current breast cancer should not use POP. Patients with current or a history of ischaemic heart disease or stroke or a history of breast cancer who use POP should be advised to switch to another contraceptive method as the risks generally outweigh the benefits of use. In all other individuals, the benefits of using POP for contraception generally outweigh the risks of other adverse health outcomes.

There is no evidence that changing the type and dose of POPs will improve problematic bleeding, but it may help some individuals.

When starting a POP, individuals do not need to wait until the first day of a natural menstrual cycle if they are reasonably certain that they are not pregnant and if they use another form of contraception or avoid UPSI for the first 48 hours of use and have a pregnancy test after 21 days.

With typical use, POP has an estimated rate of pregnancy of up to 9% in the first year of use. Individuals should be advised to take the pill at a time of day that will best suit them to promote adherence. To be effective, POP must be taken within three hours of the regular dosing time each day for levonorgestrel and norethisterone or within 12 hours for desogestrel. If adherence to pill-taking regimes is likely to be problematic, other forms of contraception may be more appropriate.

If a pill is taken more than 3 hours late (or 12 hours for desogestrel), additional contraception is needed for 48 hours after restarting the POP.

Information about funded POP is available at www.nzformulary.org.

Emergency contraception (the copper IUD and the oral contraceptive pill)

These FSRH guidelines form the basis of New Zealand Aotearoa's guidance:

- *Emergency contraception*[13], and
- *Contraception after pregnancy*.[1]

The UKMEC[6] provides robust and current guidance on the indications and contraindications for the use of the copper intrauterine device (Cu-IUD).

All health practitioners providing advice on emergency contraception must be familiar with the requirements of the Contraception, Sterilisation and Abortion Act 1977: section 5 refers to access to emergency contraception for sexual violation complaints. The Abortion Legislation Act 2020: section 16 (2) requires that the Minister of Health must ensure that access to emergency contraception is available within 48 hours of it being requested by any individual.

Emergency contraception should be offered to all individuals presenting following UPSI on any day of a natural menstrual cycle, even when ovulation could reasonably be excluded based on their natural menstrual cycle. Individuals may have more than one episode of UPSI within a natural menstrual cycle.

Individuals presenting for emergency contraception should be given advice about the effectiveness of the Cu-IUD and oral levonorgestrel (LNG-EC, the emergency contraceptive pill) methods, information about ongoing contraception, follow-up pregnancy testing and, where relevant be offered testing for STIs.

At the time of publication, ulipristal acetate is not available in New Zealand Aotearoa.

LNG-IUS cannot be used for emergency contraception.

When an individual presents for emergency contraception, health practitioners should inform them that the Cu-IUD is the most effective method of emergency contraception and offer this as the first choice to all, including adolescents. The Cu-IUD has a wider treatment window for emergency contraception and can be inserted up to five days after the first UPSI for that cycle or up to five days after the earliest likely ovulation. If an individual is presenting for emergency contraception >96 hours after UPSI or after ovulation has occurred, LNG-EC will be ineffective, the Cu-IUD is the best choice. Emergency contraception providers should offer individuals LNG-EC if a Cu-IUD is selected for emergency contraception but cannot be inserted at first presentation.

LNG-EC is most effective when taken within 72 hours (approved use) and may have some efficacy up to 96 hours (unapproved indication). LNG-EC is not effective if ovulation has already occurred. LNG-EC is available on a Practitioner Supply Order (PSO) and should be offered to individuals at the place they first present for this form of contraception. Emergency contraception providers should stock LNG-EC for this purpose.

The efficacy of LNG-EC may be reduced in individuals weighing >70 kg or with a BMI >26 kg/m^2, a Cu-IUD will be more effective in preventing pregnancy. Health practitioners may administer a double dose of LNG-EC (3mg) for individuals weighing >70 kg or with a BMI >26 kg/m^2 if a Cu-IUD is not an acceptable option or is contraindicated.

Health practitioners should offer a take home supply of oral levonorgestrel for emergency contraception for users of barrier methods.

Information about funded emergency contraception is available at www.nzformulary.org.

Permanent contraception

These FSRH *guidelines* form the basis of New Zealand Aotearoa's guidance:

- *Male and Female Sterilisation*[14], and
- *Contraception after pregnancy.*[1]

Recommendations about surgical procedure (including Essure and hysteroscopic tubal occlusion) and post-procedural advice are not part of New Zealand Aotearoa's guidance on permanent contraception.

All health practitioners providing advice on permanent contraception must be familiar with the requirements of the Contraception, Sterilisation, and Abortion Act 1977.

Both vasectomy and tubal ligation should be discussed with individuals requesting permanent contraception. Tubal ligation is a safe option after birth. Efficacy is not impacted by recent pregnancy.

Individuals should be counselled about the risks of the procedure, ectopic pregnancy risk post-tubal ligation, the risk of regret and alternative forms of contraception. Because of the risk of later regret, extra care is needed when counselling individuals under aged 30 years or those without children who request vasectomy or tubal ligation.

Individuals should use an effective method of contraception until the day of their procedure and for at least seven days after the procedure (for female permanent contraception) or until azoospermia is demonstrated (for vasectomy).

LARC is a suitable alternative option to tubal ligation: it is as efficacious, may provide additional health benefits such as control of menstrual irregularities, does not risk later regret and avoids the need for a general anaesthetic as well as surgical risk. Access may be more timely than for tubal ligation or vasectomy.

Barrier methods

These FSRH guidelines form the basis of New Zealand Aotearoa's guidance:

- *Barrier methods for contraception and STI prevention*[15], and
- *Contraception after pregnancy*.[1]

This guidance should be read in conjunction with the New Zealand's *STI management guidelines for use in primary care*.[16]

Health practitioners should promote the consistent and correct use of condoms. New Zealand Family Planning (NZFP) has resources demonstrating correct use. Footnote 1

The consistent and correct use of condoms (including with sex toys) provides protection against human immunodeficiency virus (HIV) and other STIs. Ill-fitting condoms can be associated with breakage and incomplete use. Condoms can be used on their own for contraception. They should be used in combination with other contraceptives to prevent STI transmission and to further reduce the risk of an unintended pregnancy. Individuals who use condoms for contraception should also be provided with advice about emergency contraception and offered a take home supply of LNG-EC (the emergency contraceptive pill).

Condoms should be widely offered in primary care to ensure equitable access.

[1] https://www.familyplanning.org.nz/media/304023/fp_youth_condom-x8-may-2019.pdf

Individuals should be offered different shapes and sizes of condoms so the appropriate size can be determined. Annotating the prescription with "as specified or directed by patient preference" allows the selected size to be dispensed.

Information about funded barrier methods is available at www.nzformulary.org.

Fertility awareness methods

These FSRH guidelines form the basis of New Zealand Aotearoa's guidance:

- *Fertility Awareness Methods*[17], and
- *Contraception after pregnancy*.[1]

Individuals should be advised that, with typical use, many fertility awareness methods are less effective at preventing pregnancy compared to LARC. If UPSI happens in the fertile window, chance of pregnancy is high.

If an individual is <6 months post-partum, amenorrhoeic and fully breastfeeding on demand (with the baby fed both day and night [Footnote 2]), the lactational amenorrhea method (LAM) is effective at preventing pregnancy. The risk of pregnancy increases if the frequency and duration of breastfeeding decreases (for any reason), from 14 days before the return of menstruation or when >6 months post-partum.

Individuals wishing to use fertility awareness methods for contraception should receive support and instruction on the most reliable methods from a trained health practitioner. Using fertility awareness methods to prevent pregnancy is not recommended if pregnancy poses a significant health risk to the individual, if a patient is using drugs that are known to have a teratogenic effect or if there is a clear desire to avoid pregnancy.

Individuals choosing fertility awareness should be offered LNG-EC (the emergency contraceptive pill) and provided with information about screening for STIs.

[2] Defined by the WHO as at least 10 to 12 times a day in the first few weeks post-partum and thereafter 8 to 10 times a day, including at least once at night in the first months. Daytime feedings should be no more than 4 hours apart, and night-time feedings no more than 6 hours apart.

1. EFFECTIVE CONTRACEPTIVE COUNSELLING

1.1. About contraceptive options

1. Access to contraception has important life consequences for individuals and their whānau in terms of education, learning potential, finances, physical and mental wellbeing, and child health.
2. Effective contraception counselling increases access to, and uptake of, contraception.
3. Service design can facilitate access to, and uptake of, contraception. Providers could consider the physical environment, discrete reception, display of current pamphlets and other information including web links, stocking/provision of medications.
4. Everyone should be encouraged to consider their contraception needs if they are sexually active and not wanting a pregnancy.
5. Health practitioners should adopt a person-centred approach when providing contraceptive counselling. They should support every individual to make an informed decision about the contraception that meets their needs and circumstances. These conversations should be conducted respectfully, without judgement and with understanding of culture, sexuality, and gender.
6. Contraception counselling should:
    a. identify the individual's preference for contraception
    b. discuss pregnancy plans, experience with previous contraceptives, urban myths, adherence factors and lifestyle considerations, cost, and convenience (daily versus long-acting "fit and forget")
    c. include advice based on all contraceptive options, from the most to least efficacious method
    d. discuss efficacy, length of action, insertion, and removal procedure/how to use, common side-effects and their management including alteration in bleeding patterns, reversibility, after care and cost
    e. take special care to consider individual characteristics when providing information about contraceptive methods, to remove barriers, and
    f. encourage the use of condoms (alongside other forms of contraception) to prevent STIs.
7. Health practitioners should facilitate opportunities to discuss issues with the individual in a situation of their choosing, which includes in private without a partner, friend or relative being present.
8. Whenever contraceptive counselling is provided, care should be taken to ensure individuals do not feel under pressure to choose a method of contraception.

9. Health practitioners should advise individuals that most contraceptive methods require additional precautions for a period of time if not commenced within five days of the start of a normal menstrual period: Cu-IUD are effective immediately; POP are effective in 48 hours; the COC pill, LNG implants (like Jadelle®), LNG-IUS (like Mirena® and Jaydess®), and DMPA are effective in 7 days.
10. Health practitioners should be aware of advice about switching between different methods of contraception and provide individuals for tailored advice based on the FSRH's guidance, *Switching or starting methods of contraception*.[18]
11. Health practitioners must work within their scope of practice and be competent to provide contraceptive counselling and services.
12. If a health practitioner or service cannot, or will not, deliver contraceptive counselling or services (including the insertion of long-acting reversible contraception, LARC), they must refer the individual to a health practitioner who is competent to provide the services without delay. This includes advising individuals if the health practitioner has a conscientious objection to providing contraception services prior to the appointment and providing advice on how to access the contact details of the closest provider of the service requested.
13. Services should have agreed pathways of care to local community sexual and reproductive health services for individuals with complex medical conditions or needs which may require specialist contraceptive advice.
14. Services should have agreed pathways of care to local services for individuals who may require additional non-medical care and support.

1.1.1. Creating a safe + non-judgemental environment

1. Health practitioners should:
    a. introduce themselves and take care with pronouns and pronunciation of names
    b. explain the confidential nature of the conversation
    c. use anatomic models and diagrams to facilitate health literacy where needed
    d. use clear and concise resources to guide conversations
    e. use clear language that is meaningful to the individual (age/stage/culturally appropriate) for example, understanding colloquial terminology for contraception such as the 'rod', 'jab', 'pill' or 'bar', and
    f. ask pragmatic and open-ended questions. Footnote 3

[3] Example questions may include *Would it matter to you if you got pregnant? Are you planning to have children? How many children are you planning to have? Do you know about any types of contraception? Have you thought about any particular types of contraception?*

2. Health practitioners should be aware of their own unconscious bias during consultations and be sensitive to the wishes of the individual.
3. Health practitioners providing services for youth should provide an environment where young people feel comfortable and are treated with respect. This may include having appropriate posters, current ways of sharing information, and booking systems that meet their needs.

1.1.2. Life-stage considerations

Adolescence

1. Those aged 16 years or under can consent to their own medical treatment and receive information, services, and prescriptions for contraception.
2. Health practitioners should use the Fraser Guidelines to assess competence to consent to treatment. [Footnote 4]
3. For adolescents, consider the age difference between the individual and their partner(s) and discuss sexual safety and consent.
4. Health practitioners should understand gender identity and sexual development.
5. Health practitioners should reassure adolescents that the conversation and outcome is confidential unless there are serious safety concerns.
6. Health practitioners should provide young people with weblinks to information about contraception. [Footnote 5]
7. All contraceptive methods can be considered, including LARC.
8. Condom-use should be encouraged to prevent STIs and unintended pregnancy.

Further information can be found in the FSRH guideline, *Contraceptive Choices for Young People*.[19]

Pregnancy planning

1. When removing LARC because pregnancy is desired, offer preconception care, including advice on accessing maternity care and the use of folic acid and iodine.
2. Consider time frames for returning to fertility.
3. Individuals should be advised that an interpregnancy interval of less than 12 months between birth and conceiving again is associated with an increased risk of preterm

[4] The Fraser guidelines cover the following: the young person understands the advice being given; the young person cannot be persuaded to involve parents/carers or allow the health practitioner to do so on their behalf; the young person is likely to begin, or continue having, sexual intercourse with or without contraception; unless the young person receives contraception, their physical or mental health (or both) is likely to suffer; the young person's best interests require contraceptive advice, treatment or supplies to be given with or without parental consent.

[5] Protected + Proud (https://www.protectedandproud.nz); New Zealand Family Planning (www.familyplanning.org.nz); Health navigator (www.healthnavigator.org.nz)

birth, low birthweight and small for gestational age (SGA) babies. It is especially important after caesarean section.

Perimenopause

1. Contraception should be continued for 1 year after the last menstrual period if aged ≥ 50 years, or 2 years if aged < 50 years. Further advice is included in FSRH's guideline.[1] Further information can be found in the FSRH's, *Contraception for Women Aged over 40 Years*.[20]

1.1.3. Cultural safety

1. Health practitioners should be aware that different cultures and religions conceptualise anatomy, menstruation, pregnancy, sex, sexuality, and contraception in different ways and should adapt their language and approach accordingly.
2. All conversations should proceed with respect, active listening, unpresumptuous language, and awareness of unconscious bias and stereotyping that can create barriers for individuals to high-quality, culturally safe health care.

Māori

1. Health practitioners must understand Te Tiriti o Waitangi and ensure this understanding is reflected in their practice. It is recommended that Health practitioners refer to *Whakamaua Māori Health Action Plan 2020–2025* as an important resource to guide the sector in achieving the best health outcomes for Māori.
2. Māori values are often expressed as tikanga or a set of codes for living, reflecting Māori knowledge and traditions. Specific concepts that health professionals may hear from Māori are:
    - Tapu and noa – the concepts of risk and safety
    - Wairua – the spiritual being that exists within an individual
    - Whānaungatanga – interpersonal relationships and the importance they are to well-being
    - Tiakina te wahine hapu kia tupu ora ai te uri – nurture the woman in pregnancy so that the next generation will flourish, and
    - Mana – which relates to the individuals and their right to their own dignity.
3. Health practitioners must understand their legal obligations in reducing health disparities and improving outcomes for Māori, including relevant sections of the New Zealand Public Health and Disability Act 2000.
4. Developing meaningful partnerships with Māori (individuals, whānau and communities) to meet their health care needs and aspirations is crucial to improving Māori health outcomes.

5. Māori have diverse world views and a "one size fits all approach" does not apply.
6. From Te Āo Māori (traditional Māori world view), menstrual bleeding is seen as connected to whakapapa (genealogy), which has meaning and purpose. For some, suppression of menstruation is not desired, and this may impact contraceptive choices.
7. Whānau support may be important for some Māori when choosing contraception.

Further information can be found in the *National Guidelines for Sexual and Reproductive Health Promotion with Māori*.[22]

Pacific peoples

1. Pacific cultures are diverse and a "one size fits all approach" does not apply.
2. Health practitioners can refer to the *Best Practice Framework for the Delivery of Sexual Health Promotion Services to Pacific Communities in New Zealand*[23] as a useful guiding resource.
3. For many Pacific communities, sex and sexuality are often regarded as tapu (sacred) and are not openly discussed, even among families. For some, health literacy may be low and there may be discomfort discussing contraceptive issues. Health practitioners should take care to:
    - build rapport before discussing sensitive issues
    - emphasise confidentiality
    - be prepared to introduce the topic rather than waiting for it to be brought up
    - seek information that might elicit a desire for contraception rather than asking directly
    - be prepared to use diagrams as Pacific languages may not have separate words for areas of female anatomy, and
    - present all information in positive terms – rather than contraception being about not having babies it is about having a baby when you want to have one.
4. Discussing contraception in terms of its potential to empower individuals to take control of their future (pregnancy, health, financial, family, work, etc) may support uptake.

Refugee + culturally and linguistically diverse people

1. A one-size-fits-all approach does not apply to refugee and culturally and linguistically diverse communities.
2. Health practitioners should seek individuals' understanding of cultural taboos and norms, particularly around menstruation and pregnancy.
3. Translation services should be made available where necessary.

4. All professional medical bodies in New Zealand Aotearoa provide guidance on cultural competence. Health practitioners should familiarise themselves with these resources.

1.1.4. Gender and identity

1. Health practitioners should take care with personal pronouns and gender/identity-based assumptions during all contraception conversations to improve contraceptive access for all, including transgender, homosexual, polyamorous, and other identifying individuals.
2. It is important that contraception advice is offered to transgender individuals.
3. Testosterone therapy does not provide a guarantee of adequate contraception and is contraindicated in pregnancy because of potential harm to the fetus from the androgenising effects of the treatment.
4. Progestogen-based contraceptive methods are suitable for transmasculine individuals.
5. Insertion of IUC may be more painful and technically more challenging for someone who has hormonal changes from testosterone therapy. Consider offering individuals using testosterone therapy a short course of vaginal oestrogen to facilitate more comfortable insertion.

Further information can be found in the *Guidelines for Gender Affirming Healthcare for Gender Diverse and Transgender Children, Young People and Adults*.[24]

1.1.5. Contraceptive coercion + sexual violence

1. Health practitioners should know how to enquire about gender-based violence and how to support individuals affected by gender-based violence and abuse, including providing access to information and referral to specialist support.
2. Health practitioners should screen for contraceptive coercion and sexual violence using the Ministry of Health's *Family violence assessment and intervention guideline: child abuse and intimate partner violence*[25] as a routine part of a sexual health consultation.
3. In some cases, a partner may deny contraception to their partner(s). In this situation a contraception conversation should occur when the partner is absent, if possible.
4. Health practitioners should ensure the right option can be offered.

1.1.6. BMI

Calculating and interpreting BMI is important in contraceptive advice.

- The efficacy of LNG-EC (as emergency contraception) may be reduced in individuals weighing >70 kg or with a BMI >26 kg/m^2: a Cu-IUD will be more effective in preventing pregnancy.
- Emergency contraception providers may administer a double dose of LNG-EC (3mg) for individuals weighing >70 kg or with a BMI >26 kg/m^2 if a Cu-IUD is not an acceptable option or is contraindicated.
- If BMI ≥ 35, health practitioners should advise against CHC and recommend an alternative method because of the higher risk of VTE.
- The available evidence for Jadelle® suggests a small reduction in efficacy with increasing body weight. Health practitioners should discuss efficacy rates and replacement timing with the individual, including noting that although the efficacy is reduced for individuals >60kg in Year 5, efficacy remains approximately the same as rates for Cu-IUD.

1.1.7. Investigations

Contraceptive counselling consultation should include cervical screening and STI checks (if indicated). Health practitioners should:

- inform individuals about the link between human papillomavirus (HPV) and cervical cancer and advise about strategies that reduce the risk such as condom use, smoking cessation, regular cervical screening and, where appropriate, vaccination against HPV
- offer HPV vaccine (where appropriate)
- ensure cervical screening is current, if appropriate
- assess for STIs, especially if the individual is at high risk of STIs including those aged <25 years, who have had a new sexual partner in the last 3-months, with a history of STI in the past 12 months, with genital symptoms (eg. bleeding, discharge, rash, pain) or with a sexual partner with an STI
- encourage use of condoms
- consider pre-existing medical conditions like hypertension, diabetes, and VTE risk
- investigate abnormal vaginal bleeding, and
- consider delaying IUC insertion if there is an active STI, with or without genital symptoms.

Further information can be found in the New Zealand Sexual Health Society's guideline, *STI Management Guidelines for use in primary care.*[16]

Individuals who make an informed decision to decline the HPV vaccine, cervical screening or STI checks should still be provided with contraception.

2. CONTRACEPTION AFTER PREGNANCY

2.1. Basis for New Zealand Aotearoa's guidance

The FSRH guideline, *Contraception After Pregnancy*,[1] forms the basis for New Zealand Aotearoa's guidance on the use of contraception after pregnancy. Method specific recommendations relating to contraception are also included in other FSRH guidelines. Health practitioners should ensure that they are familiar with these documents.

Although contraception is not required in the first 21 days after birth, the FSRH recommends that contraception be initiated immediately after birth if the person is medically eligible. Generally, all forms of contraception are suitable for use immediately after birth, with the exception of the COC pill. The United Kingdom's Medical Eligibility Criteria for Contraceptive Use (UKMEC)[6] provides robust and current guidance on the indications and contraindications for contraception after pregnancy (summarised in *Table 1*, overleaf).

In New Zealand Aotearoa, any registered health practitioner whose scope of practice includes provision of contraception and who is an authorised prescriber may prescribe contraception after pregnancy. This includes nurse practitioners, nurse prescribers, medical practitioners, and registered midwives. Midwives can prescribe for 6 weeks after birth. Nurses operating under standing orders may also supply some methods.

2.1.1. Insertion of IUC within 10 minutes after the delivery of the placenta and up to 48 hours after birth

The FSRH[1] advises that immediate IUC insertion following vaginal and caesarean birth (within 10 minutes of delivery of placenta and up to 48 hours after birth) is safe, effective and acceptable. It notes there is no evidence of increased risk of uterine perforation associated with immediate IUC insertion and no increased risk of infection. While expulsion rates are higher for immediate postpartum insertions compared to insertion 4 weeks after birth, continuation rates are also higher for this group. The FSRH[1] concludes that the benefits of immediate postpartum insertion (within 48 hours of birth) may outweigh the disadvantage of the risk for expulsion, which should not be regarded as a reason for not providing IUC immediately after birth, particularly when expulsion can be recognised and addressed. Recent evidence[26-30] largely reinforces the FSRH guideline[1] regarding the safety, efficacy and acceptability of immediate postpartum IUC insertion.

2.1.2. Use of progestogen-only methods of contraception during breastfeeding

The FSRH[1] advises that use of progestogen-only methods of contraception (including implants, DMPA, LNG-IUS and POP) during breastfeeding have no adverse effects on lactation, infant growth or development. Available evidence is of high quality (Graded A). The New Zealand College of Midwives' (NZCOM) consensus statement[30] on long acting reversible contraception (LARC) similarly notes that progestogen-only contraception does not appear to adversely affect infant growth, health, or development when used by breastfeeding individuals. Two recent systematic reviews[31,32] and an observational cohort study[33] investigating safety

outcomes (infant growth and development) and effect on lactation for breastfeeding individuals using progestogen-only methods of contraception similarly conclude that evidence supports the safe use of progestogen-only methods during breastfeeding.

Individuals who may have a compromised milk supply should be informed that the impact on milk production of hormonal LARC insertion prior to lactogenesis II is currently unknown.

Table 1: Use of contraception after birth (individual characteristics and method)

	Cu-IUD	LNG-IUS	LNG implant	DMPA	POP	COC
Breastfeeding; 0 to <6 weeks post-partum	See below		1	2	1	4
Breastfeeding; ≥6 weeks to <6 months post-partum			1	1	1	2
Breastfeeding; ≥6 months post-partum			1	1	1	1
Not breastfeeding; 0 to <3 weeks post-partum; with other risk factors for VTE			1	2	1	4
Not breastfeeding; 0 to <3 weeks post-partum; without other risk factors for VTE			1	2	1	3
Not breastfeeding; 3 to <6 weeks post-partum; with other risk factors for VTE			1	2	1	3
Not breastfeeding; 3 to <6 weeks post-partum; without other risk factors for VTE			1	1	1	2
Not breastfeeding; ≥6 weeks post-partum			1	1	1	1
0 to <48 hours post-partum	1	1	See above			
48 hours to <4 weeks post-partum	3	3				
≥4 weeks post-partum	1	1				
Post-partum sepsis	4	4				

Source: *UKMEC for contraceptive use*[6]

[1] A condition for which there is no restriction for the use of the method

[2] A condition where the advantages of using the method generally outweigh the theoretical or proven risks

[3] A condition where the theoretical or proven risks usually outweigh the advantages of using the method. The provision of a method requires expert clinical judgement and/or referral to a specialist contraceptive provider, since use of the method is not usually recommended unless other more appropriate methods are not available or not acceptable

[4] A condition which represents an unacceptable health risk if the method is used

2.2. Contraceptive counselling during pregnancy

Further information about specific methods is provided in Chapters 3-10.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Who and when?	
Contraceptive counselling should be made available to individuals during pregnancy to enable them to choose the method they wish to use after birth.[1]	Good practice
It is recommended that contraceptive counselling is part of routine antenatal care. The relationship between the lead maternity carer and the individual will determine the appropriate opportunities for these discussions prior to birth.	Good practice point for NZ (based on FSRH good practice[1])
All health practitioners involved in the care of pregnant individuals should provide the opportunity to discuss contraception.[1]	Good practice
Health practitioners should provide pregnant individuals with the opportunity to have a documented contraception plan prior to birth (including the option to not use contraception). Revision of this plan may be required after birth depending on clinical outcomes and ongoing choice.	Good practice point for NZ (based on FSRH good practice[1])
Information giving and counselling	
Health practitioners should refer to the relevant current FSRH guidelines, including the UKMEC, when making a clinical judgement on safe and appropriate methods of contraception for an individual after pregnancy.[1]	Good practice
Individuals should be fully informed about the effectiveness of different contraceptives, including the safety and efficacy of immediate post-partum LARC insertions and the potential side effects including problematic bleeding in the post-partum period. When choosing an appropriate method to use after pregnancy, individual choice should drive service provision.	Good practice point for NZ (based on FSRH good practice[1])
Care should be taken to ensure that: • a person-centred approach is used when providing individuals with contraceptive counselling • information is timely, current, and accurate • individuals do not feel under pressure to choose a method of contraception • advice can be made available in different languages and in a range of formats including audio-visual, and • any medical or social factors that may be relevant to the individual's choice are discussed.	Good practice point for NZ (based on FSRH good practice[1])
Record keeping and obtaining informed consent	
Health practitioners should clearly document the discussion and provision of contraception. Informed consent must be obtained before providing individuals with their chosen method.[1]	D

2.3. Contraception after birth

Further information about specific methods is provided in Chapters 3-10.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Timing	
Health practitioners should discuss with the individual any personal characteristics or existing medical conditions, including those that have developed during pregnancy, which may affect medical eligibility for any given contraceptive method.[1]	D
Individuals should be advised that although contraception is not required in the first 21 days after birth, most methods can be safely initiated within this time, with the exception of CHC.	Recommendation (based on FSRH evidence grade C[1])
An individual's chosen method of contraception can be initiated immediately after birth if desired and they are medically eligible.[1]	D
Individuals should be advised that additional contraceptive precautions (eg, barrier method/abstinence) are required if hormonal contraception is started 21 days or more after birth. Additional contraceptive precaution is not required if contraception is initiated immediately or within 21 days after birth.[1]	Good practice
Access to contraception	
Appropriately trained health practitioners should be able to provide individuals with contraception after birth.[1]	Good practice
Providers of maternity service facilities should ensure that all individuals have access to the full range of contraceptives, including the most effective LARC methods, following birth. This should not be limited to those individuals with conditions that may pose a significant health risk during pregnancy and vulnerable groups (including young people) at risk of a short interpregnancy interval or an unplanned pregnancy.	Good practice point for NZ (based on FSRH good practice[1])
If the individual chooses LARC, maternity services should be able to provide IUC and progestogen-only methods, including the LNG implant and LNG-IUS.	Good practice point for NZ (based on FSRH good practice[1])
Maternity services should ensure that there are enough staff able to provide IUC or progestogen-only implants so that individuals who choose these methods and are medically eligible can initiate them immediately after birth.[1]	Good practice
Individuals who are unable to be provided with their chosen method of contraception should be informed about services where their chosen method can be accessed. A temporary (bridging) method should be offered until the chosen method can be initiated if a delay is expected beyond 21 days post-partum.	Good practice point for NZ (based on FSRH good practice[1])
Any contraceptive counselling (general or specialist) needs to be given in conjunction with easy access to contraception in the immediate post-partum period.[1]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Maternity services should have agreed pathways of care to local specialist contraceptive services for individuals with complex medical conditions or needs which may require specialist contraceptive advice.[1]	Good practice
Maternity services should have agreed pathways of care to local services for individuals who may require additional non-medical care and support.[1]	Good practice
Method-specific considerations *Please see Parts 5 to 12 of this document for more information about each method.*	
Where clinically appropriate, individuals should have access to the contraceptive option of their choice at the time of their choosing. Contraceptive options include LARC, DMPA, COC, POP, permanent contraception, emergency contraception, barrier methods, LAM, and fertility awareness methods. Not using contraception is also an option.	Consensus statement from the NCGSG
Individuals should be advised that IUC and progestogen-only implants can be inserted immediately after birth.[1]	C
IUC can be inserted immediately after birth (within 10 minutes of delivery of the placenta) or within the first 48 hours after uncomplicated caesarean section or vaginal birth. While expulsion rates are higher during this period, continuation rates are higher as access barriers are reduced. After 48 hours, insertion should be delayed until 28 days after birth.	Recommendation (based on FSRH evidence grade B[1] and recent evidence[29])
Health practitioners should be aware that insertion of IUC at the time of either vaginal or caesarean birth is convenient and highly acceptable to many individuals. This has been associated with high continuation rates and a reduced risk of unintended pregnancy.[1]	B
Health practitioners should be aware that insertion of a progestogen-only implant soon after birth is convenient and highly acceptable to many individuals. This has been associated with high continuation rates and a reduced risk of unintended pregnancy.[1]	B
The background risk of uterine perforation at the time of insertion is low (1.4 per 1000 insertions) but recent evidence highlighted that individuals who are breast feeding, regardless of the interval from birth, have six times the risk of uterine perforation compared to non-breastfeeding individuals. Although the absolute risk remains low, individuals should be counselled about this potential complication.[4]	Evidence-based recommendation from RANZCOG
If an individual wants an IUC but it cannot be inserted immediately or within 48 hours of an uncomplicated vaginal birth or caesarean section, alternative contraception should be offered and insertion after 28 days post-partum arranged.	Consensus statement from the NCGSG
Individuals who have an IUC inserted within 48 hours after birth should have a string check/shortening by a competent health practitioner at 4-6 weeks post-partum.	Consensus statement from the NCGSG
Individuals having immediate post-partum IUC insertion should be informed of the signs and symptoms of expulsion.	Good practice point for NZ (based on FSRH good practice[1])

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Health practitioners who insert or remove IUC should be appropriately trained, maintain competence and attend regular updates. Health practitioners who insert IUC immediately postpartum (up to 48 hours) require specific training.	Consensus statement from the NCGSG
Progestogen-only implants can be safely started at any time after birth including immediately after birth.[1]	C
The progestogen-only injectable can be started at any time after birth, including immediately after birth.[1]	C
All individuals should undergo a risk assessment for VTE postnatally. COC should not be used by individuals who have risk factors for VTE within 6 weeks of birth. These include immobility, transfusion at birth, BMI ≥30 kg/m2, post-partum haemorrhage, post-caesarean birth, pre-eclampsia, or smoking. This applies to both individuals who are breastfeeding and not breastfeeding.[1]	C
Individuals who are not breastfeeding and are without additional risk factors for VTE should wait until 21 days after birth before initiating a COC method.[1]	B
POP can be started at any time after birth, including immediately after birth.[1]	C
Female permanent contraception is a safe option for permanent contraception after birth.[1]	A
Individuals should be advised that some LARC methods are as, or more, effective than female permanent contraception and may confer non-contraceptive benefits; however, individuals should not feel pressured into choosing LARC over female permanent contraception.[1]	D
Tubal occlusion should be performed at an appropriate interval after pregnancy wherever possible. Should tubal occlusion be requested either post-partum or post-abortion, individuals should be made aware of the increased rate of regret and the possible increased failure rate.[14]	B
If tubal occlusion is performed at the same time as a caesarean section, counselling and agreement should be given at least 2 weeks in advance of the procedure and after discussion of other methods of contraception.	Recommendation (based on FSRH evidence grade C[14])
Condoms (external/male and internal/female) can be used by individuals after birth.[1]	D
If an individual is <6 months post-partum, amenorrhoeic and fully breastfeeding on demand [Footnote 6], the LAM is 98% effective at preventing pregnancy (based on perfect use). The risk of pregnancy increases if the frequency of breastfeeding decreases, from 14 days before the return of menstruation or when more than 6 months post-partum.	Recommendation for NZ (based on FSRH evidence grade B[17])
Individuals using LAM should be advised that the risk of pregnancy is increased if the frequency of breastfeeding decreases (eg, through stopping night feeds, starting	C

[6] Defined by the World Health Organisation (WHO)[58] as at least 10 to 12 times a day in the first few weeks post-partum and thereafter 8 to 10 times a day, including at least once at night in the first months. Daytime feedings should be no more than 4 hours apart, and night-time feedings no more than 6 hours apart.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
or increasing supplementary feeding, use of dummies/pacifiers, expressing milk), when menstruation returns or when more than 6 months after childbirth.[1]	
Individuals may be informed that the effect of expressing breast milk on the efficacy of LAM is not known but it may potentially be reduced.[17]	Practice point
Fertility awareness methods can be used by individuals after birth. However, individuals should be advised that because fertility awareness relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after birth (until regular menstrual cycles have been established) and during breastfeeding.	Recommendation for NZ (based on FSRH evidence grade D[1])
Emergency contraception	
Emergency contraception is indicated for individuals who have had UPSI from 21 days after birth but is not required before this.[1]	Good practice
LNG-EC (1.5mg) is safe to use from 21 days after birth. The Cu-IUD is safe to use for emergency contraception from 28 days after birth.[1]	Good practice
Individuals who breastfeed should be informed that available limited evidence indicates that LNG-EC has no adverse effects on breastfeeding or on their infants.[1]	C
Emergency contraception providers should be aware that breastfeeding individuals have a higher relative risk of uterine perforation during insertion of IUC than non-breastfeeding individuals; however, the absolute risk of perforation is low.[13]	B
How long should an individual wait before trying to conceive again?	
Individuals should be advised that an interpregnancy interval of less than 12 months between birth and conceiving again is associated with an increased risk of preterm birth, low birthweight, and small for gestational age (SGA) babies. It is especially important after caesarean section.	Recommendation for NZ (based on FSRH evidence grade B[1])
Breastfeeding and contraception	
Individuals who are breastfeeding should be informed that the available evidence indicates that progestogen-only methods of contraception (LNG-IUS, LNG implants, progestogen-only implant and POP) have no adverse effects on lactation, infant growth, or development.[1]	A
Individuals who are breastfeeding should wait until 6 weeks after birth before initiating a COC method.[1]	B
Individuals who are breastfeeding should be informed that there is currently limited evidence regarding the effects of COC use on breastfeeding. However, the better-quality studies of early initiation of COC found no adverse effects on either breastfeeding performance (duration of breastfeeding, exclusivity, and timing of initiation of supplemental feeding) or on infant outcomes (growth, health and development).[1]	B

2.4. Contraception after abortion

Further information about specific methods is provided in Chapters 3-10.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
When should contraception after abortion be discussed/provided?	
Abortion service providers should give individuals requesting abortion opportunities to discuss contraception.[1]	D
Whenever contraceptive counselling is provided, care should be taken to ensure individuals do not feel under pressure to choose a method of contraception.[1]	Good practice
Individuals should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of LARC, when choosing an appropriate method to use after abortion.[1]	Good practice
Choice of contraception should be initiated at the time of abortion or soon after, as sexual activity and ovulation can resume very soon after abortion.[1]	C
Health practitioners should adopt a person-centred approach when providing individuals with contraceptive counselling.[1]	D
Health practitioners who are giving advice to individuals about contraception after abortion should ensure that this information is timely, current, and accurate.[1]	D
Comprehensive, unbiased, and accurate information on contraceptive methods after abortion should be made available in different languages and in a range of formats including audio-visual.[1]	D
When can contraception be initiated after abortion?	
An individual's chosen method of contraception should be initiated immediately after abortion (medical and surgical).[1]	B
Health practitioners should be aware that insertion of IUC at the time of abortion is convenient and highly acceptable to users. This has been associated with high continuation rates and a reduced risk for another unintended pregnancy than when provision of IUC is delayed.[1]	B
Health practitioners should be aware that insertion of progestogen-only implants at the time of abortion is convenient and highly acceptable to users. This has been associated with higher continuation rates and a reduced risk for another unintended pregnancy than when provision of a progestogen-only implant is delayed.[1]	B
Who should provide contraception after abortion?	
Abortion service providers should be able to offer all methods of contraception, including LARC, to individuals before they are discharged from the service after abortion.[1]	Good practice
Abortion services should ensure that there are enough staff able to provide IUC or a progestogen-only implant so that individuals who choose these methods and are medically eligible can initiate them immediately after abortion.[1]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals who are unable to be provided with their chosen method of contraception should be informed about services where their chosen method can be accessed. A temporary (bridging) method should be offered until the chosen method can be initiated.[1]	Good practice
Abortion services should have agreed pathways of care to local specialist contraceptive services (eg, community sexual and reproductive health services) for individuals with complex medical conditions or needs which may require specialist contraceptive advice.[1]	Good practice
There should be agreed pathways of care to local services for individuals who may require additional non-medical care and support.[1]	Good practice
Which contraceptive methods are most effective in preventing another abortion?	
Health practitioners should be aware that individuals who choose to commence LARC immediately after abortion have a significantly reduced likelihood of undergoing another abortion within 2 years, compared with individuals provided with medium-acting, short-acting, or no contraceptive methods.[1]	A
Record keeping and obtaining informed consent	
Health practitioners should clearly document the discussion and provision of contraception. Informed consent must be obtained before providing individuals with their chosen method.[1]	D
Which methods of contraception are safe to use after abortion?	
Individuals should be advised that any method of contraception can be safely initiated immediately after an uncomplicated abortion.[1]	D
IUC should not be inserted in the presence of post abortion sepsis.[1]	D
Individuals should be advised that additional contraceptive precautions (eg, barrier methods/abstinence) are required if hormonal contraception is started 5 days or more after abortion. Additional contraceptive precaution is not required if contraception is initiated immediately or within 5 days of abortion.[1]	Good practice
Method-specific considerations	
IUC can be safely used by individuals after an uncomplicated abortion. Individuals may be advised that they may benefit from reduced uterine bleeding when using LNG-IUS.[1]	A
With medical abortion, IUC can be inserted any time after expulsion of the pregnancy.[1]	D
With surgical abortion, IUC can be inserted immediately after evacuation of the uterine cavity.[1]	A
There is no need to delay insertion of an IUC post-abortion providing the individual has been informed of the small increased risk of expulsion.[2]	B

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Progestogen-only contraception can be safely started at any time, including immediately, after medical or surgical abortion.[1]	B
Individuals should be advised that a progestogen-only implant can be safely initiated during early medical abortion.[1]	B
Individuals should be advised that there may be a slightly higher risk of continuing pregnancy (failed abortion) if DMPA is initiated at the time of mifepristone administration.[1]	B
Individuals should be advised that scant or absent bleeding should not be attributed to a hormonal method of contraception that has been initiated, but that it may be due to failed medical abortion. Under such circumstances, urgent medical review should be sought.[1]	Good practice
COC can be safely started immediately at any time after abortion.[1]	B
Female permanent contraception is a safe option for permanent contraception after abortion.[1]	D
Individuals should be advised that some LARC methods are as, or more, effective than female permanent contraception and may confer non-contraceptive benefits. However, individuals should not feel pressured into choosing LARC over female permanent contraception.[1]	Good practice
Tubal occlusion should ideally be performed after some time has elapsed after abortion. Individuals who request tubal occlusion to be performed at the time of abortion should be advised of the possible increased failure rate and risk of regret.[1]	B
Health practitioners should ensure that consent from the individual to conduct female permanent contraception at the same time as surgical abortion is taken and documented in advance of the abortion.[1]	Good practice
Condoms can be used by individuals after abortion.[1]	D
Fertility awareness methods can be used after abortion. However, individuals should be advised that because fertility awareness relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after abortion.[1]	D
Is emergency contraception safe to use after abortion?	
Emergency contraception is indicated for individuals who have UPSI from 5 days after abortion.[1]	Good practice
Individuals should be advised that any method of emergency contraception can be safely used after an uncomplicated abortion.[1]	Good practice

2.5. Contraception after ectopic pregnancy or miscarriage

Further information about specific methods is provided in Chapters 3-10.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
When should contraception be discussed/provided?	
Services providing care to individuals with ectopic pregnancy or miscarriage should give them opportunities to discuss their fertility intentions, contraception, and preconception planning.[1]	Good practice
Whenever contraceptive counselling is provided, care should be taken to ensure individuals do not feel under pressure to choose a method of contraception.[1]	Good practice
If an individual wants to delay or prevent a further pregnancy, effective contraception should be initiated as soon as possible as sexual activity and ovulation may resume very soon after ectopic pregnancy or miscarriage.[1]	D
An individual's chosen method of contraception should ideally be initiated immediately after treatment for ectopic pregnancy or miscarriage.[1]	D
Individuals should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of LARC, when choosing an appropriate method to use after ectopic pregnancy or miscarriage.[1]	Good practice
Health practitioners should adopt a person-centred approach when providing individuals with contraceptive counselling.[1]	D
Health practitioners who are giving advice to individuals about contraception after ectopic pregnancy or miscarriage should ensure that this information is timely, current, and accurate.[1]	Good practice
How long should someone wait before trying to conceive again after ectopic pregnancy or miscarriage?	
Individuals who wish to conceive after miscarriage can be advised there is no need to delay as pregnancy outcomes after miscarriage are more favourable when conception occurs within 6 months of miscarriage compared with after 6 months.[1]	D
Individuals who have been treated with methotrexate should be advised that effective contraception is recommended during and for at least 3 months after treatment because of the teratogenic effects of this medication.[1]	D
Individuals should be advised that effective contraception can be started on the day of methotrexate administration or surgical management of ectopic pregnancy.[1]	Good practice
Who should provide contraception after ectopic pregnancy or miscarriage?	
Services involved in the care of individuals who have had an ectopic pregnancy or miscarriage should be able to offer all methods of contraception, including LARC, before they are discharged from the service.[1]	Good practice
Services should ensure that there are enough staff able to provide IUC or progestogen-only implants so that individuals who choose these methods and are medically eligible can initiate them immediately after treatment.[1]	Good practice
Individuals who are unable to be provided with their chosen method of contraception should be informed about services where their chosen method can be	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
accessed. A temporary (bridging) method should be offered until the chosen method can be initiated.[1]	
Services should have agreed pathways of care to local specialist contraceptive services (eg, community sexual reproductive health services) for individuals with complex medical conditions or needs which may require specialist contraceptive advice.[1]	Good practice
Services should have agreed pathways of care to local services for individuals who may require additional non-medical care and support.[1]	Good practice
Record keeping and obtaining informed consent	
Health practitioners should clearly document the discussion and provision of contraception. Informed consent must be obtained before providing individuals with their chosen method of contraception.[1]	D
Which contraceptive methods are safe to use after ectopic pregnancy or miscarriage?	
Health practitioners should refer to the method-specific recommendations for abortion which may be extrapolated for use after ectopic pregnancy or miscarriage.[1]	Good practice
Individuals should be advised that any method of contraception can be safely initiated immediately after methotrexate administration or surgical treatment of ectopic pregnancy.[1]	D
Individuals should be advised that any method of contraception can be safely initiated immediately after treatment for miscarriage.[1]	D
Method-specific advice	
IUC can be inserted after miscarriage as soon as expulsion has occurred at surgery or after medical or expectant management.[1]	C
IUC should not be inserted in the presence of sepsis after ectopic pregnancy or miscarriage.[1]	C
Emergency contraception is indicated if UPSI takes place more than 5 days after methotrexate administration or surgical treatment of ectopic pregnancy.[1]	Good practice
Individuals should be advised that any method of emergency contraception can be safely used after ectopic pregnancy or miscarriage.[1]	B
Is additional contraception required after initiation of a method after ectopic pregnancy or miscarriage?	
Individuals should be advised that additional contraceptive precautions (eg, barrier methods/abstinence) are required if hormonal contraception is started 5 days or more after miscarriage. Additional contraceptive precaution is not required if contraception is initiated immediately or within 5 days of miscarriage.[1]	Good practice
Individuals should be advised that additional contraceptive precautions (eg, barrier methods/abstinence) are required if hormonal contraception is started 5 days or more after surgical treatment or administration of methotrexate for ectopic	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
pregnancy. Additional contraceptive precaution is not required if contraception is initiated immediately or within 5 days of treatment of ectopic pregnancy.[1]	
What are the implications of recurrent miscarriage on contraceptive choice?	
Individuals who have had recurrent early miscarriage should be investigated for any underlying causes. However, investigations should not lead to a delay in initiation of a contraceptive method if the individual does not wish to become pregnant.[1]	D
COC should be avoided by individuals with recurrent early miscarriage until antiphospholipid syndrome has been excluded.[1]	D
Is there any method associated with a risk of another ectopic pregnancy?	
Individuals should be advised that the absolute risk of ectopic pregnancy when contraception is used is extremely small and that the risk of pregnancy is lowest with LARC.[1]	C
Individuals should be advised to seek medical advice if they suspect they may be pregnant and have symptoms suggestive of ectopic pregnancy, even while using contraception.[1]	D
Individuals who have had an ectopic pregnancy should be advised that the IUC is one of the most effective methods of contraception and so the absolute risk of any pregnancy including ectopic pregnancy is extremely low.[1]	C
Individuals should be informed that if pregnancy occurs with an IUC in situ, there is an increased risk of ectopic pregnancy and therefore the location of the pregnancy should be confirmed by ultrasound as soon as possible.[1]	C

2.6. Contraception after gestational trophoblastic disease

Gestational trophoblastic disease (GTD) is a group of rare tumours that start in the cells that would normally develop into the placenta during pregnancy. Some GTD can result in malignancy, although most are benign tumours.

Further information about specific methods is provided in Chapters 3-10.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
When should contraception be discussed/provided?	
Services that provide care to individuals who have/had GTD should give them opportunities to discuss their fertility intentions, contraception, and preconception planning and should advise them to get an early scan in a subsequent pregnancy.	Good practice point for NZ (based on FSRH good practice[1])
Whenever contraceptive counselling is provided, care should be taken to ensure individuals do not feel under pressure to choose a method of contraception.[1]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals should be advised to avoid subsequent pregnancy until GTD monitoring is complete. Effective contraception should be started as soon as possible as sexual activity and fertility may resume very soon after GTD.[1]	D
Individuals should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of LARC, when choosing an appropriate method to use after GTD.[1]	Good practice
Health practitioners should adopt a person-centred approach when providing individuals with contraceptive counselling.[1]	D
Health practitioners who are giving advice to individuals about contraception after GTD should ensure that this information is timely, current, and accurate.[1]	Good practice
Comprehensive, unbiased, and accurate information on contraceptive methods after GTD should be made available in different languages and in a range of formats including audio-visual.[1]	Good practice
Are fertility and pregnancy outcomes affected after GTD?	
Health practitioners should reassure individuals with GTD that fertility and pregnancy outcomes are favourable after GTD, including after chemotherapy for gestational trophoblastic neoplasia. However, there is an increased risk of GTD in subsequent pregnancy.[1]	C
How long should someone wait after GTD before trying to conceive?	
After complete molar pregnancy, individuals should be advised to avoid subsequent pregnancy for at least 6 months to allow human chorionic gonadotrophin (hCG) monitoring for ongoing GTD.[1]	D
After partial molar pregnancy, individuals should be advised to avoid pregnancy until two consecutive monthly hCG levels are normal.[1]	D
Individuals who have had chemotherapy for GTD should be advised to avoid pregnancy for 1 year after treatment is complete.[1]	D
Who should provide contraception after GTD?	
Services involved in the care of individuals with GTD should be able to offer all methods of contraception, including LARC, before they are discharged from the service.[1]	Good practice
Services should ensure that there are enough staff able to provide progestogen-only implants so that individuals who choose this method and are medically eligible can initiate the method immediately after treatment.[1]	Good practice
Individuals who are unable to be provided with their chosen method of contraception should be informed about services where their chosen method can be accessed. A temporary (bridging) method should be offered until the chosen method can be initiated.[1]	Good practice
Services should have agreed pathways of care to local specialist contraceptive services (eg, community sexual and reproductive health services) for individuals with	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
complex medical conditions or needs which may require specialist contraceptive advice.[1]	
Services should have agreed pathways of care to local services for individuals who may require additional non-medical care and support.[1]	Good practice
Record keeping and obtaining informed consent	
Health practitioners should clearly document the discussion and provision of contraception. Informed consent must be obtained before providing individuals with their chosen method of contraception.[1]	D
Which contraceptive methods are safe after GTD?	
Individuals should be advised that most methods of contraception can be safely used after treatment of GTD and can be started immediately after uterine evacuation with the exception of IUC.[1]	D
Individuals should be advised that additional contraceptive precautions (eg, barrier methods/abstinence) are required if hormonal contraception is started 5 days or more after treatment for GTD. Additional contraceptive precaution is not required if contraception is initiated immediately or within 5 days of treatment for GTD.[1]	Good practice
Method-specific advice	
IUC should not be inserted in individuals with persistently elevated hCG levels or malignant disease.[1]	D
IUC should not normally be inserted until hCG levels have normalised but may be considered on specialist advice with insertion in a specialist setting for individuals with decreasing hCG levels following discussion with a GTD centre.[1]	D
IUC insertion at surgical evacuation where GTD is suspected but not confirmed should be made on an individual case basis based upon the individual's risk for GTD, clinical findings and their preference for IUC insertion at this time.[1]	Good practice
Hormonal contraception can be started immediately after uterine evacuation for GTD.[2]	B
Emergency contraception is indicated if UPSI takes place from 5 days after treatment for GTD.[1]	Good practice
Individuals should be advised that use of LNG-EC is safe after treatment for GTD. Insertion of Cu-IUD for emergency contraception may be considered in a specialist setting for individuals with decreasing hCG levels following discussion with a GTD centre.[1]	D
Female permanent contraception is a safe option for contraception after GTD.[1]	D
Individuals should be advised that some LARC methods are as, or more, effective than female permanent contraception and may confer non-contraceptive benefits. However, individuals should not feel pressured into choosing LARC over female permanent contraception.[1]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Tubal occlusion should ideally be performed after some time has elapsed after surgical evacuation for GTD. Individuals who request tubal occlusion to be performed at the time of surgical treatment should be advised of the possible increased failure rate and risk of regret.[1]	D
Condoms can be used by individuals after treatment for GTD.[1]	D
Fertility awareness methods can be used by individuals after treatment for GTD. However, they should be advised that because fertility awareness relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after treatment for GTD.[1]	Good practice
Is there any method associated with a risk of GTD in subsequent pregnancies?	
Health practitioners should inform individuals that there is no evidence that the use of any contraceptive method after an episode of GTD increases the risk of GTD in a subsequent pregnancy.[1]	D

3. LONG-ACTING REVERSIBLE CONTRACEPTION

3.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines, *Intrauterine contraception*[2], *Progestogen-only implants*[3], *Contraception after pregnancy*[1] and Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) guidelines, *Long-acting reversible contraception*[4] and *Intrauterine contraception*[5], form the basis of New Zealand Aotearoa's guidance. Good practice points and recommendations about ENG implants are not part of New Zealand Aotearoa's guidance. The United Kingdom's Medical Eligibility Criteria for Contraceptive Use (UKMEC)[6] provides robust and current guidance on the indications and contraindications for the use of LNG-IUS and LNG implants. Health practitioners should ensure that they are familiar with these documents.

In New Zealand Aotearoa, available long acting contraception (LARC) includes subdermal LNG implants (like Jadelle®), Cu-IUD (like Choice Load 375, Choice TT380 short, Choice TT380 standard), and LNG-IUS (LNG-IUS 52mg or 13.5mg like Mirena® or Jaydess®). The LNG-IUS is available on prescription only. LNG implants and Cu-IUDs are available on prescription or Practitioner's Supply Order (PSO) from a medical practitioner, nurse practitioner (within their scope of practice and competency), nurse prescriber or a midwife (up until 6 weeks after the birth) or registered nurse (within their scope of practice and usually acting under a standing order). A registered nurse working within their scope of practice and usually acting under a standing order may insert LARC. Health practitioners must be competent to insert and remove LARC.

LARC are some of the most effective forms of contraception available, comparable to permanent contraception.[34] There is no difference in efficacy between typical use and perfect use as these methods do not require any user action beyond insertion. The FSRH[2] notes that the most effective methods of IUC are the LNG-IUS methods and T-shaped Cu-IUDs with at least 380 mm copper and copper bands on the transverse arms. *Table 2* (below) describes the efficacy for LARC methods available in New Zealand Aotearoa.

Table 2: Contraceptive efficacy for LARC methods available in New Zealand Aotearoa

LARC method	Failure rate
IUC	
LNG-IUS 52mg (Mirena®)	0.2% at one year; 0.7% at five years[35]
LNG-IUS13.5mg (Jaydess®)	0.4% at one year 0.9% at three years[36]
Cu-IUD (Choice Load 375)	1%[37]
Cu-IUD (Choice TT380 short + standard)	0.1-1%[2]
LNG implant	
LNG implant (Jadelle®)	0.1% for year one to three; 0.0% for year four; 0.8% at year five[38]

3.2. Use of IUC by individuals aged 25 years or less

The World Health Organization (WHO)[39] assigns a 'category 2' [Footnote 7] for use of copper-bearing and LNG-IUCs for those aged under 20 years old. Major professional societies in the US, Canada, Europe, and Australia [Footnote 8] and the FSRH[2] recommends that the use of IUC should not be restricted based on parity or age alone.

Two recent systematic reviews[40,41] investigated adverse outcomes for young IUC users (including pregnancy, pelvic inflammatory disease [PID] and perforation) and concluded that IUC use in young people is safe and effective for the prevention of pregnancy. Risk of adverse outcomes was low:

- Almost none of the identified studies supported a significant association between pregnancy as an outcome and IUC use in those aged 25 years or younger[40,41]
- One systematic review reported low rates of PID, ranging from 0-2.7%[40] and no cases of PID were reported in any age group in the other systematic review[41], and
- Age was not significantly associated with perforation in any of the reported studies: one systematic review reported no perforations (from nine studies)[40]; the other review reported on four studies: two retrospective chart reviews showed no perforations. A retrospective analysis of participants aged under 24 years reported 0.02% perforations compared to more perforations in older participants (0.05%). The final retrospective chart review reported no significant difference by age (0% in participants aged 13-19 years; 1% in participants aged 20-24 years; 0% in participants aged 25-45 years).[41]

A 2015 post hoc sub-group analysis of data[42] evaluated the impact of age, parity or BMI on the efficacy, safety, placement and user satisfaction associated with LNG-IUS concluded that LNG-IUS (both high and low doses) were highly effective, safe and well tolerated, regardless of age or parity.

3.3. Management of possible pain

Expectation or fear of possible pain is sometimes given as a reason to not insert IUC. Studies[43-45] show that application of lidocaine-prilocaine cream, and vaginal dinoprostone may reduce pain during insertion for a range of population groups and IUC types. Lidocaine was also shown to be effective, although results[46-48] were mixed.

Despite this, the FSRH[2] does not recommend using topical lidocaine, misoprostol, or non-steroidal inflammatory drugs (NSAIDs) to improve ease of insertion or reduce possible pain during insertion of IUC. New Zealand Family Planning (NZFP) similarly does not recommend routine use of topical pain relief agents. In New Zealand, topical pain relief agents are very expensive. Pre-insertion oral analgesia (paracetamol and/or ibuprofen) is recommended in

[7] Category 2 is "a condition where the advantages of using the method generally outweigh the theoretical or proven risks."
[8] This includes the following organisations: American College of Obstetricians and Gynecologists, American Pediatric Academy, Board of the Society of Family Planning, Society of Obstetricians and Gynaecologists of Canada, Faculty of Sexual and Reproductive Health Care Clinical Guidance, ANAES, INPES, AFSSAPS and Sexual Health and Family Planning Australia.

New Zealand. Positive reinforcement, distraction and controlling apprehension are important aspects of expectation and pain management.

3.4. Extended use of LNG-IUS

There is growing evidence that extended use of certain IUC (i.e., continuous use beyond approved or licenced duration of use) may be safe and effective for the prevention of pregnancy.[34,49-55] Extended use of LARC could reduce exposure to the risks associated with changing a LARC and increase the cost effectiveness of certain devices.

The FSRH[2] notes that LNG-IUS 52mg is licensed for 5 years of use but discusses evidence suggesting it may provide effective contraception for a longer period (up to 7 years). The FSRH does not specifically endorse extended use generally for younger people but extended use of a Cu-IUD fitted at aged 40+ years or an LNG-IUS 52mg fitted at aged 45+ years is supported.

Recent evidence builds on the literature considered by FSRH. A high quality 2020 systematic review[54] concluded that pregnancy rates during two years of extended use of LNG-IUS 52mg, were low (0.02 per 100 person-years, 95%CI: 0, 0.29) and were comparable to published rates during approved duration of use. Rates of adverse events during extended use and rates of side effects leading to discontinuation during extended use were also comparable to the data found in published literature for use during approved duration:

- Expulsion rates: included studies reported no expulsions at three years extended use, 0.7 per 100 women at the first-year extended use, or 1.2 per 100 women at the second year extended use
- Infection: two included studies reported no infections and one reported an infection rate of 3.2 per 100 women (95%CI: 0.7, 5.6)
- Bleeding leading to discontinuation: 3.7 per 100 women in the first year of extended use and 3.1 per 100 women in the second year of use; another study reported in the systematic review reported discontinued use due to bleeding of 0.2 per 100 women.[54]

3.5. Extended use of LNG implants

The FSRH[3] guideline on the progestogen-only implant includes recommendations for shorter-acting ENG implants, which are not available in New Zealand. This data should not be used to assess appropriate duration of use for LNG implants (including Jadelle®). The Medsafe data sheet[38] for the LNG implant currently available in New Zealand Aotearoa (Jadelle®) notes that the device may be used for up to five years but has a special warning in place.

> *Clinical trials have shown the contraceptive efficacy of Jadelle® implants to decrease after the fourth year of use. Consequently, the removal of Jadelle® implants and their change into new implants could be considered before five years of use, especially in individuals weighing over 60 kg (see Pharmacodynamic properties). The serum levonorgestrel concentration is lower at the end of the implant use and it is inversely related to body weight.*[38]

The datasheet notes that the decrease in efficacy between years 3 and 5 is small: for those over 60kg, the annual pregnancy rate at years 1 and 2 was 0.2, 0.3 at three years, 0.0 at 4 years and 1.1 at five years.[38] This pregnancy rate is lower than most other forms of contraception.

Few studies have been published that consider extended use of the LNG implant (including Jadelle®). A 2018 systematic review[56] considered implant efficacy during extended use, including for both LNG and ENG releasing implants but only one of the included studies considered extended use of LNG implants. The review pooled pregnancy outcomes across all six studies (with pregnancies occurring *only* among LNG implant users), to conclude that cumulative contraception failure rates were still far below typical use rates for other contraception methods.

3.6. Recommendations and practice points about LNG-IUS and LNG implants

Chapter 2 contains further recommendations about using LARC after pregnancy.

DRAFT RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
There are very few contraindications to use of LARC methods and according to the WHO, the majority of individuals are eligible for implants and IUC including young and nulliparous individuals.[4]	Consensus-based recommendation
When discussing contraception, health practitioners should discuss the risks and benefits of LARCs with individuals of all ages and parity and recommend them as a first-choice method.[4]	Consensus-based recommendation
LARC methods are the most effective reversible methods of contraception available and have high continuation and satisfaction rates amongst users.[4]	Consensus-based recommendation
LARC is a suitable alternative option to tubal ligation[35,36,38]: it is as efficacious, may provide additional health benefits such as control of menstrual irregularities, does not risk later regret, avoids the need for a general anaesthetic and does not have surgical risks.	Good practice point for NZ

3.6.1. Recommendations and practice points about IUC and LNG-IUS

Chapter 2 contains further recommendations about using LARC after pregnancy.

More information about the Cu-IUD is available in *Part 9*, *Emergency contraception*.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Efficacy of IUC	
All individuals should be counselled about the effectiveness and failure rates of IUC methods and their possible short and long-term complications.[4]	Consensus-based recommendation
Individuals should be advised of the very low failure rates associated with use of IUC.[2]	B

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
The most effective methods of IUC are the LNG-IUS methods and T-shaped Cu-IUDs with at least 380 mm2 copper and copper bands on the transverse arms.[2]	A
Return of fertility after IUC use is generally similar to fertility rates after discontinuation of oral contraceptives and barrier methods.[2]	B
Who can safely use IUC?	
Health practitioners should be familiar with the UKMEC for intrauterine methods.[2]	Good practice
Unless contraindicated, IUC is suitable for use in all individuals seeking contraception, including adolescents (nulliparous + parous), individuals with high BMI and individuals with polycystic ovary syndrome. Where appropriate, IUC should be considered as the first-choice contraceptive.	Good practice point for NZ (based on FSRH grade B[2])
Use of intrauterine methods should not be restricted based on parity or age alone.[2]	B
Individuals having immediate post-partum IUC insertion should be informed of the signs and symptoms of expulsion.	Good practice point for NZ (based on FSRH[2])
Individuals who have an IUC inserted within 48 hours after birth should have a string check/shortening at 4-6 weeks post-partum.	NCGSG consensus statement
Health practitioners who insert or remove IUC should be appropriately trained, maintain competence and attend regular updates. Health practitioners who insert IUC immediately postpartum (up to 48 hours) require specific training.	NCGSG consensus statement
Cu-IUD users with recurrent bacterial vaginosis or vulvovaginal candida may wish to consider an alternative method of contraception.[2]	C
At the time of insertion	
Informed consent should be given by the individual prior to both pelvic examination and IUC insertion or removal.[2]	Good practice
A medical and sexual history should be carried out as part of the routine assessment for IUC to assess suitability for use of the method and need for STI testing.[2]	C
A careful history and examination are essential to identify any relative or absolute contraindications to the use of IUC. STI risk should be assessed with a low threshold for testing. All individuals regarded as high risk (eg, those aged <25 years, or >25 years with a new sexual partner or more than one partner in the last year, or if their regular partner has other partners) should be tested prior to insertion or change of IUC. In asymptomatic individuals there is no need to wait for the screening results, nor routinely provide antibiotic prophylaxis, providing the individual can be contacted and treated if a positive result is found.	Consensus-based recommendation (based on RANZCOG[4] and FSRH[2])
A bimanual pelvic examination should be performed on all individuals before inserting IUC.[2]	C
For individuals with cardiac disease, the decision to use IUC should involve a cardiologist. The IUC should be fitted in a hospital setting if a vasovagal reaction presents a particularly high risk, for example, individuals with single ventricle circulation, Eisenmenger physiology, tachycardia, or pre-existing bradycardia.[2]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
There is no evidence to suggest that cervical cleansing prior to IUC insertion reduces subsequent pelvic infection.[2]	Good practice
At the time of IUC insertion pregnancy should be excluded.[4]	Consensus-based recommendation
Prophylactic antibiotics are not routinely required for the insertion or removal of IUC even in individuals with conditions where the risk of infective endocarditis may be increased.[2]	C
An appropriately trained assistant who can assist in an emergency should be available (i.e., physically present in the practice but not necessarily in the same room) during insertion of IUC.	Good practice point for NZ (based on FSRH good practice[2])
Management of possible pain	
Health practitioners should engage individuals undergoing insertion of IUC in conversation and provide reassurance over the course of the procedure.	NCGSG consensus statement
For management of possible pain during and after IUC insertion, health practitioners should advise the individual to use pre-insertion analgesia (paracetamol/ibuprofen) and provide verbal reassurance and positive reinforcement prior to and during insertion.	NCGSG consensus statement
Local anaesthetic block administered by cervical injection is not routinely required for IUC insertion but should be offered when cervical dilatation is required, or difficult IUC insertion or removal is anticipated/experienced.[2]	Good practice
NSAIDs can be offered to individuals who experience pain after insertion of an IUC method.[2]	Good practice
Insertion of IUC may be more painful and technically more challenging for someone who has hormonal changes from testosterone therapy. Individuals on testosterone therapy should be offered a short course of vaginal oestrogen to facilitate more comfortable insertion.	Good practice point for NZ
Post-insertion advice	
Individuals should be offered instruction on how to check for the IUC and advised that if the threads cannot be felt the device may have perforated the uterus or been expelled. Additional contraception should be used until they seek medical advice.[2]	Good practice
Health practitioners should inform individuals about the availability of emergency contraception and when it may be required with intrauterine methods.[2]	Good practice
A follow-up visit at 3-6 weeks may be undertaken to exclude infection, perforation, or expulsion. More importantly, the individual should also be advised to present if abnormal bleeding, or symptoms suggestive of infection or pregnancy occur, or if they are unable to locate the string of the device.[4]	Consensus-based recommendation
Complications of IUC	
The risk of expulsion with IUC is around 1 in 20 and is most common in the first year of use, particularly within 3 months of insertion.[2]	B

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
There is no need to delay insertion of an IUC post-abortion and post-partum providing an individual has been informed of the small increased risk of expulsion.	Recommendation for NZ (based on FSRH evidence grade B[2])
Menstrual cups and tampons do not appear to be associated with an increased risk of IUC expulsion, but individuals should be advised that care is needed when removing a menstrual cup as it is possible to accidently remove the IUC.	Good practice recommendation (based on FSRH evidence grade C[2])
Although ovarian cysts may occur when using the LNG-IUS, most cysts are asymptomatic and resolve spontaneously.[2]	B
The background risk of uterine perforation at the time of insertion is low (1.4 per 1000 insertions) but recent evidence highlighted that individuals who are breast feeding, regardless of the interval from birth, have six times the risk of uterine perforation compared to non-breastfeeding individuals. Although the absolute risk remains low, individuals should be counselled about this potential complication.[4]	Evidence-based recommendation from RANZCOG
If PID is diagnosed, treatment should follow recommended regimens and be based on local epidemiology and organism sensitivities. The decision to remove the IUC needs to be balanced against the risk of pregnancy. Removal may improve short-term outcomes and should be considered if there is no clinical response within 72 hours of commencing treatment, or if the individual requests removal. Alternative contraception should be provided if the IUC is removed.[4]	Consensus-based recommendation
Management of complications	
There is no evidence as to the most appropriate treatment option for individuals with unscheduled bleeding with the LNG-IUS. For individuals with unscheduled bleeding who wish to continue with the LNG-IUS and are medically eligible, a COC pill could be tried for up to 3 months (this can be in the usual cyclic manner or continuously without a pill-free interval – unlicensed use).[2]	Good practice
NSAIDS can be considered in the management of problematic bleeding with use of Cu-IUDs.[2]	A
Insertion or reinsertion of an intrauterine method can be carried out in asymptomatic individuals with actinomyces-like organisms (ALOs).[2]	C
There is no need to remove IUC in asymptomatic individuals with ALOs.[2]	C
If an individual is confirmed to have actinomycosis, **and is symptomatic**, prolonged anti-microbial treatment should be used in consultation with a clinical microbiologist or infectious diseases physician; surgery may need to be considered to drain any associated collections.[4]	Consensus-based recommendation
IUC removal is not routinely required in individuals with PID but it should be removed if there is no response to treatment (approximately 72 hours).[2]	B
Individuals should be advised to seek medical assistance at any time if they develop symptoms of pelvic infection, pain, abnormal bleeding, late menstrual period, non-palpable threads or can feel the stem of the IUC.[2]	C

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
IUC removal is recommended as soon as pregnancy is diagnosed with an IUC in situ and the threads are visible. If the threads are not visible, the device should not be removed. Ectopic pregnancy should be excluded.	NCGSG consensus statement
Ectopic pregnancy	
The overall risk of ectopic pregnancy is reduced with use of IUC when compared to using no contraception.[2]	B
If pregnancy does occur with an intrauterine method in situ, the risk of an ectopic pregnancy occurring is increased and in some studies half of the pregnancies that occurred were ectopic.[2]	B
Data are insufficient to determine if the 13.5 mg LNG-IUS is associated with a greater risk of ectopic pregnancy than other IUC method.[2]	C
IUC users should be informed about symptoms of ectopic pregnancy. The possibility of ectopic pregnancy should be considered in individuals with an intrauterine method who present with abdominal pain especially in connection with missed periods or if an amenorrhoeic individual starts bleeding. If a pregnancy test is positive an ultrasound scan is urgently required to locate the pregnancy.[2]	Good practice
Duration of use	
Individuals should be advised of the very low failure rates associated with use of LNG-IUS 52mg. Health practitioners and users should not be concerned about short-term delays to replacing these devices based on the growing body of evidence regarding extended use.	Good practice point for NZ (based on recent evidence[54])
Individuals who had a 52 mg LNG-IUS inserted for contraception and/or heavy menstrual bleeding at the age of 45 years or over can use the device for 7 years or if amenorrhoeic until the menopause, after which the device should be removed.[2]	FSRH statement about removal outside of licence, not graded
Individuals who were under the age of 45 years at the time of 52 mg LNG-IUS insertion and who present for replacement of the device between 5 and 7 years after insertion may have immediate replacement if a pregnancy test is negative and another pregnancy test is advised no sooner than 3 weeks after the last episode of UPSI.[2]	FSRH statement about removal outside of licence, not graded
If an individual is under 45 years at the time of 52 mg LNG-IUS insertion and more than 7 years have elapsed since insertion, replacement should be delayed until the individual has a negative pregnancy test at least 3 weeks after the last UPSI.[2]	FSRH statement about removal outside of licence, not graded
Individuals who retain their 13.5 mg LNG-IUS for more than 3 years should be advised to use additional precautions until pregnancy can be excluded, after which time a replacement device can be inserted.[2]	FSRH statement about removal outside of licence, not graded
A Cu-IUD (containing ≥300 mm2 copper) inserted at or after the age of 40 years can be retained until 1 year after the last menstrual period if this occurs when the individual is over the age of 50 years (2 years if under 50 years).[2]	FSRH statement about removal outside of licence, not graded

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals who wish replacement of a Cu-IUD outside the licensed duration of use (excluding those detailed above) should have pregnancy reliably excluded prior to the replacement or fit the criteria for an emergency IUD.[2]	FSRH statement about removal outside of licence, not graded
Health benefits and risks	
Use of a Cu-IUD and LNG-IUS may be associated with a reduced risk of endometrial cancer.[2]	Good practice point for NZ, based on FSRH Grade B
The 52 mg LNG-IUS may reduce pain associated with primary dysmenorrhoea, endometriosis or adenomyosis.[2]	A
The 52 mg LNG-IUS is effective in reducing menstrual blood loss and can be used in the management of heavy menstrual bleeding.[2]	A
Individuals considering the LNG-IUS can be informed that systemic absorption of progestogen occurs with these devices. The 13.5 and 52 mg LNG-IUS have similar side effect profiles (such as acne, breast tenderness/pain and headache) and hormonal side effects often settle with time. Rates of discontinuation due to side effects are not significantly different from Cu-IUD users.[2]	C
Individuals should be advised that existing evidence fails to support a negative effect on libido associated with IUC use.[2]	B
Weight gain has been observed with use of IUC. There is no significant difference between hormonal (LNG-IUS) and non-hormonal (Cu-IUD) intrauterine methods and evidence to support a causal association is lacking.[2]	B
In the 3-6 months following IUC insertion individuals may experience irregular, prolonged, or frequent bleeding but menstrual bleeding patterns tend to improve with time.[2]	B
At 1 year, infrequent bleeding is usual with the LNG-IUS: some will experience amenorrhoea.[2]	B
Discontinuation due to bleeding and pain are similar for different types of Cu-IUD.[2]	A
Evidence does not support a link between breast cancer and use of the LNG-IUS.[2]	B
Non-hormonal contraception is most appropriate for individuals with a history of breast cancer. Any consideration of the LNG-IUS should be carried out in consultation with the individual's cancer specialist.[2]	C
Evidence suggests there is little or no increased risk of VTE or myocardial infarction (MI) associated with the use of a LNG-IUS.[2]	B
The Mirena® 52 mg LNG-IUS can be used to provide endometrial protection in conjunction with oestrogen therapy for up to 5 years.[2]	B
Other considerations	

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals requesting intrauterine methods should be informed about the use of additional precautions for protection against STIs and advised about the appropriate timings of STI testing after an episode of UPSI.[2]	Good practice

3.7. Recommendations and practice points about progestogen-only implants

Chapter 2 contains further recommendations about using LARC after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Who can safely use progestogen-only implants?	
Health practitioners should be familiar with the most current UKMEC for the progestogen-only implant.[3]	Good practice
Unless contraindicated, the LNG implant is suitable for use in all individuals including adolescents and nulliparous individuals.	Good practice point for NZ (based on UKMEC[6])
Individuals should be advised that additional contraceptive precautions (eg, barrier methods/abstinence) are required if hormonal contraception is started 5 days or more after miscarriage. Additional contraceptive precaution is not required if contraception is initiated immediately or within 5 days of miscarriage or abortion.	Good practice point for NZ (based on FSRH good practice[1])
Factors affecting efficacy	
Concomitant use of enzyme-inducing drugs (some antiepileptics, antiretrovirals and some antibacterials and formulations containing St John's wort) may reduce the efficacy of the progestogen-only implant. Individuals should be advised to switch to a method unaffected by enzyme-inducing drugs or to use additional contraception until 28 days after stopping the treatment.[9]	Recommendation (based on FSRH evidence grade C[3])
Obesity (BMI >30kg/m^2) is a situation for which there is no restriction on the use of the progestogen-only implant.[3]	C
Insertion, removal and replacement	
Health practitioners who insert or remove progestogen-only implants should be appropriately trained, maintain competence and attend regular updates.[3]	C
Removal and replacement of the LNG implant should occur by year 5. Health practitioners should inform individuals of the small incremental decrease in efficacy observed during the fifth year of use.	NCGSG consensus statement
If an implant is replaced immediately, and after no longer than five years since insertion there is no need for additional contraceptive precautions after replacement.[3]	Recommendation based on Jadelle®

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
After removal of a progestogen-only implant, effective contraception is required immediately if pregnancy is not desired.[3]	B
An individual with an impalpable implant should be advised to use additional precautions or avoid intercourse until the presence of an implant is confirmed.[3]	Good practice
The location of an impalpable or deep implant should be identified before exploratory surgery. Referral to an expert implant removal centre is recommended for ultrasound-guided removal.[3]	Good practice
Removal of deep LNG implants can be covered under ACC as a treatment injury.	Good practice point for NZ
Follow-up	
Individuals using progestogen-only implants should be advised that no routine follow-up is required, but that they can return at any time to discuss problems or to change their contraceptive method.[3]	Good practice
Individuals using a progestogen-only implant should be advised to return if: they cannot feel their implant or it appears to have changed shape; they notice any skin changes or pain around the site of the implant; they become pregnant; or they develop any condition that may contraindicate continuation of the method.[3]	Good practice
Health benefits and risks	
The progestogen-only implant may help to alleviate dysmenorrhoea.[3]	C
There is little or no increased risk of VTE, stroke or MI associated with the use of the progestogen-only implant.[3]	C
There is no evidence of a clinically significant adverse effect on bone mineral density with use of a progestogen-only implant.[3]	B
Fewer than one-quarter of those using the progestogen-only implant will have regular bleeds. Infrequent bleeding is the most common pattern (approximately one-third); around one-fifth of those using the progestogen-only implant experience no bleeding; and approximately one-quarter have prolonged or frequent bleeding. Altered bleeding patterns are likely to remain irregular.[3] *NB FSRH statement refers to ENG implants*	C
Although some individuals report changes in weight, mood and libido when using the progestogen-only implant, there is no evidence of a causal association.[3]	C
Individuals may experience improvement, worsening or new onset of acne during use of a progestogen-only implant.[3]	C
Although some individuals report headache with use of the progestogen-only implant, there is no evidence of a causal association.[3]	C
Other considerations	
The consistent and correct use of condoms is the most efficient means of protecting against HIV and other STIs.[3]	B

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
After exclusion of other causes, individuals who experience troublesome bleeding while using the progestogen-only implant, and who are eligible to use COC may be offered COC cyclically or continuously for 3 months (outside the product licence). Longer-term use of the implant and COC has not been studied and is a matter of clinical judgement. Estradiol 1mg may also be effective in controlling bleeding.	Good practice point for NZ (based on FSRH good practice[3])
The progestogen-only implant is not known to be harmful in pregnancy but individuals with a continuing pregnancy should be advised to have the implant removed. Individuals may retain the implant if they wish to continue the method after a non-continuing pregnancy.[3]	C

4. DEPOT MEDROXYPROGESTERONE ACETATE (DMPA) INJECTIONS

4.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines, *Progestogen-only Injectable contraception*[7], *Quick starting contraception*[8] and *Contraception after pregnancy*[1], form the basis of New Zealand Aotearoa's guidance on DMPA. Good practice points and recommendations about norethisterone preparations (Noristerat) are not part of New Zealand Aotearoa's guidance. The United Kingdom's Medical Eligibility Criteria for Contraceptive Use (UKMEC)[6] provides robust and current guidance on the indications and contraindications for the use of DMPA. Health practitioners should ensure that they are familiar with these documents.

In New Zealand Aotearoa, the DMPA injection is formulated for deep intramuscular injection (150 mg medroxyprogesterone acetate). It is currently administered every 12 weeks (licenced use) in the gluteal or deltoid muscle.[57] Subcutaneous DMPA is not currently available here.

DMPA works primarily by inhibiting ovulation. It alters composition of cervical mucus to limit sperm penetration and causes changes in the endometrium creating an unsuitable environment for implantation. In contrast to other hormonal contraceptive methods, the efficacy of DMPA is not affected by the concurrent use of liver enzyme inducing medications.[7]

DMPA injections are available on prescription or a practitioners supply order (PSO) from a medical practitioner, nurse practitioner (within their scope of practice and competency), a midwife (within their scope of practice and competency), nurse prescriber or registered nurse (within their scope of practice and usually acting under a standing order).

When DMPA injections are administered at regular intervals, the failure rate is approximately 0.2% in the first year of use.[7] With perfect use, the efficacy of the DMPA injection is similar to long acting reversible contraception (LARC).[7] With typical use (including inconsistent or late injections), the failure rate is approximately 6%.[7] DMPA injections also have non-contraceptive benefits and may improve menorrhagia and the pain associated with dysmenorrhoea and symptoms of endometriosis.[7]

4.2. Interval between administering DMPA

The DMPA injection is licenced for use to prevent pregnancy when administered at 12-week intervals[57]; however, an evidence-based decision has been made to recommend administration at 13-week intervals.

The FSRH guideline[7] and World Health Organisation (WHO) recommendations also cite evidence from a 2009 systematic review[58] that assessed the evidence regarding return to fertility and ovulation following use of progestogen-only injectable contraceptives. Of the twelve studies specifically assessing time to pregnancy in former DMPA users, all reported either zero pregnancies or very low pregnancy rates (0.6%) up to 15 weeks following the last DMPA injection (single 150 mg dose). This finding suggested that contraceptive efficacy was maintained up to 15 weeks after a single dose injection. Two included studies reported either zero pregnancies or very low pregnancy rates (0.4; 95% CI 0.01–2.29) among study participants up to 17 weeks after their last DMPA injection.[58]

4.3. Return to fertility

The FSRH guidance[7] describes non-comparative and pharmacokinetic studies that show some individuals may ovulate within the first six months following the last DMPA injection and most will ovulate within 12 months. Results of a pharmacokinetic study[59] assessing time to ovulation using serum progesterone levels reported that the median time to ovulation following a single DMPA intramuscular injection was 183 days (26.1 weeks). There was large individual variation in time to ovulation which reportedly ranged from 70 to 315 days (10-45 weeks).

4.4. Management of the risk of anaphylaxis

Intramuscular DMPA injections are safely used by millions of individuals worldwide. As with all medications there is a very small risk of anaphylaxis following administration. In New Zealand Aotearoa, advice on resuscitation following anaphylaxis is provided by the Australian and New Zealand Committee on Resuscitation.[60] This includes a range of flowcharts and algorithms that health practitioners should be familiar with when administering medicines including DMPA. A FSRH guideline[61] also recommends that staff providing sexual and reproductive health services are trained in resuscitation and have access to essential drugs and equipment that are required for resuscitation.

4.5. Recommendations and practice points

Chapter 2 contains further recommendations about using DMPA after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Contraceptive efficacy	
When administered at the recommended dosing interval, the failure rate of progestogen-only injectable contraception is approximately 0.2% in the first year of use. With typical use, the failure rate is approximately 6%.[7]	A
Individuals should be informed that there can be a delay of up to 1 year in the return of fertility after discontinuation of DMPA.[7]	C
No increased risk of pregnancy has been demonstrated in progestogen-only injectable users with higher body weight, although data are limited in individuals with a BMI ≥40 kg/m^2.[7]	B
The efficacy of DMPA contraception is not reduced with concurrent use of enzyme inducing drugs (some antiepileptics, antiretrovirals and some antibacterials and formulations containing St John's wort).	Recommendation (based on FSRH evidence grade B[7])
Who can safely use DMPA? *NB additional proposals regarding delayed return to fertility are noted above*	
Health practitioners should be familiar with the UKMEC for intramuscular DMPA.	Good practice point for NZ (based on UKMEC[6])
In individuals aged under 18 years, progestogen-only injectable contraception can be used after consideration of alternative methods.[7]	C

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals are generally advised to switch to another method at age 50 years. If an individual does not wish to stop using DMPA, consideration may be given to continuation, providing the benefits and risks have been assessed and the individual informed of the potential risks.[7]	C
DMPA should not be recommended to individuals planning pregnancy in the short-term.[62]	Consensus-based recommendation
Progestogen-only injectable use is associated with a small loss of bone mineral density, which is usually recovered after discontinuation.[7]	B
DMPA is a contraceptive option for individuals with sickle cell disease and may reduce the severity of sickle crisis pain.[7]	B
Administration interval	
Individuals should be advised to return every 13 weeks for a repeat injection of intramuscular DMPA (outside the product licence for intramuscular DMPA). Health practitioners should be aware that this is an evidence-based recommendation and signals a change in practice in New Zealand.	Good practice point (based on FSRH[7])
An injection of DMPA can be administered up to 7 days late (up to 14 weeks after the last injection) without the need for additional contraceptive precautions (outside the product licence for intramuscular DMPA).[7]	B
If necessary, an early repeat injection of DMPA can be administered from 10 weeks.[7]	C
Individuals who discontinue their progestogen-only injectable and who do not wish to conceive should be advised to start another contraceptive method before or at the time of their next scheduled injection even if amenorrhoeic.[7]	Good practice
What should be covered in a consultation about DMPA? *NB additional proposals regarding anaphylaxis (rare) are noted above*	
Health practitioners should take a medical history and should refer to UKMEC when assessing an individual's eligibility for any contraceptive method including the DMPA injection.[7]	Good practice
Individuals using DMPA should be reviewed every two years to reassess the benefits, risks, and ongoing suitability of continued DMPA use.[7]	Good practice
Health practitioners should ensure that individuals requesting DMPA are current with cervical screening and, if relevant, have completed the HPV vaccination programme.[7]	Good practice
The gluteal muscle in the buttock is the preferred site for intramuscular DMPA administration but it can be administered into the deltoid muscle of the upper arm. In individuals with deep adipose tissue in the gluteal area, standard-length needles may not reach the muscle layer and deltoid administration of intramuscular DMPA should be considered.[7]	C
DMPA and bleeding pattern	
Individuals should be advised about changes in bleeding patterns.[7]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Amenorrhoea or reduced bleeding is common in progestogen-only injectable users and may benefit individuals with menstrual problems.[7]	B
Managing problematic bleeding	
A clinical history should be taken from individuals using DMPA who have problematic bleeding to identify the possibility of an underlying cause.[10]	C
A pregnancy test is indicated for sexually active individuals using DMPA with problematic bleeding.[10]	Good practice
Individuals using DMPA who have persistent, abnormal vaginal bleeding should be investigated appropriately (i.e., history taking, speculum and bimanual examination, diagnostic cervical smear test; pelvic ultrasound and referral to a gynaecologist).	Good practice point for NZ (based on the National Screening Unit and RANZCOG guidelines[74,75])
A speculum examination should be performed for individuals using DMPA who have problematic bleeding if they have persistent bleeding or a change in bleeding after at least 3 months of use, if medical treatment has failed or if they have not participated in the National Cervical Screening Programme.[10]	Good practice
If, after taking a clinical history, there are no risk factors for STIs, no concurrent symptoms suggestive of underlying causes, they are participating in the National Cervical Screening programme and have a history of normal results, and have had no more than 3 months of problematic bleeding, an examination may not be required.	Good practice point for NZ (based on FSRH good practice[10])
DMPA users with problematic bleeding who are at risk of STIs should be tested for Chlamydia trachomatis as a minimum. Testing for *Neisseria* gonorrhoea will depend on sexual risk, local prevalence, and availability of dual testing.[10]	Good practice
An endometrial biopsy should be considered in individuals aged ≥45 years or in individuals aged <45 years with risk factors for endometrial cancer (including a BMI of ≥30) who have persistent problematic bleeding after the first three months of use of a method or who present with a change in bleeding pattern.	Good practice point for NZ (based on FSRH good practice[10])
Individuals who experience unscheduled bleeding during use of a progestogen-only injectable and who are medically eligible can be offered a COC pill for 3 months. This can be taken in the usual cyclic manner or continuously without a hormone-free interval (outside product licence). Longer-term use of the injectable and COC has not been studied and is a matter of clinical judgement.[7]	Good practice
The role of endometrial polyps, fibroids, or ovarian cysts as a cause of problematic bleeding is uncertain. Nevertheless, for all individuals using hormonal contraception who have problematic bleeding, if such a structural abnormality is suspected a transvaginal ultrasound scan and/or hysteroscopy may be indicated.[10]	Good practice
DMPA and weight gain	
Use of DMPA appears to be associated with weight gain, particularly in individuals under 18 years of age with a BMI ≥30 kg/m^2.[7]	B

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals who gain more than 5% of their baseline body weight in the first 6 months of DMPA use are likely to experience continued weight gain and should be offered alternative contraception.	Good practice point for NZ (based on FSRH evidence grade C[7])
Quick-starting DMPA	
DMPA may be considered for quick-starting if other contraceptive methods (including COC, POP and LNG implants) are not suitable or acceptable.	Good practice point for NZ (based on FSRH good practice[8])
After LNG-EC administration, DMPA can be quick started immediately.	Good practice point for NZ (based on FSRH evidence grade D[8])
Additional contraceptive precautions (barrier or abstinence) are required until the quick started contraceptive method becomes effective.[7]	Good practice
Individuals using DMPA should be advised that there may be a slightly higher risk of continuing pregnancy (failed abortion) if DMPA is administered at the time of mifepristone administration as part of early medical abortion.[7]	B
Individuals using a progestogen-only implant or DMPA can be advised to continue their method of contraception with no additional contraceptive precautions after abortion.[7]	Good practice
DMPA and other health benefits	
DMPA use may reduce pain associated with endometriosis.[7]	A
Use of DMPA is not associated with an increased risk of ovarian or endometrial cancer and may offer some protection.[7]	B
There is possibly a weak association between current use of DMPA and breast cancer. Any increased risk is likely to be small and reduce with time after stopping.[7]	B
A causal association between DMPA and venous thrombosis has not been demonstrated in the small number of studies that have investigated this relationship.[7]	B
From the limited evidence available it is not possible to confirm or exclude an association between progestogen-only injectable use and MI or stroke.[7]	B
There is a weak association between cervical cancer and use of DMPA for 5 years or longer. Any increased risk appears to reduce with time after stopping and could be due to confounding factors.[7]	B
Individuals should be informed about the link between HPV and cervical cancer and advised about strategies that reduce the risk such as condom use, smoking cessation, regular cervical screening and, where appropriate, vaccination against HPV.[7]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Whilst there is little evidence available to demonstrate causation, a number of possible side effects such as acne, decreased libido, mood swings, headache, hot flushes, and vaginitis have been reported with use of DMPA.[7]	C
The consistent and correct use of condoms (external/male and internal/female) can reduce the risk of STI transmission and should therefore be recommended as a risk-reduction strategy.[7]	B
A causal relationship between progestogen-only injectable contraception and HIV transmission/acquisition has not been established but cannot be completely excluded.[7]	B
Other considerations	
Health practitioners should encourage the use of condoms (alongside other forms of contraception) to prevent STIs.	NCGSG consensus statement

5. THE COMBINED ORAL CONTRACEPTIVE PILL

5.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines *Combined hormonal contraception,*[9] *Quick-starting contraception*,[8] *Problematic bleeding with hormonal contraception*,[10] *Recommended actions after incorrect use of combined hormonal contraception*[11] *and Contraception after pregnancy*,[1] form the basis of New Zealand Aotearoa's guidance. Recommendations related to the COC pill are relevant to New Zealand Aotearoa. Other types of CHC are not available here. The United Kingdom's Medical Eligibility Criteria for Contraceptive Use (UKMEC)[6] provides robust and current guidance on the indications and contraindications for the use of the COC pill. Health practitioners should ensure that they are familiar with these documents.

In New Zealand Aotearoa, available COC pill preparations include ethinylestradiol 35µg [Footnote 9] or less combined with levonorgestrel or norethisterone. At August 2020, some preparations of the COC pill containing newer synthetic oestrogens and progestogens are not available here and/or are not subsidised. This includes newer preparations of COC pill which have a 24/4 day regime. Combined vaginal rings (including NuvaRing) are not available in New Zealand Aotearoa. Combined transdermal patches are not available in New Zealand Aotearoa.

The COC pill is available on prescription from a medical practitioner, nurse practitioner (within their scope of practice and competency), a midwife (until 6 weeks after the birth), or nurse prescriber (within their scope of practice and competency). A registered nurse can provide the medication under a standing order (but cannot provide the script). Sample packs are available on practitioner's supply order (PSO). Pharmacists can supply selected COC pills to individuals who meet certain criteria. For partly subsidised COC pills, higher subsidy is available with Special Authority approval for individuals with a low income if at least one fully subsidised option has been trialled and not tolerated. The COC pill can be prescribed for up to six months.

The contraceptive efficacy of the COC pill depends on the user taking the pill correctly and consistently. With perfect use, the COC pill has an estimated rate of pregnancy of less than 0.3% in the first year of use.[9] Typical use of the COC pill has an estimated rate of pregnancy of up to 9% in the first year of use, although studies report different failure rates.[9]

5.2. Recommendations and practice points

Chapter 2 contains further recommendations about using the COC pill after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Contraceptive efficacy	
If used correctly and consistently, the COC pill is very effective for contraception. With typical use, it has an 8% failure rate.	Good practice point for NZ (based on FSRH good practice[9])

[9] Other formulations are also available: see https://nzf.org.nz/nzf_4178 for more information.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Most evidence suggests no association between weight/BMI and effectiveness of COC.[9]	C
Individuals who have had bariatric surgery should be advised that the effectiveness of COC could be reduced.[9]	D
Who can safely use COC?	
Health practitioners should be familiar with the UKMEC for the COC pill.	Good practice point for NZ (based on UKMEC[6])
Individuals should be informed about the health risks associated with use of the COC pill.[9]	Good practice
Individuals for whom the COC pill is unsuitable should be offered alternative contraception.[9]	Good practice
Individuals who smoke should be advised that the risks of using the COC pill usually outweigh the benefits. Individuals who smoke more than 15 cigarettes per day should not use the COC pill.	Good practice point for NZ (based on UKMEC advice[6])
Individuals who have blood pressure systolic 140-159 mmHg or diastolic 90-99 mmHg should be advised that the risks of using the COC pill usually outweigh the benefits. Individuals with blood pressure systolic over 160 mmHg or diastolic 100 mmHg should not use the COC pill.	Good practice point for NZ (based on UKMEC advice[6])
Individuals should be advised that use of the COC pill poses an unacceptable health risk if they have had migraine with aura at any age.	UKMEC advice[6]
Current use of the COC pill is associated with increased risk of VTE; some COC pill formulations are associated with a greater risk of VTE than others, dependent on progestogen type and oestrogen dose.[9]	C
Individuals should be advised that use of the COC pill is associated with an increased risk of VTE, but the absolute risk of VTE for an individual COC pill user remains very small.[9]	C
Current use of the COC pill is associated with a very small increased risk of MI and ischaemic stroke that appears to be greater with higher doses of oestrogen in COC pills. Individuals should be informed that that these events are still extremely uncommon in COC pill users.	Recommendation (based on FSRH evidence grade C[9])
Use of the COC pill by individuals with significant additional risk factors for arterial disease should be strongly cautioned or avoided.[9]	Good practice
Individuals should be advised that current use of the COC pill is associated with a small increased risk of breast cancer which reduces with time after stopping the COC pill.[9]	C
Individuals should be advised that current use of the COC pill for more than 5 years is associated with a small increased risk of cervical cancer; risk reduces over time	C

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
after stopping the COC pill and is no longer increased by about 10 years after stopping.[9]	
The COC pill can be used by medically eligible individuals for contraception until age 50 years.[9]	D
The COC pill can be considered for use by medically eligible individuals until age 50 years as an alternative to HRT for relief of menopausal symptoms and prevention of loss of bone mineral density as well as for contraception.[9]	D
Individuals taking lamotrigine should be advised that the COC pill may interact with lamotrigine; this could result in reduced seizure control or lamotrigine toxicity. The risks of using the COC pill could outweigh the benefits.[9]	D
Advice on using a tailored regime	
Individuals should be given information about both standard and tailored COC pill regimens to broaden contraceptive choice.[9]	Good practice
Health practitioners should advise individuals that using a tailored regime (extended or continuous) reduces the chance of unintended pregnancy and reduces the impact of potential side effects associated with the hormone free interval.	Good practice point for NZ
Individuals should be advised that use of tailored COC pill regimens is outside the manufacturer's licence but is supported by the FSRH (*Note: tailored regimes are also supported by RANZCOG*).[9,63]	Good practice
Individuals should have access to clear information (either written or digital) to support tailored COC pill use. This includes providing advice whether to take none, some or all the inactive pills.	Good practice point for NZ (based on FSRH good practice[9])
Tailored COC pill regimens can reduce the frequency of withdrawal bleeds and can reduce withdrawal symptoms associated with the hormone-free interval; however, unscheduled bleeding is common.[9]	Good practice
For individuals who regularly miss pills, an alternative form of contraception such as LARC may be more reliable form of contraception for them.[9,11]	Good practice
What should be covered in a consultation about the COC pill?	
COC pills containing ≤35 mg EE in combination with levonorgestrel or norethisterone are a reasonable first-line choice to minimise cardiovascular and VTE risk.[9]	Good practice point to reflect NZ supply
Prior to first prescription, a full medical history should be taken, and blood pressure and BMI recorded. If cardiovascular or VTE risk is elevated, other forms of contraception should be discussed.	NCGSG consensus statement
Use of suitable self-completed checklists for medical eligibility appears to be accurate and acceptable to individuals.[9]	C
Assessment of medical eligibility for the COC pill should include medical conditions, lifestyle factors and family medical history.[9]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Drug history should identify any prescribed or non-prescribed drug that could affect the effectiveness of the contraceptive and any prescribed or non-prescribed drug that could itself be affected by the contraceptive.[9]	Good practice
A recent, accurate blood pressure recording should be documented for all individuals prior to first COC pill prescription.[9]	C
Blood pressure should be repeated at first review and reviewed annually after that. If blood pressure exceeds 140 (systolic) or 90 (diastolic), use of the COC pill should be reviewed to ensure low cardiovascular and VTE risk.	Good practice point for NZ (based on FSRH[9])
BMI should be documented for all individuals prior to COC pill prescription.[9]	D
Pelvic examination is not required prior to initiation of the COC pill.[9]	D
Breast examination, cervical screening, testing for thrombophilia, hyperlipidaemia or diabetes mellitus and liver function tests are not routinely required prior to initiation of the COC pill.[9]	C
Individuals should be provided with written information or a link to a trusted online resource to support safe, effective use of the COC pill.[9]	Good practice
Individuals should be advised that routine annual review of their contraception is recommended during use of the COC pill.[9]	Good practice
Medical eligibility, drug history, method adherence and method satisfaction should be reassessed at follow-up. BMI and blood pressure should be recorded.[9]	Good practice
Quick-starting the COC pill	
COC pills containing ethinylestradiol can be started by individuals up to and including Day 5 of a natural menstrual cycle without the need for additional contraceptive protection.[8]	D
COC pills containing ethinylestradiol can be quick-started by medically eligible individuals at any other time (with advice to use additional contraceptive precaution for 7 days) if it is reasonably certain that the individual is not pregnant OR if a high sensitivity urine pregnancy test is negative even if there is a risk of pregnancy from UPSI in the last 21 days.[8]	D
A follow up high sensitivity urine pregnancy test is offered 21 days after the last UPSI.	Recommendation (based on FSRH evidence grade D[8])
The COC and bleeding pattern	
Before starting the COC pill, individuals should be advised about the bleeding patterns expected both initially and in the longer term.[10]	Good practice
For individuals using a COC pill the lowest dose of ethinylestradiol to provide good cycle control should be used; however, the dose of ethinylestradiol can be increased to a maximum of 35 µg to provide good cycle control.[10]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Irregular menstrual bleeding usually improves with use of the COC pill. A COC pill does not need to be changed within the first 3 months of use as bleeding disturbances often settle in this time. If irregular bleeding is persistent (more than three months), health practitioners should consider irregular pill taking, other medication use, malabsorption, uterine or cervical pathology, pregnancy, or chlamydial infection.[10]	Good practice point for NZ
Managing irregular or problematic bleeding	
A clinical history should be taken from individuals using hormonal contraception who have problematic bleeding to identify the possibility of an underlying cause.[10]	C
A pregnancy test is indicated for sexually active individuals using hormonal contraception with problematic bleeding.[10]	Good practice
Individuals using hormonal contraception who have persistent, abnormal vaginal bleeding should be investigated appropriately (i.e., history taking, speculum and bimanual examination, diagnostic cervical smear test; pelvic ultrasound and referral to a gynaecologist).	Good practice point for NZ (based on the National Screening Unit and RANZCOG guidelines[74,75])
A speculum examination should be performed for individuals using hormonal contraception who have problematic bleeding if they have persistent bleeding or a change in bleeding after at least 3 months of use, if medical treatment has failed or if they have not participated in the National Cervical Screening Programme.[10]	Good practice
If, after taking a clinical history, there are no risk factors for STIs, no concurrent symptoms suggestive of underlying causes, they are participating in the National Cervical Screening programme and have a history of normal results, and have had no more than 3 months of problematic bleeding, an examination may not be required.	Good practice point for NZ (based on FSRH good practice[10])
Hormonal contraception users with problematic bleeding who are at risk of STIs should be tested for Chlamydia trachomatis as a minimum. Testing for *Neisseria* gonorrhoea will depend on sexual risk, local prevalence, and availability of dual testing.[10]	Good practice
An endometrial biopsy should be considered in individuals aged ≥45 years or in individuals aged <45 years with risk factors for endometrial cancer (including a BMI of ≥30) who have persistent problematic bleeding after the first three months of use of a method or who present with a change in bleeding pattern.	Good practice point for NZ (based on FSRH good practice[10])
The role of endometrial polyps, fibroids, or ovarian cysts as a cause of problematic bleeding is uncertain. Nevertheless, for all individuals using hormonal contraception who have problematic bleeding, if such a structural abnormality is suspected a transvaginal ultrasound scan and/or hysteroscopy may be indicated.[10]	Good practice
Advice on using the COC pill in specific situations	
Individuals using the COC pill should be advised about reducing periods of immobility during travel.[9]	C

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals trekking to high altitudes (above 4500 m) for periods of more than 1 week may be advised to consider switching to a safer alternative contraceptive method.[9]	D
Individuals should be advised to stop the COC pill and to switch to an alternative contraceptive method at least 4 weeks prior to planned major surgery or expected period of limited mobility.[9]	D
Individuals using the COC pill should be advised that contraceptive effectiveness could be reduced by vomiting or severe diarrhoea that lasts for more the 24 hours.	Good practice point for NZ (based on FSRH good practice[9])
The COC pill and other medications	
Individuals using enzyme-inducing drugs (some antiepileptics, antiretrovirals, and some antibacterials and formulations containing St John's wort) should be informed that the contraceptive effectiveness of the COC pill could be reduced during use of the enzyme-inducer and for 28 days after stopping.	Recommendation (based on FSRH evidence grade D[9])
Individuals using enzyme-inducing drugs (some antiepileptics, antiretrovirals and some antibacterials and formulations containing St John's wort) should be offered a reliable contraceptive method that is unaffected by enzyme-inducers.	Recommendation (based on FSRH evidence grade D[9])
Additional contraceptive precautions are not required when antibiotics that do not induce enzymes are used in conjunction with the COC pill.[9]	D
The COC pill and non-contraceptive benefits	
Use of the COC pill for contraception may also be associated with non-contraceptive health benefits.[9]	Good practice
Use of the COC pill can reduce heavy menstrual bleeding and menstrual pain and improve acne.[9]	B
Use of the COC pill may be beneficial for individuals with premenstrual syndrome symptoms.[9]	C
Use of the COC pill (particularly continuous COC pill regimens) can reduce risk of recurrence of endometriosis after surgical management.[9]	A
The COC pill can be used for management of acne, hirsutism and menstrual irregularities associated with polycystic ovary syndrome.[9]	B
COC pill use is associated with a significant reduction in risk of endometrial and ovarian cancer that increases with duration of COC pill use and persists for many years after stopping using the COC pill.[9]	C
Use of the COC pill is associated with a reduced risk of colorectal cancer.[9]	C
Other considerations	
Health practitioners should encourage the use of condoms (alongside other forms of contraception) to prevent STIs.	NCGSG consensus statement

6. THE PROGESTOGEN-ONLY PILL

6.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines, *Progestogen-only pills*,[12] *Quick-starting contraception*,[8] *Problematic bleeding with hormonal contraception*[10] and *Contraception after pregnancy*,[1] form the basis of New Zealand Aotearoa's guidance. The United Kingdom's Medical Eligibility Criteria for Contraceptive Use (UKMEC)[6] provides robust and current guidance on the indications and contraindications for the use of the POP. Health practitioners should ensure that they are familiar with these documents.

In New Zealand Aotearoa, available POP preparations include levonorgestrel, norethisterone or desogestrel (however, desogestrel is not currently funded). It is available on prescription from a medical practitioner, nurse practitioner (within their scope of practice and competency), nurse prescriber, or a midwife (until 6 weeks after the birth). A registered nurse can provide the medication under a standing order (but cannot provide the script). Pharmacists can supply selected POP to individuals who meet certain criteria. It can be prescribed for up to six months.

The contraceptive efficacy of the POP depends on the user taking the pill correctly and consistently. With perfect use, the POP has an estimated rate of pregnancy of less than 0.3% in the first year of use.[12] Typical use of the POP has an estimated rate of pregnancy of up to 9% in the first year of use, although studies report different failure rates.[12]

6.2. Recommendations and practice points

Chapter 2 contains further recommendations about using the POP after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Contraceptive efficacy	
If used consistently and correctly, POPs are more than 99% effective.[12]	C
With typical use, POP are 92% effective, although studies report different failure rates.	Good practice point for NZ (based on FSRH advice[12])
Individuals should be advised to take the pill at a time of day that will best suit them to promote adherence: to be effective POP must be taken within three hours of the regular dosing time each day (levonorgestrel and norethisterone) or within 12 hours (desogestrel). If adherence to pill-taking regimes is likely to be problematic, other forms of contraception may be more appropriate.	Good practice point for NZ (based on FSRH advice[12])
Desogestrel pills may have potential benefits over traditional POPs because ovulation is inhibited in up to 97% of cycles and they have a 12-hour window for missed pills.[12]	Good practice
Available evidence has not shown an increased risk of pregnancy in POP users with a heavier body weight or a higher BMI. There is insufficient evidence to support a dose of more than one pill per day for individuals who are heavy or overweight.[12]	C

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
While the overall risk of pregnancy is reduced with use of traditional POPs, around 1 in 10 pregnancies that do occur may be ectopic.[12]	B
There is no evidence suggesting a delay in return of fertility following discontinuation of a POP; therefore, if pregnancy is not desired, other contraceptive methods should be used immediately following discontinuation of the POP.[12]	B
Who can safely use the POP?	
Few medical conditions restrict the use of the POP. Health practitioners should be familiar with the UKMEC for the POP.[12]	Good practice
The POP can be used until the age of 55 years when natural loss of fertility can be assumed for most individuals. Alternatively, if they are aged over 50 years and amenorrhoeic they can continue using a POP and have follicle-stimulating hormone (FSH) concentrations tested on two occasions 6 weeks apart. If both FSH measurements are >30 IU/l this is suggestive of ovarian failure and they should continue with a POP or barrier method for one further year.[12]	Good practice
Individuals with current breast cancer should not use the POP.[6]	UKMEC advice
Individuals with current or a history of ischaemic heart disease or stroke or a history of breast cancer who use POP should be advised to switch to another contraceptive method as the risks generally outweigh the benefits of use.[6]	UKMEC advice
The available evidence does not support an association between breast cancer and use of a POP. However, due to the limited available evidence, an increased risk cannot be completely excluded. Any increased risk is likely to be small and to reduce with time after stopping.[12]	C
If an individual vomits within 3 hours of pill taking, another pill should be taken as soon as possible. If the subsequent pill is missed, additional precautions are required until 48 hours after pill taking has been resumed.[12]	C
Managing missed pills	
Individuals should be advised to take a missed pill as soon as remembered. If more than one pill has been missed, only one pill should be taken but the next pill should be taken at the usual time. If a POP is missed, additional contraception is needed for 48 hours after restarting the POP. If UPSI has occurred after the missed pill and within 48 hours of restarting POP, emergency contraception should be offered.	Good practice point for NZ (based on FSRH advice[12])
Quick-starting the POP	
The POP may be quick-started if the individual does not wish to delay starting. When starting a POP, individuals do not need to wait until the first day of a natural menstrual period if they: • are reasonably certain that they are not pregnant • use another form of contraception or avoid UPSI for the first 48 hours of use, and • have a negative pregnancy test after 21 days.	Good practice point for NZ (based on FSRH advice[8])

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
After LNG-EC administration, POP can be quick-started immediately.	Recommendation (based on FSRH evidence grade D[8])
Additional contraceptive precautions (barrier or abstinence) are required until the quick-started contraceptive method becomes effective.[8]	Good practice
Pregnancy cannot be excluded by a high sensitivity urine pregnancy test until ≥21 days after the last UPSI.[8]	Good practice
Individuals should be informed that contraceptive hormones are not thought to cause harm to the fetus, and they should not be advised to terminate pregnancy on the grounds of exposure.[8]	Good practice
If a pregnancy is diagnosed after starting contraception and the individual wishes to continue the pregnancy, they should be advised that the method should usually be stopped.[8]	Good practice
The POP and bleeding pattern	
Before starting hormonal contraception, individuals should be advised about the bleeding patterns expected both initially and in the longer term.	Good practice point for NZ (based on FSRH good practice[10])
Changes in bleeding pattern associated with POP are common and individuals should be informed of such changes.[12]	C
Bleeding is common in the initial months of progestogen-only method use and may settle without treatment. If treatment encourages an individual to continue with the method, it may be considered.[10]	Good practice
There is no evidence that changing the type and dose of POP will improve problematic bleeding, but bleeding patterns may vary with different POP preparations. Changing preparations may help some individuals.[10]	Good practice
The desogestrel (DSG) pill may offer some benefits in the management of dysmenorrhoea.[10]	C
Managing irregular or problematic bleeding	
A clinical history should be taken from individuals using POP who have problematic bleeding to identify the possibility of an underlying cause.[10]	C
A pregnancy test is indicated for sexually active individuals using the POP with problematic bleeding.[10]	Good practice
Individuals using POP who have persistent, abnormal vaginal bleeding should be investigated appropriately (i.e., history taking, speculum and bimanual examination, diagnostic cervical smear test; pelvic ultrasound and referral to a gynaecologist).	Good practice point for NZ (based on the National Screening Unit and RANZCOG guidelines[74,75])
A speculum examination should be performed for individuals using hormonal contraception who have problematic bleeding if they have persistent bleeding or	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
a change in bleeding after at least 3 months of use, if medical treatment has failed or if they have not participated in the National Cervical Screening Programme.[10]	
If, after taking a clinical history, there are no risk factors for STIs, no concurrent symptoms suggestive of underlying causes, they are participating in the National Cervical Screening programme and have a history of normal results, and have had no more than 3 months of problematic bleeding, an examination may not be required.	Good practice point for NZ (based on FSRH good practice[10])
Hormonal contraception users with problematic bleeding who are at risk of STIs should be tested for Chlamydia trachomatis as a minimum. Testing for *Neisseria* gonorrhoea will depend on sexual risk, local prevalence, and availability of dual testing.[10]	Good practice
An endometrial biopsy should be considered in individuals aged ≥45 years or in individuals aged <45 years with risk factors for endometrial cancer (including a BMI of ≥30) who have persistent problematic bleeding after the first three months of use of a method or who present with a change in bleeding pattern.	Good practice point for NZ (based on FSRH good practice[10])
The role of endometrial polyps, fibroids, or ovarian cysts as a cause of problematic bleeding is uncertain. Nevertheless, for all individuals using hormonal contraception who have problematic bleeding, if such a structural abnormality is suspected a transvaginal ultrasound scan and/or hysteroscopy may be indicated.[10]	Good practice
The POP and other side effects	
Studies investigating the effects of POP on libido are lacking and therefore a possible effect cannot be excluded; however, no association has yet been demonstrated.[12]	C
Evidence does not support a causal association between POP use and weight change.[12]	C
The limited available evidence does not support an association between cardiovascular disease and use of a POP.[12]	B
The POP and other medications	
POP users taking enzyme-inducing drugs (some antiepileptics, antiretrovirals and some antibacterials and formulations containing St John's wort) should be advised to switch to the progestogen-only injectable or IUC. For short durations of enzyme-inducing treatment (<2 months) individuals can continue the POP providing they use additional precautions during the treatment and for 28 days afterwards. Individuals wishing to start POP after stopping enzyme-inducing drugs should be advised to use condoms for 28 days after the last dose of the enzyme-inducing drug.	Recommendation (based on FSRH evidence grade C[12])
Other considerations	
Health practitioners should encourage the use of condoms (alongside other forms of contraception) to prevent STIs.	NCGSG consensus statement

7. EMERGENCY CONTRACEPTION

7.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines, *Emergency contraception*[13] and *Contraception after pregnancy*,[1] form the basis of New Zealand Aotearoa's guidance on emergency contraception. The United Kingdom's Medical Eligibility Criteria for Contraceptive Use (UKMEC)[6] provides robust and current guidance on the indications and contraindications for the use of the Cu-IUD. Health practitioners should ensure that they are familiar with these documents. Health practitioners must also be familiar with the requirements of the Contraception, Sterilisation, and Abortion Act 1977.

The efficacy of emergency contraception depends on the method, the time delay between UPSI and using the selected method, and whether ovulation has occurred. Two forms of emergency contraception are available in New Zealand Aotearoa: the Cu-IUD and the emergency contraceptive pill (levonorgestrel 1.5mg, LNG-EC).

The Cu-IUD is a highly effective method of emergency contraception (failure rate of less than 1%). It can be inserted to provide emergency contraception up to five days (120 hours) after the first UPSI in that cycle or within five days of the earliest estimated date of ovulation.[64] It is the only form of emergency contraception that is effective after ovulation has occurred.[13,64] The Cu-IUD can be removed after pregnancy is excluded (i.e., at the first menstrual period) or can be left in place to provide long-term contraception for up to 10 years. [13,64] If ovulation has already occurred, a Cu-IUD should be considered.

LNG-EC works by delaying ovulation: it is not effective if ovulation has occurred and the individual is in the fertile window. It is effective but less so than the Cu-IUD: the pregnancy rate after taking LNG-EC within 72 hours of UPSI is 2.2%;[64] however, the reported rate differs by study and ranges between 0.6-2.6% based on the observed pregnancy rate among participants who took LNG-EC at any time during their menstrual cycle (UPSI may or may not have occurred during the fertile window).[13] The efficacy of LNG-EC is affected by timing of administration, whether ovulation has occurred, the use of certain medications and body weight.[65]

7.2. Cu-IUD as the first-choice emergency contraception

Cu-IUD should be offered as the first-choice emergency contraception for all individuals, unless contraindicated, including adolescents.[13] It prevents fertilisation through the toxic effect of copper which adversely affects the viability and motility of sperm and ova.[13] The copper also stimulates a local inflammatory reaction in the endometrial tissue, preventing implantation if fertilisation were to occur.[13] Due to these effects, the Cu-IUD has a wider treatment window: it can be inserted up to five days after first UPSI in a cycle or up to five days after ovulation.[13] The efficacy of the Cu-IUD is not known to be affected by body weight, BMI or the concurrent use of medications.[13] Although the Cu-IUD is the most effective emergency contraceptive option, it may not be the most acceptable or convenient option for the individual.

7.3. Timing of LNG-EC to prevent pregnancy

Up to 72 hours after UPSI

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) practice statement[64] and FSRH guideline[13] advise that LNG-EC is licensed for use up to 72 hours (3 days) after UPSI but may have some efficacy up to 96 hours (4 days) (unapproved indication). The Pharmaceutical Society practice guideline[66] also notes that pharmacists must inform individuals presenting for emergency contraception that LNG-EC is only licensed for use up to 72 hours after UPSI, that the efficacy is reduced after this time and that a Cu-IUD will be more effective. It recommends individuals presenting for emergency contraception on or after day five (> 96 hours) be referred for a Cu-IUD.

A 2019 Cochrane systematic review[67] on interventions for emergency contraception included 115 randomised controlled trials (RCT) of individuals presenting for emergency contraception following UPSI (n=60,479) and included trials comparing hormonal emergency contraceptive pill (ECP) regimes or doses and hormonal ECPs with Cu-IUD insertion. In each case, the primary outcome measure was the number of pregnancies observed following treatment. A meta-analysis to assess the efficacy of LNG-EC when taken at 24-hour intervals following UPSI found individuals who took LNG-EC within 72 hours of UPSI were significantly less likely to become pregnant (RR 0.51, 95% CI 0.31, 0.84; 4 RCTs, n = 7453) compared to those who took LNG-EC more than 72 hours following UPSI.[67] The authors also reported that evidence of reducing efficacy with increasing time to 72 hours.[67]

Up to 96 hours after UPSI

The FSRH guideline[13] and RANZCOG practice statement[64] advise that LNG-EC may have some efficacy when taken up to 96 hours after UPSI. The guidelines largely cite evidence from a single study investigating the efficacy of LNG-EC up to 120 hours.[68] Using a pooled analysis of four RCTs (rated moderate to high quality), the authors investigated the rates of pregnancy among 6794 participants who received LNG-EC at 24 hour increments up to 120 hours after UPSI. The pregnancy rate varied between 0.7% and 1.6% when LNG-EC was taken between <24 and 96 hours after UPSI.[68] The odds ratio (OR) for pregnancy compared to LNG-EC within 24 hrs, differences were:

- 48 hours (OR: 0.68; 95% CI 0.36, 1.28)
- 72 hours (OR: 1.74; 95% CI 0.94, 3.19)
- 96 hours (OR: 0.87, 95% CI 0.26 to 2.89), or
- 120 hours (OR 4.8, 95% CI 2.39, 9.73).[68]

When taken on the fifth day (>96 hours), the pregnancy rate increased to 5.2%. The OR of pregnancy compared to the first day was 5.81 (95% CI 2.87, 11.76).[68]

7.4. Dose

The FSRH recommends that individuals be advised that LNG-EC may be less effective in preventing pregnancy among individuals who weigh >70kg or have a BMI of >26 kg/m^2 (based on three systematic reviews).[65,69,70] Guidelines recommended that individuals should also be

advised that the effectiveness of the Cu-IUD is not known to be affected by weight or BMI and is the most effective method of emergency contraceptive.[13,64,66] If a Cu-IUD is not acceptable or accessible, a double dose (3mg) of LNG-EC can be used but the effectiveness of LNG-EC (3mg) has not been demonstrated for individuals in this group. The FSRH guideline[13] reports that use of LNG-EC (3mg) is justified by its potential to prevent unintended pregnancy more effectively than the standard 1.5 mg dose and is well tolerated. Pharmacokinetic studies have reported that individuals with a BMI >30kg/m2 were exposed to lower concentrations of LNG with a single 1.5 mg dose than those with a BMI <25kg/m^2.[71] Double dosing with 3mg appears to correct these reductions in serum concentrations.

7.5. Recommendations and practice points

Chapter 2 contains further recommendations about emergency contraception after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Legal requirements	
Emergency contraception providers must be familiar with the requirements of the Contraception, Sterilisation and Abortion Act 1977 and the Abortion Legislation Act 2020.	Good practice point for NZ
Individuals who require emergency contraception after sexual assault should be offered all methods of emergency contraception, including the Cu-IUD.[13]	Good practice
Advice	
Individuals presenting for emergency contraception should be given advice about the effectiveness of the emergency contraception methods, information about ongoing contraception and, where relevant, be offered testing for STIs.[64]	Consensus statement
Contraceptive efficacy – Cu-IUD	
Health practitioners should be familiar with the UKMEC for the Cu-IUD and LNG-EC.	Good practice point for NZ based on UKMEC[6]
Individuals should be informed that the Cu-IUD is the most effect method of emergency contraception and has a failure rate of less than 1%.[13]	C
The Cu-IUD should be offered as the first-choice treatment for all individuals, unless contraindicated, including for adolescents.	Good practice point for NZ (based on FSRH[13])
Individuals should be informed that the effectiveness of the Cu-IUD is not known to be affected by weight or BMI and is the most effective form of emergency contraception.	Good practice point for NZ (based on FSRH[13])
Emergency contraception providers should be aware that a Cu-IUD can be inserted up to 5 days after the first UPSI in a natural menstrual cycle, or up to 5 days after the earliest likely date of ovulation (whichever is later).[13]	Good practice
Emergency contraception providers should offer individuals LNG-EC if a Cu-IUD is selected for emergency contraception but cannot be inserted at first presentation.[13]	Good practice

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Emergency contraception providers should be aware that the contraindications to insertion of a Cu-IUD for emergency contraception are the same as those for routine IUD insertion.[13]	D
If a Cu-IUD is not appropriate or not acceptable, individuals should be advised that LNG-EC should be taken as soon as possible if there has been UPSI within the last 5 days.[13]	Good practice
Contraceptive efficacy – LNG-EC	
Emergency contraception providers should advise individuals that LNG-EC is licensed for use up to 72 hours after UPSI and may be effective up to 96 hours (unapproved indication).[13]	B
Individuals presenting for emergency contraception on or after Day 5 (>96 hours) should be advised that LNG-EC will not be effective, and these individuals should be encouraged to have a Cu-IUD inserted.[13]	B
Individuals should be informed that LNG-EC is ineffective after ovulation has occurred and should be referred to have a Cu-IUD inserted to prevent pregnancy.[13]	B
Individuals should be informed that LNG-EC may be less effective if they weigh >70 kg or have a BMI >26 kg/m^2.[13]	C
In individuals weighing >70 kg or with a BMI >26 kg/m^2, a double dose (3mg) of levonorgestrel may be administered if a Cu-IUD is not the preferred option or is not readily accessible.	Good practice point for NZ (based on FSRH good practice[13])
Emergency contraception providers should advise individuals using enzyme-inducing drugs (some antiepileptics, antiretrovirals and some antibacterials and formulations containing St John's wort) that the effectiveness of LNG-EC could be reduced.	Recommendation for NZ (based on FSRH evidence grade D[13])
Individuals requiring emergency contraception who are using enzyme-inducing drugs (some anti-epileptics, antiretrovirals and some antibacterials and formulations containing St John's wort) should be offered a Cu-IUD if appropriate.	Good practice point for NZ (based on FSRH good practice[13])
Individuals who weigh more than 70kg or have a BMI >26 kg/m^2 should be advised that the Cu-IUD is more effective than oral emergency contraception methods. A 3 mg dose of LNG-EC can be considered but individuals should be informed that the effectiveness of this regimen is unknown.	Good practice point for NZ (based on FSRH good practice[13])
LNG-IUS cannot be used for emergency contraception.	NCGSG consensus statement
Access	
Individuals wishing to prevent pregnancy should be offered emergency contraception after UPSI that has taken place on any day of a natural menstrual cycle, even when ovulation could reasonably be excluded on the basis of their natural menstrual cycle.[13]	D

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Individuals who do not wish to conceive should be offered emergency contraception after UPSI if their regular contraception has been compromised or has been used incorrectly.[13]	Good practice
Individuals must have access to emergency contraception within 48 hours of first presentation.	Good practice point for NZ (based on FSRH good practice[13])
LNG-EC is available on a practitioner supply order (PSO) and should be offered to individuals at the place they first present for emergency contraception. Emergency contraception providers should stock LNG-EC for this purpose.	NCGSG consensus statement
Health practitioners should offer advice on factors affecting efficacy when using barrier methods. This includes providing advice on the availability of emergency contraception and when it can be used. LNG-EC is available on a PSO and LNG-EC should be offered for emergency contraception for users of barrier methods.	NCGSG consensus statement
Follow-up pregnancy testing	
A follow up high sensitivity urine pregnancy test should be offered 28 days after the last UPSI.	Good practice point for NZ
Meeting ongoing contraception needs	
Health practitioners should utilise opportunities such as presentation for emergency contraception, post-exposure prophylaxis following sexual exposure and STI testing to discuss pregnancy and STI risk reduction strategies.[15]	Good practice
Individuals requesting emergency contraception should be given information regarding all methods of ongoing contraception and how to access these.[13]	Good practice
Emergency contraception providers should advise individuals that Cu-IUD provides effective ongoing contraception.[13]	Good practice
Emergency contraception providers should advise individuals that LNG-EC does not provide ongoing contraception.[13]	Good practice
Emergency contraception providers should advise individuals that after LNG-EC there is a pregnancy risk if there is further UPSI and ovulation occurs later in the same cycle.[13]	B
After taking LNG-EC, individuals should be advised to start suitable contraception immediately. Individuals should be made aware that they must use condoms reliably or abstain from sex until contraception becomes effective.	Recommendation (based on FSRH evidence grade D[13])
Health practitioners should encourage the use of condoms (alongside other forms of contraception) to prevent STIs.	NCGSG consensus statement

8. PERMANENT CONTRACEPTION

8.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines, *Male and Female Sterilisation*[14] and *Contraception after pregnancy*,[1] form the basis for New Zealand Aotearoa's guidance on the use of permanent contraception. Recommendations about surgical procedure (including Essure and hysteroscopic tubal occlusion) and post-procedural advice are not part of New Zealand Aotearoa's guidance on permanent contraception. Health practitioners should ensure that they are familiar with these documents. Health practitioners must also be familiar with the requirements of the Contraception, Sterilisation, and Abortion Act 1977.

Permanent contraception is available for individuals who wish to undergo either tubal ligation or vasectomy for contraceptive reasons. There is no difference in efficacy between typical use and correct and consistent use as these methods do not require any user action or compliance following surgery.

Tubal ligation requires a general anaesthetic. Different methods (removal of the fallopian tube or clipping of the fallopian tubes) have very low rates of failure, generally 1 in 200.[14] Methods used in New Zealand Aotearoa include transection of the fallopian tubes (electro cautery or cutting and tying), Filshie clip tubal occlusion, or salpingectomy. Tubal ligation is available as a publicly funded procedure. Female permanent contraception may be performed laparoscopically, as a mini-laparotomy or through open abdominal surgery such as at the time of a caesarean section. Wait lists for publicly funded tubal ligations vary from District Health Board (DHB) to DHB, but there are often long waits for the procedure. This can result in delays to timely tubal ligation.

Access to a vasectomy can be performed in primary or secondary care but are not required to be publicly funded. Most are performed in private practice. The Ministry of Social Development offers financial assistance to individuals who want a vasectomy. A vasectomy has a 1 in 300 chance of failure, but if post-procedure tests are clear, this drops to 1 in 2000.[14] For comparison, long acting reversible contraception (LARC) also has failure rates of less than 1%.[35,36,38] Vasectomy is reversible but the pregnancy rate post-vasectomy varies considerably based on interval since the vasectomy was performed[15] and is not publicly funded.

8.2. Recommendations and practice points

Chapter 2 contains further recommendations about permanent contraception after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Legal requirements	
All health practitioners providing advice on permanent contraception must be familiar with the requirements of the Contraception, Sterilisation, and Abortion Act 1977.	Good practice point for NZ
Contraceptive efficacy	

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
If post-procedure tests are clear, the failure rate for vasectomy is 1 in 2000. Tubal ligation has a failure rate of 1 in 200.	Good practice point for NZ (based on FSRH[14])
LARC is a suitable alternative option to tubal ligation[35,36,38]: it is as efficacious, may provide additional health benefits such as control of menstrual irregularities, does not risk later regret, avoids the need for a general anaesthetic and does not have surgical risks. However, individuals should not feel pressured into choosing LARC over female permanent contraception.	Good practice point for NZ (based on FSRH[1])
Access	
Clear and timely referral pathways for permanent contraception should be in place and equitable for all population groups.	Good practice point for NZ
Informed decision making and consent	
Counselling and advice on permanent contraception procedures should be provided to individuals within the context of a service providing a full range of information about and access to other long-term reversible methods of contraception. This should include information on the advantages, disadvantages, and relative failure rates of each method.[14]	C
Both vasectomy and tubal ligation should be discussed with individuals requesting permanent contraception. Individuals should be counselled about the risks of the procedure, the risk of regret and the risk of ectopic pregnancy.	Good practice point for NZ
Individuals should be informed that vasectomy carries a lower failure rate, in terms of post-procedural pregnancies, and that there is less risk associated with the procedure than female permanent contraception carried out by laparoscopy or laparotomy.[14]	C
Because of the risk of later regret, extra care is needed when counselling individuals under aged 30 years or those without children who request vasectomy or tubal ligation.	Good practice point for NZ
Legal advice should be sought if there is any doubt as to whether an individual has the mental capacity to consent to a procedure that will permanently remove their fertility.[14]	C
Written consent should be obtained from individuals wishing to undergo a vasectomy or laparoscopic tubal occlusion. A consent form and clinical record should be used to document an individual's agreement to the procedure, discussion that took place, requests made by the individual, and any information provided.[14]	Good Practice
All verbal advice must be supported by accurate, impartial, printed, or recorded information (in translation, where appropriate and possible), which the individual requesting permanent contraception may take away/download and review before the procedure.[14]	C

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
A history should be taken from all individuals requesting vasectomy or tubal occlusion. Scrotal or bimanual pelvic examination should be carried out either at initial consultation or before commencing the procedure.[14]	C
Individuals should be informed of the method of access and tubal occlusion being recommended in their case, the reasons for preferring it over other methods, and the method to be used if the intended procedure cannot be performed.[14]	Good practice
Individuals should be informed that if tubal occlusion fails, the resulting pregnancy may be ectopic.[14]	B
Timing of tubal occlusion	
Tubal occlusion can be performed at any time during the menstrual cycle, providing that the individual has a negative pregnancy test and is not at risk of luteal-phase pregnancy [no UPSI in the past 3 weeks]. If this is not the case, the procedure should be deferred, and contraception used until at least 3 weeks from the last instance of UPSI.[14]	B
A pregnancy test must be performed before tubal ligation to exclude the possibility of a pre-existing pregnancy. However, a negative test result does not exclude the possibility of a luteal phase pregnancy.[14]	B
If tubal occlusion is performed at the same time as a caesarean section, counselling and agreement should be given at least 2 weeks in advance of the procedure and after discussion of other methods of contraception.	Recommendation (based on FSRH evidence grade C[14])
Tubal occlusion should be performed at an appropriate interval after pregnancy wherever possible. Should tubal occlusion be requested either post-partum or post-abortion, individuals should be made aware of the increased rate of regret and the possible increased failure rate.[14]	B
When a pregnancy occurs while an individual is on a waiting list for permanent contraception, they should be offered further counselling about future contraceptive choices due to the change in their circumstances.[14]	Good practice
Contraception after tubal ligation	
If a Cu-IUD or LNG-IUS is in situ prior to tubal ligation, this should be retained and removed at least 1 week after laparoscopic tubal occlusion.[14]	C
Individuals using the COC pill, the progestogen only pill (POP) or non-hormonal contraception should be advised to continue their contraceptive method for at least 7 days after laparoscopic tubal ligation.[14]	C
If laparoscopic tubal ligation is scheduled for the hormone-free interval or Day 1 of a cycle of the COC pill, the hormone-free interval should be omitted or the COC pill should be restarted, and the COC pill should be continued for at least 7 days after the procedure is performed.[14]	C

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
If the progestogen-only injectable or implant is being used, laparoscopic tubal occlusion can be carried out at any time during the period of licensed use without the need for additional contraception.[14]	C
The progestogen-only implant can be removed at the time of the procedure or any time following laparoscopic tubal occlusion.[14]	C
There is no evidence to support stopping the COC pill use prior to tubal ligation or to support the routine use of thromboprophylaxis.[14]	C
Contraception after vasectomy	
Individuals who have undergone vasectomy should be informed of the need to use additional contraception until sterility is confirmed.[14]	Good practice
Post-vasectomy semen analysis (PVSA) should be carried out to identify early failure.[14]	B
Additional contraception should be used until azoospermia is confirmed or special clearance given.[14]	B
Evidence suggests that 12 weeks post-vasectomy is the optimal timing to schedule the first PVSA. Earlier or later testing is acceptable taking into account that earlier testing increases the probability of additional tests and later testing prolongs the need for additional contraception.[14]	B
A routine second PVSA is not required if azoospermia is found in the first sample.[14]	B
In a small proportion of individuals, non-motile sperm will persist following vasectomy. In such cases special clearance can be given to cease using additional contraception when less than 100 000 non-motile sperm/ml are observed in a fresh semen sample post-vasectomy.[14]	B
If more than 100 000 non-motile sperm/ml are observed in a fresh sample 7 months after vasectomy, clinical judgement and/or local protocols may be used to determine whether or not the procedure should be deemed a failure.[14]	Good practice
If motile sperm are observed in a fresh sample 7 months post-procedure, the vasectomy should be considered a failure.[14]	C
Other considerations	
Vasectomy reversal involves complex surgery that can result in high postoperative patency rates but may not result in pregnancy or a return to fertility.[14]	B
Health practitioners should encourage the use of condoms (alongside other forms of contraception) to prevent STIs.	NCGSG consensus statement

9. BARRIER METHODS

9.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines, *Barrier methods for contraception and STI prevention*[15] and *Contraception after pregnancy*[1] form the basis for New Zealand Aotearoa's guidance on the use of barrier methods. This guidance should be read in conjunction with the New Zealand's *STI management guidelines for use in primary care*.[16] Health practitioners should ensure that they are familiar with these documents.

Barrier methods available in New Zealand Aotearoa include external/male condoms and internal/female condoms. Condoms are an effective preventative measure against the transmission of STIs. When used correctly and consistently, the rate of transmission of STIs is greatly reduced.[15] Health practitioners should also be aware of guidance about the management of STIs.[16]

External/male condoms are publicly funded in New Zealand Aotearoa (but not all brands attract subsidy). All subsidised condoms are pre-lubricated. No separate lubricant products for use with condoms are subsidised. All subsidised condoms are also available on a Practitioner Supply Order. Condoms without latex are available but are not subsidised. Condoms without latex should only be necessary in a small number of individuals who have a latex allergy (approximately 4% of the general population).[72]

Internal/female condoms are less readily available than external/male condoms. Internal condoms can be bought from a range of retailers, however, there is no subsidy. Internal condoms are less effective in preventing pregnancy and individuals are more likely to use them incorrectly.

Diaphragms and cervical caps must be correctly fitted in order to adequately prevent pregnancy. Spermicide is not available in New Zealand Aotearoa, but it may be purchased online. Use of spermicide alone is not sufficient to prevent pregnancy. It is not recommended for use with condoms as there is no evidence that spermicides provide additional protection from pregnancy. Some spermicides have been associated with increased genital lesions and use may increase the risk of transmission of STIs and HIV.

9.2. Recommendations and practice points

Chapter 2 contains further recommendations about barrier methods after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Contraceptive efficacy of barrier methods	
External condoms are 98% effective and internal condoms are 95% effective at preventing pregnancy but only when used consistently and correctly.[15]	B
Individuals should be advised that with typical use, external/male condoms are 82% effective at preventing pregnancy and that internal/female condoms are 79% effective at preventing pregnancy.	Good practice point for NZ (based on data in FSRH guideline[15])

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Pregnancy rates are similar for latex and non-latex condoms.[15]	B
Health practitioners should provide advice on factors affecting efficacy when using barrier methods. This includes providing advice on the availability of emergency contraception and when it can be used. LNG-EC is available on a PSO and should be offered for emergency contraception for users of barrier methods.	Good practice point for NZ
Who can use barrier methods?	
Individuals with a history of toxic shock syndrome may use external/male or internal/female condoms.[15]	C
Individuals with a sensitivity to latex proteins should avoid the use of latex barrier contraceptives and may use non-latex external/male or internal/female condoms or deproteinised latex external/male condoms.[15]	C
Correct use	
Health practitioners should promote the consistent and correct use condoms (external/male and internal/female). Advice on condoms should be supported by a demonstration of correct use.	Good practice point for NZ (based on FSRH good practice[15])
Users should be informed that adding lubricant to the inside of condoms or to the outside of the penis before using condoms is associated with an increased risk of slippage.[15]	B
The use of condoms lubricated with nonoxynol-9 is not recommended.[15]	B
When using lubricant with latex condoms, a water or silicone-based preparation is recommended.[15]	B
Access to condoms	
Condoms should be widely offered in primary care to ensure equitable access.	Practice point
Ill-fitting condoms can be associated with breakage Individuals should be offered different shapes and sizes of condoms so the appropriate size can be determined. Annotating the prescription with "as specified or directed by patient preference" allows the selected size to be dispensed.	Good practice point for NZ
Prevention of STIs	
Health practitioners should encourage the use of condoms (alongside other forms of contraception) to prevent STIs.	Good practice point for NZ
Sexually active individuals should be advised that the consistent and correct use of condoms (including with sex toys) provides protection against HIV and other STIs.[15]	Varies by STI
Health practitioners should advise when STI testing may be required.[15]	Good practice
Health practitioners should utilise opportunities such as presentation for emergency contraception, post-exposure prophylaxis following sexual exposure and STI testing to discuss pregnancy and STI risk reduction strategies.[15]	Good practice

10. FERTILITY AWARENESS METHODS

10.1. Basis for New Zealand Aotearoa's guidance

The FSRH guidelines, *Fertility Awareness Methods*[17] and *Contraception after pregnancy*[1] form the basis for New Zealand Aotearoa's guidance on the use of fertility awareness methods. Health practitioners should ensure that they are familiar with these documents.

Fertility awareness describes methods used to determine fertile and infertile periods in a person's menstrual cycle. UPSI is avoided at fertile times to prevent pregnancy. Medications or medical devices are not used. Data on efficacy (with correct and consistent use and typical use) is presented in *Table 3*. For most fertility awareness methods, pregnancy rates with typical use are high. This highlights the importance of consulting with a trained fertility educator if using fertility awareness methods as a form of contraception.

Table 3: Pregnancies per 100 individuals over the first year

		Pregnancies per 100 women over the first year of use	
		Correct and consistent use	Typical use
Calendar-based methods	Standard days method	5	12
Symptoms-based methods	Two-day method	4	14
	Ovulation method	3	23
	Sympto-thermal method	<1	2
LAM	Where the following conditions are met: <6 months post-partum, amenorrhoeic, fully breastfeeding on demand[52.] Failure rates increase as soon as a person no longer meets one or more of these criteria: there is an immediate risk of pregnancy.	0.9 (in six months)	2 (in six months)

Source: World Health Organization[73]

10.2. Recommendations and practice points

Chapter 2 contains further recommendations about fertility awareness methods after pregnancy.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Contraceptive efficacy of specific methods	
Individuals should be advised that with typical use, many fertility awareness methods are much less effective at preventing pregnancy compared to long acting reversible contraception (LARC). If UPSI happens in the fertile window, the chance of pregnancy is high. Depending on the method used, with typical use, pregnancy rates range between 2 and 23%.	Good practice point for NZ based on WHO data[73]
Over 1 year, fewer than 1 in 100 individuals would be expected to fall pregnant with correct and consistent use of the sympto-thermal method [monitoring of	B

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
cervical secretions and basal body temperature (BBT) used with a calendar calculation].[17]	
When sexual intercourse only occurs in the identified post-ovulatory phase, the failure rate of BBT as a single indicator is estimated to be approximately 6.6%.[17]	B
Individuals should be informed that combining fertility indicators is considered more effective than using single fertility indicators alone.[17]	C
Sexual intercourse on days when cervical secretions are present increases the likelihood of pregnancy. Individuals wishing to avoid pregnancy should not have UPSI, or they should use an additional contraceptive method until three consecutive dry days are noted.[17]	B
The effectiveness of changes to the cervix as a sole indicator for contraceptive purposes is unknown and therefore is not recommended.[17]	C
If an individual is <6 months post-partum, amenorrhoeic and fully breastfeeding on demand [Footnote 10], the LAM is effective at preventing pregnancy. The risk of pregnancy increases if the frequency of breastfeeding decreases, from 14 days before the return of menstruation or when more than 6 months post-partum.	Recommendation for NZ (based on FSRH evidence grade B[17])
Individuals using LAM should be advised that the risk of pregnancy is increased if the frequency of breastfeeding decreases (eg, through stopping night feeds, starting or increasing supplementary feeding, use of dummies/pacifiers, expressing milk), when menstruation returns or when more than 6 months after childbirth.[1]	C
Individuals may be informed that the effect of expressing breast milk on the efficacy of LAM is not known but it may potentially be reduced.[17]	Practice point
Who can use fertility awareness methods?	
Individuals who do not wish to get pregnant should be advised to use other forms of contraception unless they are using the sympto-thermal method and have received advice from a trained health practitioner.	Good practice point for NZ
In individuals for whom pregnancy poses a significant health risk, the reliance on fertility indicators for the prevention of pregnancy is not recommended. Contraceptive options should be discussed with the individual and specialists involved in the management of the condition.[17]	C
Individuals using drugs that are known to have a teratogenic effect should not rely solely on fertility indicators for prevention of pregnancy.[17]	C
Individuals stopping hormonal contraception should not rely on fertility indicators until regular menstrual cycles have been established and they have had a minimum of three cycles after stopping.[17]	C

[10] Defined by the WHO[58] as at least 10 to 12 times a day in the first few weeks post-partum and thereafter 8 to 10 times a day, including at least once at night in the first months. Daytime feedings should be no more than 4 hours apart, and night-time feedings no more than 6 hours apart.

RECOMMENDATIONS + GOOD PRACTICE POINTS	EVIDENCE LEVEL
Provision of advice	
Individuals wishing to use fertility indicators for contraceptive purposes should receive support and instruction on the method from a trained health practitioner.[17]	C
Individuals choosing fertility awareness should be offered LNG-EC and provided with information about screening for STIs.	Good practice point for NZ
Other considerations	
Health practitioners should encourage the use of condoms (alongside other forms of contraception) to prevent STIs.	NCGSG consensus statement
Barrier methods can be considered as an alternative to sexual abstinence during the fertile window of the menstrual cycle in individuals, provided couples have been properly instructed in their use and accept a potentially higher failure rate if using barrier contraception around the time of ovulation (peak fertile time).[17]	B
Withdrawal is not advised as a method of contraception on its own or as an alternative to condom use or abstinence in individuals using fertility indicators to avoid pregnancy.[17]	C

10.3. Other suggested resources

Advice on sympto-thermal methods of fertility awareness (the most reliable method) is available from Natural Fertility New Zealand (NFNZ), www.naturalfertility.co.nz. Fertility awareness counselling is not a subsidised service in New Zealand. New Zealand Family Planning also has resources on fertility awareness.

ANNEX A: A NOTE ABOUT THE STRENGTH OF EVIDENCE

Recommendations contained in the FSRH guidelines are graded based on:

Classification of evidence levels		Grades of recommendation	
1++	High-quality systematic reviews or meta-analysis of RCTs or RCTs with a very low risk of bias.	A	At least one meta-analysis, systematic review or randomised controlled trial (RCT) rated as 1++, and directly applicable to the target population, or A systematic review of RCTs or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population and demonstrating overall consistency of results.
1+	Well-conducted systematic reviews or meta-analysis of RCTs or RCTs with a low risk of bias.		
1-	Systematic reviews or meta-analysis of RCTs or RCTs with a high risk of bias.		
2++	High-quality systematic reviews of case-control or cohort studies or high-quality case-control or cohort studies with a very low risk of confounding, bias or chance and a high probability that the relationship is causal.	B	A body of evidence including studies rated as 2++ directly applicable to the target population and demonstrating overall consistency of results; or Extrapolated evidence from studies rated as 1++ or 1+.
2+	Well-conducted case-control or cohort studies with a low risk of confounding, bias or chance and a moderate probability that the relationship is causal.	C	A body of evidence including studies rated as 2+ directly applicable to the target population and demonstrating overall consistency of results; or Extrapolated evidence from studies rated as 2++.
2-	Case-control or cohort studies with a high risk of confounding, bias or chance and a significant risk that the relationship is not causal.	D	Evidence level 3 or 4; or Extrapolated evidence from studies rated as 2+.
3	Non-analytical studies (eg case report, case series).		
4	Expert opinions.	✓	Good Practice Points based on the clinical experience of the guideline development group.

NB: this table is replicated from FSRH guidance on the COC pill.

REFERENCES

1. Faculty of Sexual and Reproductive Healthcare. 2017. *Contraception after pregnancy*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/contraception-after-pregnancy-guideline-january-2017/
2. Faculty of Sexual and Reproductive Healthcare. 2015 (amended 2019). *Intrauterine Contraception*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/ceuguidanceintrauterinecontraception/
3. Faculty of Sexual and Reproductive Healthcare. 2014 (amended 2019). *Progestogen-only Implant*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/cec-ceu-guidance-implants-feb-2014/
4. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2017. *Long acting reversible contraception*. RANZCOG, Wellington. https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical%20-%20Gynaecology/Long-acting-reversible-contraception-(C-Gyn-34)-Review-July-2017.pdf?ext=.pdf
5. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2017. *Intrauterine contraception*. RANZCOG, Wellington. https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical%20-%20Gynaecology/Intrauterine-contraception-(C-Gyn-3)-Review-July-2017_3.pdf?ext=.pdf
6. Faculty of Sexual and Reproductive Healthcare. 2016 (Amended 2019). *UK Medical Eligibility Criteria for contraceptive use*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/ukmec-2016/
7. Faculty of Sexual + Reproductive Healthcare. 2014 (amended 2020). *Progestogen-only Injectable Contraception*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/cec-ceu-guidance-injectables-dec-2014/
8. Faculty of Sexual and Reproductive Healthcare. 2017. *Quick starting contraception*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/fsrh-clinical-guidance-quick-starting-contraception-april-2017/
9. Faculty of Sexual and Reproductive Healthcare. 2019 (amended 2019). *Combined hormonal contraception*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/combined-hormonal-contraception/
10. Faculty of Sexual and Reproductive Healthcare. 2015. *Problematic Bleeding with Hormonal Contraception*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/ceuguidanceproblematicbleedinghormonalcontraception/
11. Faculty of Sexual and Reproductive Healthcare. 2020. *Recommended Actions after incorrect Use of Combined Hormonal Contraception (e.g. late or missed pills, ring or patch)*. FSRH, England. https://www.fsrh.org/documents/fsrh-ceu-guidance-recommended-actions-after-incorrect-use-of/fsrh-guidance-recommended-actions-after-incorrect-use-of-chc-march-2020.pdf
12. Faculty of Sexual and Reproductive Healthcare. 2015 (amended 2019). *Progestogen-only pills*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/cec-ceu-guidance-pop-mar-2015/
13. Faculty of Sexual and Reproductive Healthcare. 2017 (amended 2017). *Emergency Contraception*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/ceu-clinical-guidance-emergency-contraception-march-2017/
14. Faculty of Sexual + Reproductive Healthcare. 2014. *Male and Female Sterilisation*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/cec-ceu-guidance-sterilisation-cpd-sep-2014/

15. Faculty of Sexual and Reproductive Health. 2012 (amended 2015). *Barrier methods for contraception and STI prevention.* FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/ceuguidancebarriermethodscontraceptionsdi/
16. New Zealand Sexual Health Society. 2017. *STI Management Guidelines for use in primary care*. https://www.nzshs.org/guidelines.
17. Faculty of Sexual + Reproductive Healthcare. 2015. *Fertility Awareness Methods*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/ceuguidancefertilityawarenessmethods/
18. Faculty of Sexual and Reproductive Health. 2017 (amended 2019). *Switching or starting methods of contraception*. https://www.fsrh.org/standards-and-guidance/fsrh-guidelines-and-statements/switching-or-starting-methods-of-contraception/
19. Faculty of Sexual and Reproductive Healthcare. 2010 (amended 2019). *Contraceptive Choices for Young People*. FSRH, England. https://www.fsrh.org/standards-and-guidance/documents/cec-ceu-guidance-young-people-mar-2010/
20. Faculty of Sexual and Reproductive Healthcare. 2017. *Contraception for Women Aged over 40 Years*. FSRH, England. https://www.fsrh.org/documents/fsrh-guidance-contraception-for-women-aged-over-40-years-2017/fsrh-guideline-contraception-aged-over-40-sep-2019.pdf
21. Ministry of Health. 2020. *Whakamaua Māori Health Action Plan 2020–2025*. MOH: Wellington
22. Green JA. Tipene J. Davis K. 2016. *Mana Tangata Whenua: National Guidelines for Sexual and Reproductive Health Promotion with Māori – First Edition*. Hamilton: Te Whāriki Takapou. https://tewhariki.org.nz/assets/National_Guidelines_for_SRH_Promotion_with_Maori.pdf
23. Veukiso-Ulugia A. *Best practice framework for the delivery of sexual health promotion services to Pacific communities in New Zealand*. Hamilton: Te Whāriki Takapou.
24. Oliphant J. Veale J. Macdonald J. Carroll R. Johnson R. Harte M. Stephenson C. Bullock J. 2018. *Guidelines for gender affirming healthcare for gender diverse and transgender children, young people and adults in Aotearoa, New Zealand*. Transgender Health Research Lab, University of Waikato. https://researchcommons.waikato.ac.nz/handle/10289/12160
25. Ministry of Health. 2016. *Family violence assessment and intervention guideline: child abuse and intimate partner violence*. MOH: Wellington.
26. Laporte M, Marangoni M, Surita F, Juliato CT, Miadaira M, Bahamondes L. Postplacental placement of intrauterine devices: A randomized clinical trial. Contraception. 2020;101(3):153–8. https://doi.org/10.1016/j.contraception.2019.12.006
27. Hinz E, Murthy A, Wang B, Ryan N, Ades V. A prospective cohort study comparing expulsion after post-placental insertion: the levonorgestrel versus the copper intrauterine device. Contracept Elsevier Inc. 2019;100:101–5. https://doi.org/10.1016/j.contraception.2019.04.011
28. Braniff K, Gomez E, Muller R. A randomised clinical trial to assess satisfaction with the levonorgestrel- releasing intrauterine system inserted at caesarean section compared to postpartum placement. Aust N Z J Obstet Gynaecol. 2015 Jun;55(3):279–83. https://doi.org/10.1111/ajo.12335
29. Jatlaoui TC, Whiteman MK, Jeng G, Tepper NK, Berry-Bibee E, Jamieson DJ, et al. Intrauterine device expulsion after postpartum placement: A systematic review and meta-Analysis. Obstet Gynecol. 2018;132(4):895–905. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6549490/
30. New Zealand College of Midwives. Consensus Statement: Long Acting Reversible Contraception. 2018. https://www.midwife.org.nz/wp-content/uploads/2018/09/LARC-Final-2018.pdf
31. Phillips SJ, Tepper NK, Kapp N, Nanda K, Temmerman M, Curtis KM. Progestogen-only contraceptive use among breastfeeding women: a systematic review. Contraception. 2016;94(3):226–52. https://doi.org/10.1016/j.contraception.2015.09.010
32. Abdelhakim AM, Sunoqrot M, Amin AH, Nabil H, Raslan AN, Samy A. The effect of early vs. delayed postpartum insertion of the LNG-IUS on breastfeeding continuation: a systematic review and

meta-analysis of randomised controlled trials. Eur J Contracept Reprod Health Care. 2019;24(5):327–36. https://doi.org/10.1080/13625187.2019.1665175

33. Shaaban OM, Abbas AM, Mahmoud HR, Yones EM, Mahmoud A, Zakherah MS. Levonorgestrel emergency contraceptive pills use during breastfeeding; effect on infants' health and development. J Matern Fetal Neonatal Med. 2018;1-5. https://doi.org/10.1080/14767058.2018.1439470
34. Bahamondes L, Fernandes A, Monteiro I, Bahamondes MV. 2020. Long-acting reversible contraceptive (LARCs) methods. *Best Pract Res Clin Obstet Gynaecol* http://dx.doi.org/10.1016/j.bpobgyn.2019.12.002
35. Medsafe, New Zealand Medicines and Medical Devices Safety Authority. Data Sheet for Mirena. 1998 [cited 2020 May 12]. Available at https://www.medsafe.govt.nz/profs/Datasheet/m/Mirenaius.pdf
36. Medsafe, New Zealand Medicines and Medical Devices Safety Authority. Data Sheet for Jaydess. 2014. Available at https://www.medsafe.govt.nz/profs/datasheet/j/jaydessIVD.pdf
37. New Zealand Family Planning. Pre IUD/IUS, Operational Procedure Document. 2018.
38. Medsafe, New Zealand Medicines and Medical Devices Safety Authority. New Zealand Data Sheet for Jadelle. 2015. https://www.medsafe.govt.nz/profs/datasheet/j/Jadelleimplant.pdf
39. World Health Organization. 2015. *Medical Eligibility Criteria for Contraceptive Use, fifth edition*. World Health Organization; Geneve. https://www.who.int/reproductivehealth/publications/family_planning/MEC-5/en/
40. Patseadou M, Michala L. 2017. Usage of the levonorgestrel-releasing intrauterine system (LNG-IUS) in adolescence: what is the evidence so far? Arch Gynecol Obstet. 2017 Mar;295(3):529–41. https://doi.org/10.1007/s00404-016-4261-0
41. Jatlaoui TC, Riley HEM, Curtis KM. The safety of intrauterine devices among young women: a systematic review. Contraception. 1;95(1):17–39. https://doi.org/10.1016/j.contraception.2016.10.006
42. Gemzell-Danielsson K, Apter D, Hauck B, Schmelter T, Rybowski S, Rosen K, et al. 2015. The Effect of Age, Parity and Body Mass Index on the Efficacy, Safety, Placement and User Satisfaction Associated With Two Low-Dose Levonorgestrel Intrauterine Contraceptive Systems: Subgroup Analyses of Data From a Phase III Trial. PLoS ONE Electron Resour. 2015;10(9):e0135309. https://doi.org/10.1371/journal.pone.0135309
43. Samy A, et al. Evaluating different pain lowering medications during intrauterine evice insertion: a systematic review and network meta-analysis. Fertil Steril. 2019;111(3). https://doi.org/10.1016/j.fertnstert.2018.11.012
44. Samy A, Ali AS, Latif D, Darweesh FF, Ghamry NK, Metwally AA. Benefits of self-administered vaginal dinoprostone 12 hours prior to levonorgestrel-releasing intrauterine device insertion in nulliparous adolescents and young women: A Randomized Controlled Trial. J Pediatr Adolesc Gynecol [Internet]. 2020. https://dx.doi.org/10.1016/j.jpag.2020.02.010
45. Abbas AM, Abdellah MS, Khalaf M, Bahoul M, Abdellah NH, Ali MK, et al. Effect of cervical lidocaine-prilocaine cream on pain perception during copper T380A intrauterine device insertion among parous women: A randomized double-blind controlled trial. Contracept Elsevier Inc. 2017;95:251–6. https://doi.org/10.1016/j.contraception.2016.10.011
46. Anthoulakis C, Iordanidou E, Vatopoulou A. Pain Perception during Levonorgestrel-releasing Intrauterine Device Insertion in Nulliparous Women: A Systematic Review. J Pediatr Adolesc Gynecol. 2018 Dec;31(6):549-556.e4. https://doi.org/10.1016/j.jpag.2018.05.008
47. Akers AY, Steinway C, Sonalkar S, Perriera LK, Schreiber C, Harding J, et al. Reducing pain during intrauterine device insertion: A randomized controlled trial in adolescents and young women. Obstet Gynecol. 2017;130(4):795–802. https://doi.org/10.1097/AOG.0000000000002242

48. Fouda UM. Diclofenac plus lidocaine gel for pain relief during intrauterine device insertion. A randomized, double-blinded, placebo-controlled study. Contraception; 2016. https://doi.org/10.1016/j.contraception.2016.02.001
49. Bahamondes L, Fernandes A, Bahamondes MV, Juliato CT, Ali M, Monteiro I. Pregnancy outcomes associated with extended use of the 52-mg 20 mug/day levonorgestrel-releasing intrauterine system beyond 60 months: A chart review of 776 women in Brazil. Contraception. 2018;97(3):205–9. https://doi.org/10.1016/j.contraception.2017.10.007
50. Batur P, Sikka S, McNamara M. Contraception update: Extended use of long acting methods, hormonal contraception risks, and over the counter access. J Womens Health. 2018;27(12):1437–40. https://doi.org/10.1089/jwh.2018.7391
51. McNicholas C, Swor E, Wan L, Peipert JF. Prolonged use of the etonogestrel implant and levonorgestrel intrauterine device: 2 years beyond Food and Drug Administration-approved duration. Am J Obstet Gynecol. 2017;216(6):586.e1-586.e6. https://doi.org/10.1016/j.ajog.2017.01.036
52. McNicholas C, Maddipati R, Zhao Q, Swor E, Peipert JF. Use of the etonogestrel implant and levonorgestrel intrauterine device beyond the U.S. Food and Drug Administration-approved duration. Obstet Gynecol. 2015 Mar;125(3):599–604. https://doi.org/10.1097/AOG.0000000000000690
53. Rowe et al. Safety and efficacy in parous women of a 52-mg levonorgestrel-medicated intrauterine device: a 7-year randomized comparative study with the TCu380A. Contraception. 2016;93(6):498–506. https://doi.org/10.1016/j.contraception.2016.02.024
54. Ti AJ, Roe AH, Whitehouse KC, Smith RA, Gaffield ME, Curtis KM. Effectiveness and safety of extending intrauterine device duration: a systematic review. Am J Obstet Gynecol. 2020;15:15. https://doi.org/10.1016/j.ajog.2020.01.014
55. Wu JP, Pickle S. Extended use of the intrauterine device: a literature review and recommendations for clinical practice. Contraception. 2014;89(6):495–503. https://doi.org/10.1016/j.contraception.2014.02.011
56. Thaxton L, Lavelanet A. Systematic review of efficacy with extending contraceptive implant duration. Int J Gynaecol Obstet. 2019 Jan;144(1):2–8. https://doi.org/10.1002/ijgo.12696
57. Pfizer New Zealand. 2017. *Data sheet. Depo-Provera*. https://www.medsafe.govt.nz/profs/Datasheet/d/Depoproverainj.pdf
58. Paulen ME, Curtis KM. 2009. When can a woman have repeat progestogen-only injectables–depot medroxyprogesterone acetate or norethisterone enantate? In *Contraception*; 80:391–408. https://doi.org/10.1016/j.contraception.2009.03.023
59. Jain J, Dutton C, Nicosia A, Wajszczuk C, Bode FR, Mishell DRJ. 2004. Pharmacokinetics, ovulation suppression and return to ovulation following a lower dose subcutaneous formulation of Depo-Provera. *Contraception*: 70:11–8. https://doi.org/10.1016/j.contraception.2004.01.011
60. ANZCOR guidelines https://www.nzrc.org.nz/guidelines/
61. Faculty of Sexual & Reproductive Healthcare. Service Standards for Resuscitation in Sexual and Reproductive Healthcare Services. 2016. https://www.fsrh.org/standards-and-guidance/documents/service-standards-for-resuscitation-in-sexual-and-reproductive/
62. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2018. *Statement: Depot Medroxyprogesterone Acetate*. https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women's%20Health/Statement%20and%20guidelines/Clinical%20-%20Gynaecology/Depot-Medroxyprogesterone-Acetate-(C-Gyn-4)Review-July-2015-clean.pdf?ext=.pdf
63. Royal Australia and New Zealand College of Obstetricians and Gynaecologists. 2019. *Combined hormonal contraceptives.* https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-

MEDIA/Women's%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Combined-hormonal-contraceptives-(C-Gyn-28)-Review-March-2016.pdf?ext=.pdf

64. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2019. *Statement: Emergency Contraception*. https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical%20-%20Gynaecology/Emergency-contraception-(C-Gyn-11).pdf?ext=.pdf
65. Festin MPR, Seuc A, Peregoudov A, Kiarie J, Temmerman M. 2015. Effect of BMI and body weight on the effectiveness of LNG as emergency contraception: Analysis of four who HRP studies. *International Journal of Gynecology and Obstetrics*. 131:E27. https://doi.org/10.1016/j.contraception.2016.08.001
66. Pharmaceutical Society of New Zealand. 2017. *Practice Guidelines: Pharmacist supply of the emergency contraceptive pill (ECP)*. https://www.psnz.org.nz/Folder?Action=View%20File&Folder_id=119&File=PSNZ%20ECP%20Guidelines%202017.pdf
67. Shen J, Che Y, Showell E, Chen K, Cheng L. 2019. Interventions for emergency contraception. *Cochrane Database of Systematic Reviews*: 1:CD001324. https://doi.org/10.1002/14651858.CD001324.pub6
68. Piaggio G, Kapp N, von Hertzen, H. 2011. Effect on pregnancy rates of the delay in the administration of levonorgestrel for emergency contraception: a combined analysis of four WHO trials. 84(1):35–9. https://doi.org/10.1016/j.contraception.2010.11.010
69. Glasier A, Cameron ST, Blithe D, Scherrer B, Mathe H, Levy D, et al. 2011. Can we identify women at risk of pregnancy despite using emergency contraception? Data from randomized trials of ulipristal acetate and levonorgestrel. *Contraception*. 84(4):363–7. doi:10.1016/j.contraception.2011.02.009
70. Jatlaoui TC, Curtis KM. Safety and effectiveness data for emergency contraceptive pills among women with obesity: a systematic review. *Contraception*. 94(6):605–11. https://doi.org/10.1016/j.contraception.2016.05.002
71. Edelman AB, Cherala G, Blue SW, Erikson DW, Jensen JT. Impact of obesity on the pharmacokinetics of levonorgestrel based emergency contraception: single and double dosing. *Contraception*. 94(1):52–7. https://doi.org/10.1016/j.contraception.2016.03.006
72. New Zealand Formulary: www.nzformulary.org
73. World Health Organization. 2018. *Family planning, a global handbook for providers*. WHO: Geneve. https://www.who.int/reproductivehealth/publications/f-global-handbook/en/
74. Ministry of Health. 2020. *Clinical practice guidelines for cervical screening in New Zealand*. Wellington: MOH.
75. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2018. *Investigation of intermenstrual and post-coital bleeding*.