Long-acting reversible contraception: the effective and appropriate use of long-acting reversible contraception

NICE guideline

Second draft for consultation, May 2005

If you wish to comment on this version of the guideline, please be aware that all the supporting information and evidence is contained in the full version.

Contents

Introduction

It is estimated that about 30% of pregnancies are unplanned. The effectiveness of barrier method and oral contraceptive pills is dependent on their correct and consistent use. By contrast, long-acting reversible contraceptive (LARC) methods have effectiveness that does not depend on daily concordance. Currently there is very low uptake of LARC, at around 8% of contraceptive usage, compared with 25% for the oral contraceptive pill and 23% for the barrier method among women aged 16 to 49 in 2003/4 in the UK.

Expert clinical opinion is that LARC methods may have a wider role in contraception and their increased uptake could help to reduce unintended pregnancy. The current limited use of LARC suggests that health professionals need better guidance and training so that they can help women make an informed choice. Enabling women to make an informed choice about LARC and addressing women preferences is an important objective of this guideline.

LARC is defined in this guideline as contraceptive methods that require administration less than once per cycle or month. Included in the category of LARC are:

- copper intrauterine devices
- progestogen only intrauterine systems
- progestogen only injectable contraceptives
- progestogen only subdermal implants.

The guideline offers the best-practice advice for all women of reproductive age who may wish to regulate their fertility through the use of LARC methods and covers specific issues for the use of these methods in women during the menarche and before the menopause. The guideline also identifies specific issues that may be relevant to particular groups, including women with HIV, learning disabilities, or physical disabilities, or who are younger than 16.

Patient-centred care

This guideline offers the best-practice advice on the provision of guidance and care for women who are considering or using LARC.

Treatment and care should take into account women's individual needs and preferences. Women who are considering using or who use LARC should have the opportunity to make informed decisions about their care and treatment. If the woman does not have the capacity to make decisions, healthcare professionals should follow the Department of Health guidelines, *Reference guide to consent for examination or treatment* (2001) (available from www.dh.gov.uk).

Good communication between healthcare professionals and women is essential. It should be supported by the provision of evidence-based information offered in a form that is tailored to the needs of the individual woman. The treatment, care and information provided should be culturally appropriate and in a form that is accessible to people who have additional needs, such as people with physical, cognitive or sensory disabilities, and people who do not speak or read English.

If appropriate, and if the woman wishes, carers and relatives should have the opportunity to be involved in decisions about the women's care and treatment.

Carers and relatives should, if appropriate, also be provided with the information and support they need.

Key priorities for implementation

The following recommendations have been identified as priorities for implementation.

Contraceptive provision in the UK

- Women requiring contraception should be provided with information and offered a choice of all methods, including long-acting reversible contraception (LARC) methods.

Counselling and provision of information

- Women considering LARC methods should receive both verbal and written information that will enable them to choose and use the method effectively. This information should take into consideration their individual needs and should include:
  - contraceptive efficacy
  - risks and possible side effects
  - advantages and disadvantages
  - non-contraceptive benefits
  - the procedure for initiation and removal/discontinuation
  - duration of use
  - when to seek help while using the method.

Training of health professionals in contraceptive care

- All healthcare professionals advising women about contraceptive choices should be competent to:
  - assist women to consider and compare the risks and benefits of all methods relevant to their individual needs
  - manage common side effects.

- All healthcare professionals providing contraceptive care should ensure that they have an agreed mechanism in place for referring women for LARC if they do not provide LARC within their own practice/service.

- All healthcare professionals providing intrauterine or subdermal contraceptives should receive training to develop and maintain the relevant skills to provide these methods.

The following guidance is evidence based. Appendix A shows the grading scheme used for the recommendations: A, B, C, D or good practice point – D(GPP). A summary of the evidence on which the guidance is based is provided in the full guideline (see Section 5).

1 Guidance

1.1 Contraception and principles of care

1.1.1 Normal fertility

1.1.1.1 Health professionals should ensure that women and men understand that unprotected sexual intercourse risks pregnancy especially when it occurs in the days around ovulation. **[C]**

1.1.2 Contraceptive provision

1.1.2.1 Family planning is a human right. Women and men should have access to all types of licensed contraception available on the NHS and be free to choose the method that suits them best. **[D(GPP)]**

1.1.2.2 Women requiring contraception should be provided with information and offered a choice of all methods, including long-acting reversible contraception (LARC) methods. **[D(GPP)]**

1.1.3 Counselling and provision of information

1.1.3.1 Women and men should be given accurate and detailed information, tailored to their needs, about all methods of contraception, including LARC. **[D(GPP)]**

1.1.3.2 Women considering LARC methods should receive both verbal and written information that will enable them to choose and use the method effectively. This information should take into consideration their individual needs and should include:

- contraceptive efficacy
- risks and possible side effects

- advantages and disadvantages
- non-contraceptive benefits
- the procedure for initiation and removal/discontinuation
- duration of use
- when to seek help while using the method. **[D(GPP)]**

1.1.3.3 Counselling about contraception should be sensitive to cultural differences and religious beliefs. **[D(GPP)]**

1.1.3.4 Health professionals should be able to provide information that is in a format appropriate for women with special needs **[D(GPP)]**

1.1.3.5 For women whose first language is not English, written information about contraceptive methods should be available in their preferred language. **[D(GPP)]**

1.1.3.6 Health professionals should have access to interpreters for women who are not English speaking and/or advocates for women with sensory impairments or learning difficulties. **[D(GPP)]**

1.1.4 Contraceptive prescribing

1.1.4.1 A detailed medical history, including relevant family history, menstrual, contraceptive and sexual history, should be taken as part of the routine assessment of medical eligibility for individual contraceptive methods. **[D(GPP)]**

1.1.4.2 All health professionals helping women to make contraceptive choices should be familiar with nationally agreed guidance* on medical eligibility and recommendations for contraceptive use. **[D(GPP)]**

(* This refers to the WHOMEC)

1.1.5 Acceptability

1.1.5.1 Women should be provided with the method of contraception which is most acceptable to them provided it is not contraindicated for reasons of safety. **[D(GPP)]**

1.1.6 Contraception and sexually transmitted infection

1.1.6.1 All health professionals providing contraceptive advice should promote safer sex. **[D(GPP)]**

1.1.6.2 All health professionals providing contraceptive advice should promote screening for STI when appropriate. **[D(GPP)]**

1.1.6.3 All health professionals should be able to provide information about local services for STI screening, investigation and treatment. **[D(GPP)]**

1.1.6.4 Women using LARC should be encouraged to also use condoms with a new partner. **[D(GPP)]**

1.1.7 User autonomy and consent

1.1.7.1 Women (couples) should have freedom of choice in contraceptive methods. **[D(GPP)]**

1.1.8 The law relating to contraception for special groups

1.1.8.1 People with learning and/or physical disabilities should be supported in making their own decisions about contraception through referral to GPs or specialist clinics. **[D(GPP)]**

1.1.8.2 Contraception should be seen in terms of the needs of the individual rather than in terms of relieving the anxieties of carers and relatives. **[D(GPP)]**

1.1.8.3 Where a person with a learning disability is unable to understand and take responsibility for decisions about contraception, carers and other involved parties should meet to address issues around

contraceptive need and to establish a care plan for future support of the individual. **[D(GPP)]**

1.1.8.4 Health professionals should be aware of the law relating to the provision of contraception for young people and for people with learning disabilities. **[D(GPP)]**

1.1.9 Training of health professionals in contraceptive care

1.1.9.1 All health professionals advising women about contraceptive choices should be competent to:

- assist women to consider and compare the risks and benefits of all methods relevant to their individual needs
- manage common side effects **[D(GPP)]**

1.1.9.2 All health professionals providing contraceptive care should ensure that they have an agreed mechanism in place for referring women for LARC if they do not provide LARC within their own practice/service. **[D(GPP)]**

1.1.9.3 All health professionals providing intrauterine or subdermal contraceptives should receive training to develop and maintain the relevant skills to provide these methods. **[D(GPP)]**

1.1.10 Cost-effectiveness of LARC methods versus other reversible contraceptive methods

1.1.10.1 LARC methods should be available in the NHS, since they are cost effective compared with other reversible contraceptive methods commonly used.

1.2 Copper intrauterine devices (IUDs)

1.2.1 Introduction

1.2.1.1 Women should be advised that there is evidence that all copper IUDs probably act by both impairing gamete viability and inhibiting implantation. **[C]**

1.2.1.2 Women who are aged 40 and older at the time of copper IUD insertion can retain the device until they no longer require contraception. It is important that this is discussed with women at fitting as it is outside the product license. **[D(GPP)]**

1.2.2 Effectiveness

1.2.2.1 Health professionals should be aware that the TCu380A is the copper IUD of choice because of its effectiveness and licensed duration of action of 8 years. **[B]**

1.2.2.2 Women should be informed that the pregnancy rate associated with the use of IUDs with 375 mm^2 copper or above is less than 2 in 100 women over a 5-year period. **[C]**

1.2.3 Expulsion

1.2.3.1 Women should be advised that an IUD may be expelled but that this occurs in fewer than 1 in 20 women over a 3-year period. **[C]**

1.2.3.2 Women should be instructed how to check for the presence of the IUD threads and advised to do so regularly with the aim of recognising expulsion. **[D(GPP)]**

1.2.4 Discontinuation and reasons for discontinuation

1.2.4.1 Health professionals and women should be made aware that up to 50% of women will stop using the IUD within 5 years. The most common reason for discontinuation is unacceptable vaginal bleeding. **[C]**

1.2.5 Adverse effects

1.2.5.1 Health professionals and women should be made aware of the risk of heavier bleeding and/or dysmenorrhoea with IUD use. **[C]**

1.2.5.2 Heavier bleeding with IUD use can be treated with non-steroidal anti-inflammatory drugs and tranexamic acid. **[B]**

1.2.5.3 Women who find heavy bleeding in association with a copper IUD unacceptable may consider changing to a LNG-IUS (Levonorgestrel intrauterine system). **[D(GPP)]**

1.2.5.4 Women with established iron-deficiency anaemia should not usually use a copper IUD. **[D(GPP)]**

1.2.6 Common concerns and symptoms

1.2.6.1 Women should be informed that there is no evidence that the use of an IUD affects weight. **[C]**

1.2.6.2 Women should be advised that changes in mood and libido were similar whether using IUDs or LNG-IUS, and the changes are small. **[C]**

1.2.7 Risks

1.2.7.1 Women should be reassured that the overall risk of ectopic pregnancy with copper IUD use is reduced compared with using no contraception. However, women who become pregnant with an IUD in place should have intrauterine and ectopic pregnancy excluded. **[D(GPP)]**

1.2.7.2 Women should be advised that in the event of IUD failure the risk of ectopic pregnancy is less than 0.2%. **[C]**

1.2.7.3 The presence of actinomyces-like organisms on a cervical smear in a woman with a current copper IUD requires an assessment to exclude pelvic infection. Routine removal is not indicated in women without signs of pelvic infection. **[D(GPP)]**

1.2.7.4 Women should be informed that the chance of developing pelvic inflammatory disease following a copper IUD insertion is very low in women at low risk of sexually transmitted infection, at less than 1% over 1 year. **[C]**

1.2.7.5 All women should be offered screening for STIs before IUD insertion and women at risk of STIs should be strongly encouraged to accept the offer. **[D(GPP)]**

1.2.7.6 Where screening is not possible, or where screening has not been completed, use of prophylactic antibiotics is recommended in women with increased risk of STIs. **[D(GPP)]**

1.2.7.7 Women should be reassured that the risk of uterine perforation at the time of IUD insertion is very low (less than 1 in 100). **[C]**

1.2.7.8 Women should be advised on symptoms of uterine perforation, which would warrant an early review. **[D(GPP)]**

1.2.7.9 Women should be informed that the risk of perforation is related to the skill of the healthcare professional inserting the device. **[D(GPP)]**

1.2.7.10 Women who become pregnant with the IUD in situ should be advised to consult early to exclude ectopic pregnancy. **[D(GPP)]**

1.2.7.11 If the pregnancy is before 12 weeks and the IUD can be easily removed, it should be removed regardless of the woman's intentions to continue or terminate the pregnancy. **[D(GPP)]**

1.2.8 Return to fertility

1.2.8.1 Women should be informed that there is no evidence for any delay in return of fertility following removal or expulsion of the copper IUD. **[C]**

1.2.9 Details of method use

1.2.9.1 Health professionals fitting a copper IUD should have reasonably excluded relevant genital tract infection (cervical or pelvic) (chlamydia, gonorrhoea and pelvic inflammatory disease) by assessing sexual history, clinical examination and undertaking laboratory tests. **[D(GPP)]**

1.2.9.2 Women with identified risks associated with uterine or systemic infection should have investigation, appropriate prophylaxis or treatment instigated prior to insertion of a copper IUD. **[D(GPP)]**

1.2.9.3 Women should be advised of failure rates, benefits, risks and side effects of the copper IUD. **[D(GPP)]**

1.2.9.4 Women should be informed that insertion of an IUD may cause pain and discomfort for a few hours and light bleeding for a few days following insertion and should be advised about appropriate pain relief. **[D(GPP)]**

1.2.9.5 Women should be informed that the effect of the position of an IUD within the uterine cavity, in relation to contraceptive efficacy, is not known. **[D(GPP)]**

1.2.9.6 Copper IUDs can be inserted at any time during a menstrual cycle. **[D(GPP)]**

1.2.9.7 Copper IUDs can be inserted immediately or at any time following first and second trimester termination of pregnancy. **[D(GPP)]**

1.2.9.8 Copper IUDs can be inserted from 4 weeks post partum irrespective of the mode of delivery if it is reasonably certain that the woman is not pregnant. **[D(GPP)]**

1.2.10 Training of health professionals

1.2.10.1 IUDs should only be fitted by trained personnel with continuing experience of fitting at least one copper IUD or one LNG-IUS a month. **[D(GPP)]**

1.2.11 Specific groups

1.2.11.1 IUDs may be inserted in adolescents. However, STI risk and Fraser competence should be considered. **[D(GPP)]**

1.2.11.2 Women should be informed that nulliparity at any age is not a contraindication to IUD insertion. **[D(GPP)]**

1.2.11.3 Women should be informed that women of all ages can use copper IUDs. **[D(GPP)]**

1.2.11.4 Women should be informed that copper IUDs can safely be used by women who are breastfeeding. **[C]**

1.2.12 Medical conditions and contraindications

1.2.12.1 Women should be informed that diabetes poses no restriction to use of copper IUDs. **[D(GPP)]**

1.2.12.2 Emergency drugs including anti-epileptic medication should be available at the time of fitting a copper IUD in a woman with epilepsy because there may be an increased risk of a seizure at the time of cervical dilation. **[D(GPP)]**

1.2.12.3 The IUD is a safe and effective method of contraception for women who are HIV positive or have AIDS. Safer sex using condoms should also be encouraged. **[D(GPP)]**

1.2.13 Follow-up

1.2.13.1 A follow-up visit should be carried out after the first menses, or 3 to 6 weeks after insertion to exclude infection, perforation or expulsion. Thereafter, a woman should be advised to return at any

time to discuss problems, if she wants to change her method, or when it is time to have the IUD removed. **[D(GPP)]**

1.3 Progestogen-only intrauterine system (POIUS)

1.3.1 Introduction

1.3.1.1 Women should be advised that LNG-IUS as a contraceptive may act predominantly to prevent implantation and may not always prevent fertilisation. **[D(GPP)]**

1.3.1.2 LNG-IUS is licensed 5 years. **[C]**

1.3.1.3 Women who are aged 45 and older at the time of LNG-IUS insertion and who are amenorrhoeic can retain the device until they no longer require contraception. It is important that this is discussed with women at the time of fitting as it is outside the product licence. **[D(GPP)]**

1.3.2 Effectiveness

1.3.2.1 Women should be informed that the pregnancy rate associated with the use of LNG-IUS is less than 1 in 100 women over a 5-year period. **[C]**

1.3.3 Expulsion

1.3.3.1 Women should be advised that a LNG-IUS may be expelled but this occurs in fewer than 1 in 10 women over a 5-year period. **[C]**

1.3.3.2 Women should be instructed how to check for the presence of the LNG-IUS threads, and advised to do this regularly with the aim of recognising expulsion. **[D(GPP)]**

1.3.4 Discontinuation and reasons for discontinuation

1.3.4.1 Health professionals and women should be made aware that up to 60% of women will stop using the IUS within 5 years. The most

common reasons for discontinuation are unacceptable vaginal bleeding and pain. **[C]** The less common reasons for discontinuation are:

- hormone-related (non-bleeding)
- pelvic inflammatory disease **[C]**

1.3.5 Adverse effects

1.3.5.1 Women may be advised that oligoamenorrhoea or amenorrhoea is highly likely to occur by the end of the first year after LNG-IUS insertion. However, persistent bleeding and spotting are common for the first 6 months. **[D(GPP)]**

1.3.6 Common concerns and symptoms

1.3.6.1 Women should be informed that there is no evidence that the LNG-IUS causes weight gain. However, some women discontinue the method citing weight gain as the reason, which may have occurred during the time of use as an unrelated event. **[C]**

1.3.6.2 Users of the LNG-IUS should be reassured that there is no increase above background prevalence in loss of libido or depression. **[C]**

1.3.6.3 Women should be informed that they may be at a theoretically increased risk for developing acne due to absorption of the progestogen, but that women do not discontinue the LNG-IUS for this reason frequently. **[C]**

1.3.6.4 Women should be informed that all progestogen only methods, including the LNG-IUS, may be used by women who have migraine with or without aura. However, if the aura becomes more severe or frequent, the headaches should be investigated and alternative methods of contraception considered. **[D(GPP)]**

1.3.7 Risks

1.3.7.1 Women with a history of venous thromboembolism (VTE) may use LNG-IUS. **[D(GPP)]**

1.3.7.2 Women with a current VTE are advised not to use LNG-IUS **[D(GPP)]**

1.3.7.3 Women with a history of previous ectopic pregnancy are at increased risk of future ectopic pregnancies. Women who become pregnant with a LNG-IUS in place should have intrauterine and ectopic pregnancy excluded. **[D(GPP)]**

1.3.7.4 Women should be advised that in the event of a LNG-IUS failure the risk of ectopic pregnancy is less than 0.1%. **[C]**

1.3.7.5 The presence of actinomyces-like organisms on a cervical smear in a woman with a current LNG-IUS requires an assessment to exclude pelvic infection. Routine removal is not indicated in women without signs of pelvic infection. **[D(GPP)]**

1.3.7.6 Women should be informed that the chance of developing PID following LNG-IUS insertion is very low in women at low risk of sexually transmitted infections, at less than 1% over 1 year. **[C]**

1.3.7.7 All women should be offered screening for STIs before LNG-IUS insertion and women at risk of STIs should be strongly encouraged to accept the offer. **[D(GPP)]**

1.3.7.8 Where screening is not possible, or where screening has not been completed, use of prophylactic antibiotics is recommended in women with increased risk of STIs. **[D(GPP)]**

1.3.7.9 Women should be reassured that the risk of uterine perforation at the time of LNG-IUS insertion is very low at approximately 1 in 1000 over 5 years. **[C]**

1.3.7.10 Women should be advised on symptoms of uterine perforation, which would warrant an early review. **[D(GPP)]**

1.3.7.11 Women should be informed that the risk of perforation is related to the skill of the health professional inserting the device.**[D(GPP)]**

1.3.7.12 Women who become pregnant with the LNG-IUS in situ should be advised to consult early to exclude ectopic pregnancy. **[D(GPP)]**

1.3.7.13 If the pregnancy is before 12 weeks and the LNG-IUS can be easily removed, it should be removed regardless of the woman's intentions to continue or terminate the pregnancy. **[D(GPP)]**

1.3.8 Return to fertility

1.3.8.1 Women should be informed that there is no evidence for any delay in return of fertility following removal or expulsion of the LNG-IUS. **[C]**

1.3.9 Details of method use

1.3.9.1 Healthcare professionals fitting a LNG-IUS should have reasonably excluded relevant genital tract (cervical or pelvic) infection (chlamydia, gonorrhoea and PID) by assessing sexual history, clinical examination and if indicated, by appropriate laboratory tests. **[D(GPP)]**

1.3.9.2 Women with identified risks associated with uterine or systemic infection should have an investigation, appropriate prophylaxis or treatment instigated prior to insertion of the LNG-IUS. **[D(GPP)]**

1.3.9.3 Women should be advised of failure rates, benefits, risks and side effects of the LNG-IUS. **[D(GPP)]**

1.3.9.4 Women should be informed that the insertion of a LNG-IUS may cause pain and discomfort for a few hours and light bleeding for a few days following insertion and should be advised about appropriate pain relief. **[D(GPP)]**

1.3.9.5 Women should be informed that effect of the position of a LNG-IUS within the uterine cavity in relation to contraceptive efficacy is not known. **[D(GPP)]**

1.3.9.6 A LNG-IUS can be inserted at any time during a menstrual cycle if it is reasonably certain the woman is not pregnant. **[D(GPP)]**

1.3.9.7 A LNG-IUS can be inserted immediately or at any time following first and second trimester termination of pregnancy. **[D(GPP)]**

1.3.9.8 A LNG-IUS can be inserted from 4 weeks post partum irrespective of the mode of delivery if it is reasonably certain the woman is not pregnant. Use before 6 weeks is outside the product license. **[D(GPP)]**

1.3.10 Training of health professionals

1.3.10.1 IUDs should only be fitted by trained personnel with continuing experience of fitting at least one copper IUD or one LNG-IUS a month. **[D(GPP)]**

1.3.11 Specific groups

1.3.11.1 LNG-IUS may be inserted in adolescents. However, STI risk and Fraser competence should be considered. **[D(GPP)]**

1.3.11.2 Women should be informed that nulliparity at any age is not a contraindication to LNG-IUS insertion. **[D(GPP)]**

1.3.11.3 Women should be informed that those of all ages can use LNG-IUS. **[D(GPP)]**

1.3.11.4 Women should be informed that LNG-IUS can be safely used by breast feeding mothers. **[D(GPP)]**

1.3.12 Medical conditions and contraindications

1.3.12.1 Women should be informed that diabetes poses no restriction to use of LNG-IUS. **[D(GPP)]**

1.3.12.2 Emergency drugs including anti-epileptic medication should be available at the time of fitting a LNG-IUS in a woman with epilepsy because there may be an increased risk of a seizure at the time of cervical dilation. **[D(GPP)]**

1.3.12.3 The LNG-IUS is a safe and effective method of contraception for women who are HIV positive or have AIDS. Safer sex using condoms should also be encouraged. **[D(GPP)]**

1.3.13 Drug interactions

1.3.13.1 Women and health professionals should be made aware that there is no evidence of reduced effectiveness of LNG-IUS when taking any other medication. **[D(GPP)]**

1.3.14 Follow-up

1.3.14.1 A follow-up visit should be carried out after the first menses, or 3 to 6 weeks after insertion, to exclude infection, perforation or expulsion. Thereafter, a woman should be advised to return at any time to discuss problems, if she wants to change her method, or when it is time to have the LNG-IUS removed. **[D(GPP)]**

1.4 Progestogen-only injectable contraceptives (POICs)

1.4.1 Introduction

1.4.1.1 Women should be advised that progestogen-only contraceptive injectables work primarily by preventing ovulation. **[C]**

1.4.1.2 Depot medroxyprogesterone acetate (DMPA) should be repeated every 12 weeks and norethisterone enanthate (NET-EN) every 8 weeks. **[C]**

1.4.2 Effectiveness

1.4.2.1 Women should be advised that injectable contraceptives, when given at the appropriate intervals, have very low pregnancy rates, no higher than 0.4 in 100 at 2 years. Pregnancy rates with DMPA are lower than those with NET-EN. **[C]**

1.4.3 Discontinuation and reasons for discontinuation

1.4.3.1 Health professionals should know that as many as 50% of women using DMPA may discontinue by 1 year. **[C]**

1.4.3.2 Women should be informed that an altered bleeding pattern is a common reason for the discontinuation of use of DMPA. **[C]**

1.4.4 Adverse effects

1.4.4.1 Women should be informed that amenorrhoea is a common side effect of injectable contraceptives:

- it is more likely with DMPA than NET-EN
- it is more likely as time goes by
- it is not harmful. **[C]**

1.4.4.2 Health professionals should be advised that non-hormonal treatment with mefenamic acid or hormonal treatment with ethinylestradiol may be helpful in managing bleeding problems associated with DMPA use. **[D(GPP)]**

1.4.5 Common concerns and symptoms

1.4.5.1 Women should be advised that DMPA use may be associated with an increase of 2 to 3 kg in weight over 1 year. **[C]**

1.4.5.2 Women should be advised that the use of DMPA is not associated with depression. **[C]**

1.4.5.3 Women should be advised that the use of DMPA is not associated with acne. **[C]**

1.4.5.4 Women should be informed that all progestogen-only methods, may be used by women who have migraine with or without aura. Women should be advised that the use of DMPA is not associated with headaches. **[C]**

1.4.6 Risks

1.4.6.1 Health professionals should know that DMPA, and probably NET-EN, are medically safe for women to use if there is a contraindication to oestrogen. **[D(GPP)]**

1.4.6.2 All women should be advised that the use of DMPA is associated with a small loss of bone mineral density, which may be recovered when the method is discontinued. **[B]**

1.4.6.3 There is no evidence that the use of DMPA increases the risk of fracture. **[B]**

1.4.6.4 All women who wish to continue DMPA beyond 2 years should have their individual clinical situation reviewed and be supported in their choice. Their continued use of the method should be reviewed at regular intervals. **[D(GPP)]**

1.4.6.5 Care should be taken in recommending DMPA to adolescents but DMPA may be given if other options are not suitable or acceptable. Their individual clinical situation should be reviewed at regular intervals. **[D(GPP)]**

1.4.6.6 If pregnancy occurs during the use of DMPA there is no evidence of harm to the fetus. **[D(GPP)]**

1.4.7 Return to fertility

1.4.7.1 Women should be informed that there could be a delay of up to 1 year in the return of fertility after discontinuation of injectable contraceptives. **[C]**

1.4.7.2 Women stopping injectable contraceptives but not wishing to conceive should be advised to use a different method of contraception immediately. **[D(GPP)]**

1.4.8 Details of method use

1.4.8.1 The gluteal, lateral thigh and deltoid are all acceptable sites for injectable contraceptives. **[D(GPP)]**

1.4.8.2 Women should be advised of failure rates, benefits, risks and side effects of injectable contraceptives. **[D(GPP)]**

1.4.8.3 Injectable contraceptives may be started up to and including the fifth day of the menstrual cycle. No additional contraceptive protection is needed. Injectables contraceptives may be given at any other time in the cycle if it is reasonably certain that the woman is not pregnant; additional contraception should be used for the first 7 days after injection. **[D(GPP)]**

1.4.8.4 Repeat injections of DMPA should be given every 12 weeks and for NET-EN every 8 weeks. **[C]**

1.4.8.5 Women attending up to 2 weeks late may be given DMPA or NET-EN injection without the need for additional contraceptives if it is reasonably sure that they are not pregnant. **[D(GPP)]**

1.4.8.6 DMPA and NET-EN may be given immediately following abortion in any trimester (spontaneous or induced). **[D(GPP)]**

1.4.8.7 DMPA and NET-EN may be initiated at any time post partum if it is reasonably certain the woman is not pregnant.**[D(GPP)]**

1.4.9 Specific groups

1.4.9.1 Care should be taken in recommending DMPA to women aged over 40 because of the possible effect on bone mineral density but in general the benefits outweigh the risks. **[D(GPP)]**

1.4.9.2 Women with a body mass index over 30 can safely use DMPA and NET-EN. **[D(GPP)]**

1.4.9.3 Breastfeeding women may be advised that they can use injectable contraceptives immediately after childbirth if other methods are unacceptable. **[D(GPP)]**

1.4.10 Medical conditions and contraindications

1.4.10.1 Women should be informed that progestogen-only injectable contraceptives are not contraindicated for women with diabetes. **[D(GPP)]**

1.4.10.2 The use of DMPA may be associated with a reduction in the frequency of seizures in women with epilepsy requiring contraception. **[D(GPP)]**

1.4.10.3 There is no evidence to suggest a causal relationship between the use of DMPA and an increased risk of STIs or HIV acquisition. Women at increased risk of STIs, including HIV/AIDS, may use DMPA and NET-EN. POICs do not protect against STI/HIV and if there is a risk, the correct and consistent use of condoms in addition to the injectable contraceptives is recommended. **[D(GPP)]**

1.4.11 Drug interactions

1.4.11.1 It is not considered necessary to avoid the use of injectable contraceptives in women taking liver enzyme-inducing medication or to reduce the injection interval. **[D(GPP)]**

1.4.12 Follow-up

1.4.12.1 A repeat follow-up visit is required every 12 weeks for DMPA users and 8 weeks for NET-EN users. **[D(GPP)]**

1.5 Progestogen only subdermal implants (POSDIs)

1.5.1 Introduction

1.5.1.1 Women should be advised that implants work by altering the endometrium and cervical mucus and in a proportion by preventing ovulation. **[C]**

1.5.1.2 Women should be informed that Implanon lasts for 3 years. **[C]**

1.5.2 Effectiveness

1.5.2.1 Women should be advised that subdermal implants, including Implanon, have very low pregnancy rates (less than 0.1 in 100 over 3 years). **[C]**

1.5.3 Discontinuation and reasons for discontinuation

1.5.3.1 Women should be aware that up to 33% of women will discontinue Implanon within 3 years because of irregular bleeding. Fewer than one in ten women will discontinue for other reasons including hormonal effects. **[C]**

1.5.4 Adverse effects

1.5.4.1 Women should be advised that it is highly likely that their bleeding pattern will change while using Implanon. **[C]**

1.5.4.2 One in five women will have no bleeding while almost half will have frequent, infrequent or prolonged bleeding with Implanon use. Women should be advised that bleeding patterns are unlikely to become more regular over time. **[C]**

1.5.4.3 Women should be advised that dysmenorrhoea may improve during Implanon use. **[C]**

1.5.4.4 Health professionals should be advised that non-hormonal treatment with mefenamic acid or hormonal treatment with

ethinylestradiol or mifepristone is moderately effective in stopping irregular bleeding during implant use. **[B]**

1.5.5 Common concerns and symptoms

1.5.5.1 Women should be informed that the use of Implanon is not associated with weight changes in the short term. **[C]**

1.5.5.2 Women should be informed that mood changes may occur with the use of Implanon. **[C]**

1.5.5.3 Women should be reassured that Implanon use is not associated with a change in libido. **[C]**

1.5.5.4 Women should be informed that acne may occur during Implanon use.**[C]**

1.5.5.5 Women should be informed that all progestogen-only methods may be used by women who have migraine with or without aura. Women should be reassured that there is no evidence that headaches will be increased by the use of Implanon. **[C]**

1.5.6 Risks

1.5.6.1 Subdermal implants are medically safe for women to use if there is a contraindication to oestrogen. **[C]**

1.5.6.2 Women should be informed that there is no evidence for a clinically significant effect of Implanon on bone mineral density. **[C]**

1.5.6.3 Women should be informed that the risk of ectopic pregnancy while using Implanon is theoretically extremely low, and less than that of women not using contraception. **[C]**

1.5.6.4 Providers and women should be advised that there is no evidence for a teratogenic effect of Implanon. Nevertheless, should pregnancy occur and be continued, the implant should be removed. **[D(GPP)]**

1.5.7 Return to fertility

1.5.7.1 There is no evidence for any delay in return of fertility following removal of contraceptive implants. **[C]**

1.5.8 Details of method use

1.5.8.1 Women should be advised of failure rates, benefits, risks and side effects of contraceptive implants.**[D(GPP)]**

1.5.8.2 Implants may be inserted at any time if it is reasonably certain that the woman is not pregnant. If the woman is amenorrhoeic or it has been more than 5 days since menstrual bleeding started, additional barrier contraception should be advised for 7 days following insertion. **[D(GPP)]**

1.5.8.3 Implants may be inserted immediately following abortion in any trimester (spontaneous or induced). **[D(GPP)]**

1.5.8.4 Implants may be initiated at any time post partum if it is reasonably certain the woman is not pregnant. **[D(GPP)]**

1.5.8.5 Women may be informed that Implanon insertion and removal both cause some discomfort and bruising but that technical problems are unusual (less than 1 in 100). **[C]**

1.5.8.6 Women should be informed that if an Implanon has migrated or is too deep to be removed, an ultrasound localisation and removal by an expert will be required.**[D(GPP)]**

1.5.9 Training of health professionals

1.5.9.1 Subdermal implants should be inserted and removed only by health professionals trained in the procedures. **[D(GPP)]**

1.5.10 Specific groups

1.5.10.1 Women and adolescents should be informed that there is no evidence that effectiveness or adverse effects of implants vary with

the age of the user. However, STI risk and Fraser competence (for adolescents) should be considered.**[C]**

1.5.10.2 Providers and adolescents should be aware that pregnancy rates are lower among adolescents using implants compared with those using oral contraception or condoms. **[C]**

1.5.10.3 Women should be advised that, as potential users of Implanon, there is no evidence for a higher rate of pregnancy among women weighing more than 70kg. **[D(GPP)]**

1.5.10.4 Subdermal implants can safely be used by women who are breastfeeding and may be inserted at any time post partum if there has been no risk of pregnancy. **[D(GPP)]**

1.5.11 Medical conditions and contraindications

1.5.11.1 Women should be informed that Implanon is not contraindicated for women with diabetes. **[C]**

1.5.11.2 There is no evidence to suggest a causal relationship between the use of implants and an increased risk of STIs or HIV acquisition. Women at increased risk of STIs including HIV/AIDS may use implants. Subdermal implants do not protect against STIs/HIV and if there is a risk, the correct and consistent use of condoms in addition to the implants is recommended. **[D(GPP)]**

1.5.12 Drug interactions

1.5.12.1 Implanon is not recommended as the sole method of contraception for women concurrently taking enzyme-inducing drugs. **[D(GPP)]**

1.5.13 Follow-up

1.5.13.1 No routine follow-up after implant insertion is required. **[D(GPP)]**

2 Notes on the scope of the guidance

All NICE guidelines are developed in accordance with a scope document that defines what the guideline will and will not cover. The scope of this guideline was established, after a period of consultation, at the start of the guideline development process; it is available from www.nice.org.uk/NICEtoadddetails.

Long-acting reversible contraception (LARC) is defined in this guideline as methods that require administration less than once per cycle or month.

The guideline does not include any contraception for men because there are currently no long-acting reversible methods. The guideline does not cover methods of contraception that are intended to result in permanent sterilisation. Contraceptive methods that are related to coitus or that require frequent (more than once per cycle [month] for women) repeat administration (for example, the combined oral contraceptive pill or progestogen only pills) are not included. Postcoital or emergency contraceptive methods (including IUD insertion for that use) are also not covered. The use of these technologies for non-contraceptive reasons (such as heavy menstrual bleeding or hormone replacement therapy) is outside the scope of this guideline.

This guideline is of relevance to those who work in or use the National Health Service in England and Wales, in particular the guideline will cover the necessary elements of clinical care for provision of LARC methods in general practice, community contraceptive clinics, sexual health clinics and hospital services.

3 Implementation in the NHS

3.1 Resource implications

Local health communities should review their existing practice for LARC against this guideline. The review should consider the resources required to implement the recommendations set out in Section 1, the people and processes involved, and the timeline over which full implementation is envisaged. It is in the interests of patients that the implementation is as rapid as possible.

Relevant local clinical guidelines, care pathways and protocols should be reviewed in the light of this guidance and revised accordingly.

Information on the cost impact of this guideline in England is available on the NICE website and includes a template that local communities can use (www.nice.org.uk/CGXXXcosttemplate). **[Note: the costing information will be available when the guideline is published.]**

3.2 General

There are no current NHS guidelines covering this topic that are widely used or tailored to cover UK practice. This guideline intends to complement other existing and proposed works of relevance, including *A strategic framework for sexual health in Wales*, the *National strategy for sexual health and HIV*, and the subsequent implementation plan.

3.3 Audit

Suggested audit criteria based on the key priorities for implementation are listed in Appendix D, and can be used to audit practice locally.

4 Research recommendations

The Guideline Development Group has made the following recommendations for research, on the basis of its review of the evidence. The Group regards these recommendations as the most important research areas to improve

NICE guidance and patient care in the future. The Group recommends research in the following areas.
Typical use effectiveness of all contraceptive methods over time among UK women.

Continuation rates and patterns of contraceptive method switching among UK women.

Factors that influence initiation, continuation and effective use of contraception among UK women/couples.

Effect of non-contraceptive health benefits on uptake and continuation of contraceptive methods and on use of NHS resources.

Effect of health harms (side effects and risks) on uptake and continuation of contraceptive methods and on use of NHS resources.

The effectiveness, discontinuation, bleeding patterns and bone mineral density in women in the UK who have used DMPA for longer than 2 years.

5 Other versions of this guideline

The National Institute for Clinical Excellence commissioned the development of this guidance from the National Collaborating Centre for Women's and Children's Health. The Centre established a Guideline Development Group, which reviewed the evidence and developed the recommendations. The members of the Guideline Development Group are listed in Appendix B. Information about the independent Guideline Review Panel is given in Appendix C.

The booklet *The guideline development process – an overview for stakeholders, the public and the NHS* has more information about the Institute's guideline development process. It is available from the Institute's website and copies can also be ordered by telephoning 0870 1555 455 (quote reference N0472).

5.1 Full guideline

The full guideline, *Long-acting reversible contraception: The effective and appropriate use of long-acting reversible contraception*, is published by the National Collaborating Centre for Women's and Children's Health; it is available from [www.ncc-wch.org.uk/index.asp?PageID=21], the NICE website (www.nice.org.uk/CGXXXfullguideline) and the website of the National Library for Health (www.nlh.nhs.uk). **[Note: these details will apply to the published full guideline.]**

5.2 Quick reference guide

A quick reference guide for health professionals is also available from the NICE website (www.nice.org/CGXXXquickrefguide) or from the NHS Response Line (telephone 0870 1555 455; quote reference number N0XXX). **[Note: these details will apply when the guideline is published.]**

5.3 Information for the public

A version of this guideline for women requiring long-acting reversible contraception and their carers, and for the public, is available from the NICE website (www.nice.org.uk/CGXXXpublicinfo) or from the NHS Response Line (0870 1555 455); quote reference number N0xxx for an English version and N0XXX for an English and Welsh version). **[Note: these details will apply when the guideline is published.]**

6 Related NICE guidance

There is no related NICE guidance.

7 Review date

The process of reviewing the evidence is expected to begin 4 years after the date of issue of this guideline. Reviewing may begin before this if significant evidence that affects the guideline recommendations is identified. The updated guideline will be available within 2 years of the start of the review process.

Appendix A: Grading scheme

The classification of recommendations and the levels of evidence for intervention studies used in this guideline are adapted from the Scottish Intercollegiate Guidelines Network (*SIGN 50: a guideline developers' handbook*), and summarised in the tables below and on page XX).

Classification of recommendations on interventions

Recommendation grade	Evidence
A	• At least one meta-analysis, systematic review, or randomised controlled trial (RCT) that is rated as 1^{++}, and is directly applicable to the target population, **or** • A systematic review of RCTs or a body of evidence that consists principally of studies rated as 1+, is directly applicable to the target population and demonstrates overall consistency of results, **or** • Evidence drawn from a NICE technology appraisal
B	• A body of evidence that includes studies rated as 2^{++}, is directly applicable to the target population and demonstrates overall consistency of results, **or** • Extrapolated evidence from studies rated as 1^{++} or 1^{+}
C	• A body of evidence that includes studies rated as 2^{+}, is directly applicable to the target population and demonstrates overall consistency of results, **or** • Extrapolated evidence from studies rated as 2^{++}
D	• Evidence level 3 or 4, **or** • Extrapolated evidence from studies rated as 2^{+}, **or** • Formal consensus
D(GPP)	• A good practice point (D(GPP)) is a recommendation for best practice based on the experience of the Guideline Development Group

Levels of evidence for intervention studies

Level of evidence	Type of evidence
1^{++}	• High-quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias
1^{+}	• Well-conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias
1^{-}	• Meta-analyses, systematic reviews of RCTs, or RCTs with a high risk of bias
2^{++}	• High-quality systematic reviews of case–control or cohort studies • 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
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
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
3	• Non-analytical studies (for example, case reports, case series)
4	• Expert opinion, formal consensus

Appendix B: The Guideline Development Group

Dr Chris Wilkinson

Consultant in Sexual and Reproductive Health, Medical Director of the Margaret Pyke Centre and Camden & Islington Contraceptive and Reproductive Health Services and Group Leader

Professor Anna Glasier

Director, Family Planning & Well Woman Services, Lothian Primary Care NHS Trust

Dr Simon Barton

Clinical Director, St. Stephens Centre, Chelsea and Westminster Healthcare NHS Trust

Dr Hannah-Rose Douglas

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Lead Associate Specialist, Family Planning Service, Croydon PCT

Dr Sophie Mancey-Jones

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Ms Shelley Mehigan

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Dr Sam Rowlands

Clinical Director, British Pregnancy Advisory Service (bpas), Henley-in-Arden

Mrs Sue Ward

Service Manager/Clinical Nurse Specialist, Morley Street Health Centre, South Downs Health NHS Trust

Ms Stephanie Whitehead

Policy & Development Manager, Brook, London

Miss Anna Bancsi	Work Programme Co-ordinator, NCC-WCH
Mr Michael Corkett	Senior Information Specialist, NCC-WCH
Dr Martin Dougherty	Locum Co-Director (Women's Health), NCC-WCH
Mrs Irene Kwan	Research Fellow, NCC-WCH
Dr Ifigeneia Mavranezouli	Health Economist, NCC-WCH
Dr Moira Mugglestone	Deputy Director, NCC-WCH

Appendix C: The Guideline Review Panel

The Guideline Review Panel is an independent panel that oversees the development of the guideline and takes responsibility for monitoring its quality. The Panel includes experts on guideline methodology, health professionals and people with experience of the issues affecting patients and carers. The members of the Guideline Review Panel were as follows.

Mrs Christina Oppenheimer (Chair)
Consultant in Obstetrics and Gynaecology, Leicester Royal Infirmary and Honorary Senior Lecturer in Medical Education, University of Leicester

Mr Vincent Argent
Consultant Obstetrician and Gynaecologist, Eastbourne District General Hospital

Dr Jo Cox
Clinical Research Physician, Eli Lilly

Mrs Carol Youngs
Policy Director, British Dyslexia Association

Appendix D: Technical detail on the criteria for audit

Possible objectives for an audit

To ensure that women are receiving the correct information and advice, and have access to LARC services.

People that could be included in an audit and time period for selection

- Healthcare professionals responsible for delivery of information and advice about LARC.
- Health professionals responsible for providing LARC services.

Measures that could be used as a basis for an audit

The audit criteria below are based on recommendations selected as the key priorities for implementation.

Criterion	Exception	Definition of terms
1. Women requiring contraception should be provided with information and offered a choice of all methods, including long-acting reversible contraception (LARC) methods.		
2. Women considering a LARC method should receive both verbal and written information that will enable them to choose and use the method effectively. This information should take into consideration their individual needs and should include: • contraceptive efficacy • risks and possible side effects • non-contraceptive benefits • the procedure for initiation and removal/discontinuation • duration of use • when to seek help while using the method.		

3. All healthcare professionals advising women about contraceptive choices should be competent to: • assist women to consider and compare the risks and benefits of all methods relevant to their individual needs • manage common side effects		
4. All healthcare professionals providing contraceptive care should ensure that they have an agreed mechanism in place for referring women for LARC if they do not provide LARC within their own practice/service.		
5. All healthcare professionals providing intrauterine or subdermal contraceptives should receive training to develop and maintain the relevant skills to provide these methods.		Guidance for training for doctors and nurses can be obtained from the FFPRHC(Faculty of Family Planning and Reproductive Health Care and RCN (Royal College of Nursing) respectively

Appendix E: The LARC selection algorithm

[Please note that the algorithms are being published as a separate file for consultation]