

FSRH Guideline

Contraception After Pregnancy

FSRH | January 2017 (Amended October 2020)

Title	Contraception After Pregnancy
Author/ publisher	Faculty of Sexual & Reproductive Healthcare
Publication date	January 2017 (Amended October 2020)
Review date	January 2022
Available online	https://www.fsrh.org/standards-and-guidance/documents/contraception-after-pregnancy-guideline-january-2017/

Detail of changes to original guidance document

Since this guideline was first published, the following changes have been made:

October 2020 - Table 7, 9 and 12 has been updated to include additional advice regarding initiation of estradiol-containing combined oral contraceptives after pregnancy

Faculty of Sexual & Reproductive Healthcare (FSRH) provided funding to the Clinical Effectiveness Unit (of the FSRH) to assist them in the production of this guideline, *Contraception After Pregnancy* (January 2017, amended October 2020).

Published by the Faculty of Sexual & Reproductive Healthcare.
Registered in England No. 2804213 and Registered Charity No. 1019969

Contraception After Pregnancy first published in January 2017.

Copyright © Faculty of Sexual & Reproductive Healthcare January 2017.

Permission is granted to reproduce or transmit this document for non-commercial personal and non-commercial education use only. Commercial use of any kind, including copying, hiring and lending, is prohibited.

Any reproduction of the whole of this document must reproduce this copyright notice in its entirety.

Any reproduction of a part of this document must include a statement that it is reproduced under licence from FSRH and the notice Copyright © Faculty of Sexual & Reproductive Healthcare January 2017.

Published in the UK



NICE has accredited the process used by the Faculty of Sexual & Reproductive Healthcare to produce this guideline. More information on accreditation can be viewed at www.nice.org.uk/accreditation.

Abbreviations Used

APS	antiphospholipid syndrome
CEU	Clinical Effectiveness Unit
CHC	combined hormonal contraception/contraceptive
CI	confidence interval
COC	combined oral contraception/contraceptive
Cu-IUD	copper intrauterine device
CVR	combined contraceptive vaginal ring
DMPA	depot medroxyprogesterone acetate
EC	emergency contraception
EMA	early medical abortion
FAM	fertility awareness methods
FSRH	Faculty of Sexual & Reproductive Healthcare
GBV	gender-based violence
GDG	guideline development group
GP	general practitioner
GTD	gestational trophoblastic disease
GTN	gestational trophoblastic neoplasia
hCG	human chorionic gonadotrophin
HR	hazard ratio
HSUP	high-sensitivity urinary pregnancy test
IM	intramuscular
IMP	progestogen-only implant
IPI	interpregnancy interval
IU	international unit
IUC	intrauterine contraception/contraceptive
LAM	lactational amenorrhoea method
LARC	long-acting reversible contraception/contraceptive
LNG-EC	levonorgestrel (for emergency contraception)
LNG-IUS	levonorgestrel-releasing intrauterine system
NICE	National Institute for Health and Care Excellence
OC	oral contraceptive
OR	odds ratio
PGD	patient group direction
POI	progestogen-only injectable
POP	progestogen-only pill
RCT	randomised controlled trial
RCOG	Royal College of Obstetricians & Gynaecologists
RR	relative risk
SC	subcutaneous
SGA	small for gestational age
SPC	Summary of Product Characteristics
SRH	sexual and reproductive health
STI	sexually transmitted infection
UKMEC	UK Medical Eligibility for Contraceptive Use
UPA	ulipristal acetate
UPA-EC	ulipristal acetate (for emergency contraception)
UPSI	unprotected sexual intercourse
VTE	venous thromboembolism
WHO	World Health Organization
WHOMEc	WHO Medical Eligibility for Contraceptive Use

Grading of Recommendations

Please refer to [Appendix 1](#) for a full explanation of the classification of evidence level and grading of recommendations.

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.

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+.

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++.

D

Evidence level 3 or 4;

or

Extrapolated evidence from studies rated as 2+.

✓

Good Practice Point based on the clinical experience of the guideline development group.

Contents

Abbreviations Used.....	i
Grading of Recommendations	ii
Contents.....	iii
Executive Summary of Recommendations	vi
 1. Introduction: Contraception After Pregnancy	 1
1.1 Purpose and scope.....	1
1.2 Introduction and background – Why it is important to address contraception after pregnancy.....	1
1.2.1 Prevention of unintended pregnancies: a national health priority	1
1.2.2 Improving women’s access to contraception after pregnancy: a collaborative approach ..	2
1.3 Identification and assessment of the evidence.....	2
1.4 Discussion and provision of contraception after pregnancy	3
1.4.1 What methods of contraception are available in the UK?	3
1.4.2 What is the UK Medical Eligibility Criteria for Contraceptive Use (UKMEC)?.....	3
1.4.3 Effectiveness of contraceptive method.....	4
1.4.4 Information giving and counselling	5
1.4.5 Provision of contraception.....	6
1.4.6 Discussing women’s contraceptive needs.....	7
1.4.7 Record keeping and obtaining valid consent.....	7
1.4.8 Provision of continuing care and support	8
 2. Contraception After Childbirth	 10
2.1 Discussion and provision of contraception after childbirth.....	10
2.1.1 When should contraception after childbirth be discussed/provided?	10
2.1.2 When can contraception after childbirth be initiated?	12
2.1.3 How long should a woman wait before trying to conceive again?	13
2.1.4 Who should provide contraception to women after childbirth?.....	14
2.1.5 Record keeping and obtaining valid consent.....	15
2.2 Medical eligibility	15
2.2.1 Which methods of contraception are safe to use after childbirth?	15
2.2.2 Can women who develop medical problems during pregnancy safely use contraception after childbirth?	16
2.2.3 Is emergency contraception (EC) safe to use after childbirth?	17
2.2.4 Is additional contraception required after initiation of a method after childbirth?	18
2.3 Breastfeeding and contraception	19
2.3.1 Does initiation of hormonal contraceptives affect breastfeeding or infant outcomes?	19
2.3.2 Can women who breastfeed effectively use lactational amenorrhoea method (LAM) as contraception?	21
2.4 Method-specific considerations.....	22
2.4.1 Intrauterine contraception (IUC).....	22
2.4.2 Progestogen-only implant (IMP).....	25
2.4.3 Progestogen-only injectable (POI)	26
2.4.4 Progestogen-only pills (POP).....	27
2.4.5 Combined hormonal contraception (CHC)	27
2.4.6 Female sterilisation	28
2.4.7 Barrier methods	30
2.4.8 Fertility awareness methods (FAM).....	31
2.5 Useful links and support group: Contraception after childbirth	31
 3. Contraception After Abortion	 32

3.1 Discussion and provision of contraception after abortion	32
3.1.1 When should contraception after abortion be discussed/provided?	32
3.1.2 When can contraception be initiated after abortion?	33
3.1.3 Who should provide contraception to women after abortion?	34
3.1.4 Which contraceptive methods are most effective in preventing another abortion? ...	35
3.1.5 Record keeping and obtaining valid consent	36
3.2 Medical eligibility	36
3.2.1 Which methods of contraception are safe to use after abortion?	36
3.2.2 Is emergency contraception (EC) safe to use after abortion?	37
3.2.3 Is additional contraception required after initiation of a method after abortion?	37
3.3 Method-specific considerations	38
3.3.1 Intrauterine contraception (IUC)	38
3.3.2 Progestogen-only contraception	40
3.3.3 Combined hormonal contraception (CHC)	43
3.3.4 Female sterilisation	43
3.3.5 Barrier methods	45
3.3.6 Fertility awareness methods (FAM)	45
3.4 Useful links and support group: Contraception after abortion	46
 4. Contraception After Ectopic Pregnancy or Miscarriage	47
4.1 Discussion and provision of contraception after ectopic pregnancy or miscarriage	47
4.1.1 When should contraception be discussed/provided?	47
4.1.2 How long should a woman wait before trying to conceive again after ectopic pregnancy or miscarriage?	48
4.1.3 Who should provide contraception after ectopic pregnancy or miscarriage?	49
4.1.4 Record keeping and obtaining valid consent	50
4.2 Medical eligibility	50
4.2.1 Which contraceptive methods are safe to use after ectopic pregnancy or miscarriage?	50
4.2.2 Is emergency contraception (EC) safe to use after ectopic pregnancy or miscarriage?	51
4.2.3 Is additional contraception required after initiation of a method after ectopic pregnancy or miscarriage?	52
4.3 Specific issues	53
4.3.1 Does hormonal contraception have an effect on bleeding after ectopic pregnancy or miscarriage?	53
4.3.2 What are the implications of recurrent miscarriage on contraceptive choice?	53
4.3.3 Is there any method associated with a risk of another ectopic pregnancy?	54
4.4 Useful links and support group: Contraception after ectopic pregnancy or miscarriage	57

5. Contraception After Gestational Trophoblastic Disease (GTD)	58
5.1 Discussion and provision of contraception after GTD	58
5.1.1 When should contraception be discussed/provided?	58
5.1.2 Are fertility and pregnancy outcomes affected after GTD?	59
5.1.3 How long should a woman wait after GTD before trying to conceive?	59
5.1.4 Who should provide contraception to women after GTD?	60
5.1.5 Record keeping and obtaining valid consent	61
5.2 Medical eligibility	61
5.2.1 Which contraceptive methods are safe to use after GTD?	61
5.2.2 Is emergency contraception (EC) safe to use after GTD?	62
5.2.3 Is additional contraception required after initiation of a method after GTD?	62
5.3 Method-specific considerations	63
5.3.1 Intrauterine contraception (IUC)	63
5.3.2 Hormonal contraception	64
5.3.3 Female sterilisation	65
5.3.4 Barrier methods	66
5.3.5 Fertility awareness methods (FAM)	66
5.4 Specific issues	67
5.4.1 Is there any method associated with a risk of GTD in subsequent pregnancies?	67
5.5 Useful links and support group: Contraception after gestational trophoblastic disease	67
Recommendations for Future Research	68
References	69
Appendices	82
Appendix 1: FSRH Clinical Guideline Development Process	82
Appendix 2: Clinical Guidelines, Systematic Reviews and Meta-analyses Included in this Guideline	88
Resources	91
Resource 1: Risk factors for venous thromboembolism in pregnancy and the puerperium	91
Resource 2: Criteria for diagnosis of antiphospholipid syndrome (APS)	92
Resource 3: Symptoms of an ectopic pregnancy	92
Questions for Continuing Professional Development	93
Auditable Outcomes	95
Comments and Feedback on Published Guideline	96

Executive Summary of Recommendations

1. Introduction: Contraception after Pregnancy

Discussion and provision of contraception after pregnancy

What methods of contraception are available in the UK?



Clinicians should refer to the relevant current FSRH guidelines, including the UK Medical Eligibility Criteria for Contraceptive Use (UKMEC), when making a clinical judgement on safe and appropriate methods of contraception for a woman after pregnancy.

Effectiveness of contraceptive method



Women should be informed during pregnancy about the effectiveness of different contraceptives, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after pregnancy.

Information giving and counselling



All clinicians involved in the care of pregnant women should provide the opportunity to discuss contraception.



Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.



Clinicians should adopt a person-centred approach when providing contraceptive counselling.



Clinicians who are giving advice to women about contraception after pregnancy should ensure that this information is timely, up-to-date and accurate.



Comprehensive, unbiased and accurate information on contraceptive methods after pregnancy should be made available in different languages and formats including audio-visual.

Provision of contraception



Services providing care to pregnant women should be able to offer all appropriate methods of contraception, including LARC, to women before they are discharged from the service.



Services should ensure that there are sufficient numbers of staff able to provide intrauterine contraception (IUC) or progestogen-only implants (IMP) so that women who choose these methods and are medically eligible can initiate them immediately after pregnancy.



Women 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.

Discussing women's contraceptive needs



Clinicians should discuss with the woman any medical or social factors that may be relevant to her choice of contraceptive method after pregnancy.

Record keeping and obtaining valid consent

D

Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method.

Provision of continuing care and support



Clinicians should facilitate opportunities to discuss issues with the woman in private without a partner, friend or relative being present.

D

Clinicians should know how to enquire about gender-based violence (GBV) and how to support women affected by GBV and abuse, including providing access to information and referral to specialist support.



Services involved in the care of pregnant women should have agreed pathways of care to local community sexual and reproductive health (SRH) services for women with complex medical conditions or needs which may require specialist contraceptive advice.



Services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

2. Contraception After Childbirth

Discussion and provision of contraception after childbirth

When should contraception after childbirth be discussed/provided?



Maternity services (including services providing antenatal, intrapartum and postpartum care) should give women opportunities to discuss their fertility intentions, contraception and preconception planning.



Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.

D

Effective contraception after childbirth should be initiated by both breastfeeding and non-breastfeeding women as soon as possible, as sexual activity and ovulation may resume very soon afterwards.



Maternity service providers should ensure that all women after pregnancy have access to the full range of contraceptives, including the most effective LARC methods, to start immediately after childbirth. This should not be limited to those women with conditions that may pose a significant health risk during pregnancy and vulnerable groups (including young people) at risk of a short interpregnancy interval (IPI) or an unintended pregnancy.

✓	Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after childbirth.
D	Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.
✓	Clinicians who are giving advice to women about contraception after childbirth should ensure that this information is timely, up-to-date and accurate.
✓	Comprehensive, unbiased and accurate information on contraceptive methods postpartum should be made available in different languages and in a range of formats including audio-visual.
✓	Contraceptive counselling should be made available to women in the antenatal period to enable them to choose the method they wish to use after childbirth.
✓	Any contraceptive counselling (general or specialist) needs to be given in conjunction with easy access to contraception in the immediate postpartum period.

When can contraception after childbirth be initiated?

D	The choice of contraceptive method should be initiated by 21 days after childbirth.
D	A woman's chosen method of contraception can be initiated immediately after childbirth if desired and she is medically eligible.
C	Women should be advised that intrauterine contraception (IUC) and progestogen-only implant (IMP) can be inserted immediately after delivery.
B	Clinicians should be aware that insertion of IMP soon after childbirth is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk of unintended pregnancy.
B	Clinicians should be aware that insertion of IUC at the time of either vaginal or caesarean delivery is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk of unintended pregnancy.

How long should a woman wait before trying to conceive again?

B	Women should be advised that an interpregnancy interval (IPI) of less than 12 months between childbirth and conceiving again is associated with an increased risk of preterm birth, low birthweight and small for gestational age (SGA) babies.
---	---

Who should provide contraception to women after childbirth?

✓	Appropriately trained clinicians including sexual and reproductive health (SRH) doctors and nurses, obstetricians, midwives, nurses, general practitioners (GPs) and health visitors should be able to provide women with contraception after childbirth.
✓	Maternity services should be able to provide IUC and progestogen-only methods, including IMP, injectable (POI) or pill (POP), to women before they are discharged from the service after childbirth.
✓	Maternity services should ensure that there are sufficient numbers of staff able to provide IUC or IMP so that women who choose these methods and are medically eligible can initiate them immediately after childbirth.
✓	Women 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.
✓	Maternity services should have agreed pathways of care to local specialist contraceptive services (e.g. community SRH services) for women with complex medical conditions or needs which may require specialist contraceptive advice.
✓	Maternity services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

Record keeping and obtaining valid consent

D	Clinicians should clearly document the discussion and provision of contraception after childbirth. Valid consent must be obtained before providing women with their chosen method.
---	--

Medical eligibility

Which methods of contraception are safe to use after childbirth?

C	Women should be advised that although contraception is not required in the first 21 days after childbirth, most methods can be safely initiated immediately, with the exception of combined hormonal contraception (CHC).
---	---

Can women who develop medical problems during pregnancy safely use contraception after childbirth?

D	Clinicians should discuss with the woman any personal characteristics or existing medical conditions, including those that have developed during pregnancy, which may affect her medical eligibility for contraceptive use.
---	---

Is emergency contraception (EC) safe to use after childbirth?

✓	Emergency contraception (EC) is indicated for women who have had unprotected sexual intercourse (UPSI) from 21 days after childbirth, but is not required before this.
---	--

✓	Oral EC levonorgestrel 1.5 mg (LNG-EC) and ulipristal acetate 30 mg (UPA-EC) are safe to use from 21 days after childbirth. The copper intrauterine device (Cu-IUD) is safe to use for EC from 28 days after childbirth.
C	Women who breastfeed should be informed that available limited evidence indicates that LNG-EC has no adverse effects on breastfeeding or on their infants.
D	Women who breastfeed should be advised not to breastfeed and to express and discard milk for a week after they have taken UPA-EC

Is additional contraception required after initiation of a method after childbirth?

✓	Women should be advised that additional contraceptive precautions (e.g. barrier method/abstinence) are required if hormonal contraception is started 21 days or more after childbirth. Additional contraceptive precaution is not required if contraception is initiated immediately or within 21 days after childbirth.
---	--

Breastfeeding and contraception

Does initiation of hormonal contraceptives affect breastfeeding outcomes or infant outcomes?

A	Women who are breastfeeding should be informed that the available evidence indicates that progestogen-only methods of contraception (LNG-IUS, IMP, POI and POP) have no adverse effects on lactation, infant growth or development.
B	Women who are breastfeeding should wait until 6 weeks after childbirth before initiating a CHC method.
B	Women who are breastfeeding should be informed that there is currently limited evidence regarding the effects of CHC use on breastfeeding. However, the better quality studies of early initiation of CHC 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).

Can women who breastfeed effectively use lactational amenorrhoea method (LAM) as contraception?

C	Women may be advised that, if they are less than 6 months postpartum, amenorrhoeic and fully breastfeeding, the lactational amenorrhoea method (LAM) is a highly effective method of contraception.
C	Women using LAM should be advised that the risk of pregnancy is increased if the frequency of breastfeeding decreases (e.g. 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.

Method-specific considerations

Intrauterine contraception (IUC)

B

IUC can be safely 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. After 48 hours, insertion should be delayed until 28 days after childbirth.

Progestogen-only implants (IMP)

C

IMP can be safely started at any time after childbirth including immediately after delivery.

Progestogen-only injectable (POI)

C

POI can be started at any time after childbirth, including immediately after delivery.

Progestogen-only pills (POP)

C

POP can be started at any time after childbirth, including immediately after delivery.

Combined hormonal contraception (CHC)

C

All women should undergo a risk assessment for VTE postnatally. CHC should not be used by women who have risk factors for venous thromboembolism (VTE) within 6 weeks of childbirth. These include immobility, transfusion at delivery, body mass index (BMI) ≥ 30 kg/m², postpartum haemorrhage, post-caesarean delivery, pre-eclampsia or smoking. This applies to both women who are breastfeeding and not breastfeeding.

B

Women who are not breastfeeding and are without additional risk factors for VTE should wait until 21 days after childbirth before initiating a CHC method.

Female sterilisation

A

Female sterilisation is a safe option for permanent contraception after childbirth.

A

For sterilisation after childbirth, both Filshie clips and modified Pomeroy technique are effective. Filshie clip application is quicker to perform.

D

Women should be advised that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits. However, women should not feel pressured into choosing LARC over female sterilisation.

C

Tubal occlusion should ideally be performed after some time has elapsed following childbirth. Women who request tubal occlusion to be performed at the time of a delivery should be advised of the possible increased risk of regret.

C

Clinicians should ensure that written consent to be sterilised at caesarean section is obtained and documented at least 2 weeks in advance of a planned elective caesarean section.

Barrier methods

D

Male and female condoms can be safely used by women after childbirth.

D

Women choosing to use a diaphragm should be advised to wait at least 6 weeks after childbirth before having it fitted because the size of diaphragm required may change as the uterus returns to normal size.

Fertility awareness methods (FAM)

D

Fertility awareness methods (FAM) can be used by women after childbirth. However, women should be advised that because FAM relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after childbirth and during breastfeeding.

3. Contraception After Abortion

Discussion and provision of contraception after abortion

When should contraception after abortion be discussed/provided?

D

Abortion service providers should give women requesting abortion opportunities to discuss contraception.

✓

Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.

✓

Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after abortion.

C

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.

D

Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.

✓

Clinicians who are giving advice to women about contraception after abortion should ensure that this information is timely, up-to-date and accurate.

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.

When can contraception be initiated after abortion?

B	A woman's chosen method of contraception should be initiated immediately after abortion (medical and surgical).
B	Clinicians should be aware that insertion of intrauterine contraception (IUC) at the time of abortion is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk for another unintended pregnancy than when provision of IUC is delayed.
B	Clinicians should be aware that insertion of progestogen-only implants (IMP) at the time of abortion is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk for another unintended pregnancy than when provision of IMP is delayed.

Who should provide contraception to women after abortion?

✓	Abortion service providers should be able to offer all methods of contraception, including LARC, to women before they are discharged from the service after abortion.
✓	Abortion services should ensure that there are sufficient numbers of staff able to provide IUC or IMP so that women who choose these methods and are medically eligible can initiate them immediately after abortion.
✓	Women 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.
✓	Abortion services should have agreed pathways of care to local specialist contraceptive services [e.g. community sexual and reproductive health (SRH) services] for women with complex medical conditions or needs which may require specialist contraceptive advice.
✓	There should be agreed pathways of care to local services for women who may require additional non-medical care and support.

Which contraceptive methods are most effective in preventing another abortion?

A	Clinicians should be aware that women who choose to commence LARC immediately after abortion have a significantly reduced likelihood of undergoing another abortion within 2 years, compared with women provided with medium-acting, short-acting or no contraceptive methods.
----------	--

Record keeping and obtaining valid consent

D	Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method.
----------	---

Medical eligibility

Which methods of contraception are safe to use after abortion?

D	Women should be advised that any method of contraception can be safely initiated immediately after an uncomplicated abortion.
D	IUC should not be inserted in the presence of postabortion sepsis.

Is emergency contraception (EC) safe to use after abortion?

✓	Emergency contraception (EC) is indicated for women who have had unprotected sexual intercourse (UPSI) from 5 days after abortion.
✓	Women should be advised that any method of EC can be safely used after an uncomplicated abortion.

Is additional contraception required after initiation of a method after abortion?

✓	Women should be advised that additional contraceptive precautions (e.g. 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.
---	--

Method-specific consideration

Intrauterine contraception (IUC)

A	IUC can be safely used by women after an uncomplicated abortion. Women may be advised that they may benefit from reduced uterine bleeding when using levonorgestrel-releasing intrauterine system (LNG-IUS).
D	With medical abortion, IUC can be inserted any time after expulsion of the pregnancy.
A	With surgical abortion, IUC can be inserted immediately after evacuation of the uterine cavity.

Progestogen-only contraception

B	Progestogen-only contraception can be safely started at any time, including immediately, after medical or surgical abortion.
B	Women should be advised that IMP can be safely initiated at the time of mifepristone administration.
B	Women 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.
✓	Women 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.

Combined hormonal contraception (CHC)

- | | |
|----------|---|
| B | Combined hormonal contraception (CHC) can be safely started immediately at any time after abortion. |
|----------|---|

Female Sterilisation

- | | |
|----------|--|
| D | Female sterilisation is a safe option for permanent contraception after abortion. |
| ✓ | Women should be advised that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits. However, women should not feel pressured into choosing LARC over female sterilisation. |
| B | Tubal occlusion should ideally be performed after some time has elapsed after abortion. Women 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. |
| ✓ | Clinicians should ensure that consent from the woman to conduct female sterilisation at the same time as surgical abortion is taken and documented in advance of the abortion. |

Barrier methods

- | | |
|----------|--|
| D | Condoms (male and female) can be used by women after abortion. |
| D | Women choosing to use a diaphragm should be advised to wait at least 6 weeks after second-trimester abortion because the size of diaphragm required may change as the uterus returns to normal size. |

Fertility awareness methods (FAM)

- | | |
|----------|---|
| D | Fertility awareness methods (FAM) can be used by women after abortion. However, women should be advised that because FAM relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after abortion. |
|----------|---|

4. Contraception After Ectopic Pregnancy or Miscarriage

Discussion and provision of contraception after ectopic pregnancy or miscarriage

When should contraception be discussed/provided?

- | | |
|----------|--|
| ✓ | Services providing care to women with ectopic pregnancy or miscarriage should give them opportunities to discuss their fertility intentions, contraception and preconception planning. |
| ✓ | Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception. |
| D | If a woman wishes 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. |

D	A woman's chosen method of contraception should ideally be initiated immediately after treatment for ectopic pregnancy or miscarriage.
✓	Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after ectopic pregnancy or miscarriage.
D	Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.
✓	Clinicians who are giving advice to women about contraception after ectopic pregnancy or miscarriage should ensure that this information is timely, up-to-date and accurate.

How long should a woman wait before trying to conceive again after ectopic pregnancy or miscarriage?

D	Women 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.
D	Women who have been treated with methotrexate should be advised that effective contraception is recommended during and for at least 3 months after treatment in view of the teratogenic effects of this medication.
✓	Women should be advised that effective contraception can be started on the day of methotrexate administration or surgical management of ectopic pregnancy.

Who should provide contraception after ectopic pregnancy or miscarriage?

✓	Services involved in the care of women who have had an ectopic pregnancy or miscarriage should be able to offer all methods of contraception, including LARC, to women before they are discharged from the service.
✓	Services should ensure that there are sufficient numbers of staff able to provide intrauterine contraception (IUC) or progestogen-only implant (IMP) so that women who choose these methods and are medically eligible can initiate them immediately after treatment.
✓	Women 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.
✓	Services should have agreed pathways of care to local specialist contraceptive services [e.g. community sexual reproductive health (SRH) services] for women with complex medical conditions or needs which may require specialist contraceptive advice.



Services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

Record keeping and obtaining valid consent

D

Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method of contraception.

Medical eligibility

Which contraceptive methods are safe to use after ectopic pregnancy or miscarriage?



Clinicians should refer to the method-specific recommendations for abortion which may be extrapolated for use after ectopic pregnancy or miscarriage.

D

Women should be advised that any method of contraception can be safely initiated immediately after methotrexate administration or surgical treatment of ectopic pregnancy.

D

Women should be advised that any method of contraception can be safely initiated immediately after treatment for miscarriage.

C

IUC can be inserted after miscarriage as soon as expulsion has occurred at surgery or after medical or expectant management.

C

IUC should not be inserted in the presence of sepsis after ectopic pregnancy or miscarriage.

Is emergency contraception (EC) safe to use after ectopic pregnancy or miscarriage?



Emergency contraception (EC) is indicated if unprotected sexual intercourse (UPSI) takes place more than 5 days after methotrexate administration or surgical treatment of ectopic pregnancy.

B

Women should be advised that any method of EC can be safely used after ectopic pregnancy or miscarriage.

Is additional contraception required after initiation of a method after ectopic pregnancy or miscarriage?



Women should be advised that additional contraceptive precautions (e.g. 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.



Women should be advised that additional contraceptive precautions (e.g. barrier methods/abstinence) are required if hormonal contraception is started 5 days or more after surgical treatment or administration of methotrexate for ectopic pregnancy. Additional contraceptive precaution is not required if contraception is initiated immediately or within 5 days of treatment of ectopic pregnancy.

Specific issues

What are the implications of recurrent miscarriage on contraceptive choice?

D

Women who have had recurrent early miscarriage (REM) should be investigated for any underlying causes. However, investigations should not lead to a delay in initiation of a contraceptive method if the woman does not wish to become pregnant.

D

Combined hormonal contraception (CHC) should be avoided by women with REM until antiphospholipid syndrome (APS) has been excluded.

Is there any method associated with a risk of another ectopic pregnancy?

C

Women 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.

D

Women 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.

C

Women 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.

C

Women 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.

5. Contraception After Gestational Trophoblastic Disease (GTD)

Discussion and provision of contraception after GTD

When should contraception be discussed/provided?



Services that provide care to women who have/had gestational trophoblastic disease (GTD) should give them opportunities to discuss their fertility intentions, contraception and preconception planning.



Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.

D

Women 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.

✓	Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after GTD.
D	Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.
✓	Clinicians who are giving advice to women about contraception after GTD should ensure that this information is timely, up-to-date and accurate.
✓	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.

Are fertility and pregnancy outcomes affected after GTD?

C	Clinicians should reassure women with GTD that fertility and pregnancy outcomes are favourable after GTD, including after chemotherapy for gestational trophoblastic neoplasia (GTN). However, there is an increased risk of GTD in subsequent pregnancy.
---	---

How long should a woman wait after GTD before trying to conceive?

D	After complete molar pregnancy, women should be advised to avoid subsequent pregnancy for at least 6 months to allow human chorionic gonadotrophin (hCG) monitoring for ongoing GTD.
D	After partial molar pregnancy, women should be advised to avoid pregnancy until two consecutive monthly hCG levels are normal.
D	Women who have had chemotherapy for GTD should be advised to avoid pregnancy for 1 year after treatment is complete.

Who should provide contraception to women after GTD?

✓	Services involved in the care of women with GTD should be able to offer all methods of contraception, including LARC, to women before they are discharged from the service.
✓	Services should ensure that there are sufficient numbers of staff able to provide progestogen-only implant (IMP) so that women who choose this method and are medically eligible can initiate the method immediately after treatment.
✓	Women 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.
✓	Services should have agreed pathways of care to local specialist contraceptive services (e.g. community sexual and reproductive health (SRH) services) for women with complex medical conditions or needs which may require specialist contraceptive advice.

- ✓ Services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

Record keeping and obtaining valid consent

- D Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method of contraception.

Medical eligibility

Which contraceptive methods are safe to use after GTD?

- D Women should be advised that most methods of contraception can be safely used after treatment for GTD and can be started immediately after uterine evacuation, with the exception of intrauterine contraception (IUC).
- D IUC should not be inserted in women with persistently elevated hCG levels or malignant disease.
- 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 women with decreasing hCG levels following discussion with a GTD centre.

Is emergency contraception (EC) safe to use after GTD?

- ✓ Emergency contraception (EC) is indicated if unprotected sexual intercourse (UPSI) takes place from 5 days after treatment for GTD.
- D Women should be advised that use of oral EC is safe after treatment for GTD. Insertion of copper intrauterine device (Cu-IUD) for EC may be considered in a specialist setting for women with decreasing hCG levels following discussion with a GTD centre.

Is additional contraception required after initiation of a method after GTD?

- ✓ Women should be advised that additional contraceptive precautions (e.g. 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.

Method-specific considerations

Intrauterine Contraception (IUC)

- D IUC should not normally be inserted until hCG levels have normalised after GTD. Insertion of Cu-IUD as EC may be considered in a specialist setting for women with decreasing hCG levels following discussion with a GTD centre.



IUC insertion at surgical evacuation where GTD is suspected but not confirmed should be made on an individual case basis based upon the individual woman's risk for GTD, clinical findings and her preference for IUC insertion at this time.

Hormonal contraception

B

Hormonal contraception can be started immediately after uterine evacuation for GTD.

Female sterilisation

D

Female sterilisation is a safe option for permanent contraception after GTD.



Women should be advised that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits. However, women should not feel pressured into choosing LARC over female sterilisation.

D

Tubal occlusion should ideally be performed after some time has elapsed after surgical evacuation for GTD. Women 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.

Barrier methods

D

Condoms (male and female) can be used by women after treatment for GTD.



Women who choose a diaphragm should be advised to wait at least 6 weeks after treatment for GTD because the required size of diaphragm may change as the uterus returns to normal size.

Fertility awareness methods (FAM)



Fertility awareness methods (FAM) can be used by women after treatment for GTD. However, women should be advised that because FAM relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after treatment for GTD.

Specific issues

Is there any method associated with a risk of GTD in subsequent pregnancies?

D

Clinicians should inform women 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.

FSRH Guideline (January 2017, amended October 2020)

Contraception After Pregnancy

(Revision due by January 2022)

1. Introduction: Contraception After Pregnancy

1.1 Purpose and scope

This new guideline brings together evidence and expert opinion on the provision of contraception to women after childbirth, abortion, ectopic pregnancy, miscarriage or gestational trophoblastic disease (GTD). It replaces the 2009 Faculty of Sexual & Reproductive Healthcare (FSRH) clinical guideline *Postnatal Sexual and Reproductive Health*.¹

This guideline is for use by UK clinicians including sexual and reproductive health (SRH) clinicians, obstetricians, gynaecologists, midwives, general practitioners (GPs), nurses, and health visitors involved in caring for women during and after pregnancy. Typical settings where this guideline would be relevant include maternity services, abortion services, early pregnancy assessment units, general gynaecology services, integrated sexual health clinics and general practice.

It is hoped that this guideline will be implemented across all relevant services in the UK and will promote a more collaborative and consistent approach to providing the highest standard of contraceptive care to all women after pregnancy.

Key considerations of this guideline include:

- ▶ When should contraception be discussed/provided?
- ▶ Who should provide contraception?
- ▶ Which contraceptive methods are most effective?
- ▶ Which methods of contraception are safe to use?
- ▶ Are there method-specific issues to consider?
- ▶ Are there other SRH issues to consider?

This guideline was developed by the FSRH and endorsed by the Royal College of General Practitioners (RCGP), Royal College of Midwives (RCM), Royal College of Nursing (RCN) and Royal College of Obstetricians and Gynaecologists (RCOG).

1.2 Introduction and background – Why it is important to address contraception after pregnancy

1.2.1 Prevention of unintended pregnancies: a national health priority

In the UK, it is estimated that as many as one in three pregnancies ends in an abortion and one in three pregnancies that continues to term may have originally been unintended.^{2,3} A recent UK study⁴ reported that almost 1 in 13 women presenting for an abortion or delivery had conceived within a year of a previous birth.

A short interpregnancy interval (IPI) of less than 12 months increases the risk of complications including preterm birth, low birthweight, stillbirth and neonatal death.^{5,6} Currently, the World Health Organization (WHO) recommends a 24-month IPI after childbirth.⁷

All national SRH strategies across the UK^{8–11} highlight the importance of contraception for women after pregnancy, especially for women identified as being from vulnerable groups (e.g. young people)¹¹ who are at high risk of future unintended pregnancy. Accessing timely contraceptive counselling and the full range of contraceptive methods will enable women to plan the number of children they would like to have and the optimum spacing between them.

Pregnancy is a key reproductive event when women are in contact with healthcare services, creating an opportunity to discuss contraceptive choice and provide contraception to women motivated to avoid a future unintended pregnancy. This clinical guideline provides a framework of recommendations to support clinicians and services involved in the care of women during pregnancy to discuss and, if appropriate, initiate contraception at different points during their care pathways.

1.2.2 Improving women's access to contraception after pregnancy: a collaborative approach

All women who are pregnant should receive the highest standard of contraceptive care, regardless of pregnancy outcome and irrespective of where they receive their care and by whom care is provided. There are a number of UK and European clinical guidelines currently available to healthcare providers caring for women after childbirth,^{1,12} abortion,¹³ early pregnancy loss¹⁴ (including ectopic pregnancy¹⁵ and miscarriage) and GTD.^{16,17} These guidelines consider separate pregnancy outcomes, with inconsistent consideration of contraceptive needs. This clinical guideline consolidates the recommendations for contraception after all pregnancy outcomes, based on the most up-to-date evidence and on expert consensus, into one comprehensive document to guide clinical practice.

The development of this clinical guideline has presented an opportunity to bring together experts from different disciplines to develop an integrated approach to the provision of contraception to women after pregnancy. This collaborative approach will hopefully lead to a well-trained workforce, improved care pathways and the sharing of good practice, which will contribute to improving the quality of care received by women after a pregnancy.

1.3 Identification and assessment of the evidence

This guideline was developed in accordance with standard methodology for developing FSRH clinical guidelines. The recommendations made within this document are based on the best available evidence and the consensus opinion of experts and the guideline development group (GDG). The methodology used in developing this guideline and a list of GDG members and other contributors can be found in [Appendix 1](#).

The recommendations included should be used to guide clinical practice but are not intended to serve alone as a standard of medical care or to replace clinical judgement in the management of individual cases.

1.4 Discussion and provision of contraception after pregnancy

1.4.1 What methods of contraception are available in the UK?



Clinicians should refer to the relevant current FSRH guidelines, including the UK Medical Eligibility Criteria for Contraceptive Use (UKMEC), when making a clinical judgement on safe and appropriate methods of contraception for a woman after pregnancy.

The recommendations are intended to inform practice in the UK; therefore only contraceptive methods and practices utilised in the UK are included. FSRH clinical guidelines on the methods of contraception available in the UK can be accessed from the [FSRH website](#).

- ▶ Intrauterine contraception (IUC)
- ▶ Progestogen-only implant (IMP)
- ▶ Progestogen-only injectable contraception (POI)
- ▶ Progestogen-only pill (POP)
- ▶ Combined hormonal contraception (CHC)
- ▶ Emergency contraception (EC)
- ▶ Barrier methods for contraception and sexually transmitted infection (STI) prevention
- ▶ Male and female sterilisation
- ▶ Fertility awareness methods (FAM).

1.4.2 What is the UK Medical Eligibility Criteria for Contraceptive Use (UKMEC)?

The UK Medical Eligibility Criteria for Contraceptive Use (UKMEC)¹⁸ provides recommendations for the safe use of contraception including categories for women after childbirth (postpartum) and abortion (including miscarriage). It also provides recommendations for women with a history of ectopic pregnancy or with current GTD. The relevant UKMEC categories will be presented in the relevant sections for the different pregnancy outcomes. For each of the personal characteristics or medical conditions considered by the UKMEC, a category 1, 2, 3 or 4 is given. The definitions of the categories are given in [Table 1](#).

Table 1: Definition of UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) categories¹⁸

UKMEC	Definition of category
Category 1	A condition for which there is no restriction for the use of the method.
Category 2	A condition where the advantages of using the method generally outweigh the theoretical or proven risks.
Category 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.
Category 4	A condition which represents an unacceptable health risk if the method is used.

Clinicians should ensure they are familiar with, or refer to, the current version of the UKMEC. Unless specifically stated, UKMEC does not take account of multiple health conditions. Clinical judgement is required when making an assessment of a woman's medical eligibility, which should take into consideration her personal characteristics and other co-existing medical conditions. These evidence-based recommendations apply only to the safety of contraceptive use and do not indicate a best method for a woman nor do they take into account method efficacy (which could be affected by drug interactions or malabsorption).

1.4.3 Effectiveness of contraceptive method



Women should be informed during pregnancy about the effectiveness of different contraceptives, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after pregnancy.

Provided the woman is medically eligible to use a particular method, she should be free to choose the method that is most acceptable to her. Many factors determine the method of contraception a woman chooses to use. Women should be informed about the effectiveness of different contraceptives, including highly effective long-acting reversible contraception (LARC).¹⁹

Methods that require consistent and correct use by individuals have a wide range of effectiveness and can vary greatly with the user's characteristics such as age, socioeconomic status, users' desires to prevent or delay pregnancy, and culture. [Table 2](#) compares the percentage of women experiencing an unintended pregnancy during the first year of contraceptive use when the method is used 'typically' (which includes both incorrect and inconsistent use) or 'perfectly' (correct and consistent use).²⁰ Methods considered to be LARC are highlighted. A pictorial chart on the effectiveness of family planning methods is available from the [Centers for Disease Control and Prevention \(CDC\) website](#).

Table 2: Percentage of women experiencing an unintended pregnancy within the first year of use with typical use and perfect use (modified from Trussell, 2011)²⁰

Method	Typical use (%)	Perfect use (%)
No method	85	85
Fertility awareness-based methods	24	0.4–5
Female diaphragm	12	6
Male condom	18	2
Combined hormonal contraception*	9	0.3
Progestogen-only pills	9	0.3
Progestogen-only injectables	6	0.2
Copper intrauterine device	0.8	0.6
Levonorgestrel-releasing intrauterine system	0.2	0.2
Progestogen-only implant	0.05	0.05
Female sterilisation	0.5	0.5
Vasectomy	0.15	0.1

*Includes combined oral contraception, transdermal patch and vaginal rings. Long-acting reversible contraceptive methods have been highlighted in grey.

1.4.4 Information giving and counselling

✓	All clinicians involved in the care of pregnant women should provide the opportunity to discuss contraception.
✓	Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.
D	Clinicians should adopt a person-centred approach when providing contraceptive counselling.
✓	Clinicians who are giving advice to women about contraception after pregnancy should ensure that this information is timely, up-to-date and accurate.
✓	Comprehensive, unbiased and accurate information on contraceptive methods after pregnancy should be made available in different languages and formats including audio-visual.

All service providers involved in the care of women during pregnancy have a role to play in supporting women in their choice of contraception after pregnancy. This involves raising awareness of the importance of contraception (e.g. posters in waiting rooms), making educational resources available for women (e.g. leaflets and audio-visuals), engaging women in general discussions about effective contraceptive use, providing specialist contraception counselling, and supplying chosen methods of contraception.

Women should not feel pressured into using contraception or any particular method. Any contraceptive counselling (general or specialist) needs to be provided in conjunction with availability of method provision. Further, the woman will need to have had the time to consider her contraceptive options in order to make an informed choice. Therefore it is important that women are offered opportunities for discussing and obtaining information about contraception throughout the care pathway. After contraceptive discussion and counselling, women need to be encouraged to make an informed choice and to decide on their chosen method so that this can be initiated or planned for without delay.

It is important that clinicians are trained and supported to provide general and specialist contraceptive counselling using a person-centred and non-judgemental approach,^{21,22} taking into account the woman's sexual and reproductive history, specific preferences, expectations, feelings and beliefs regarding contraception as well as social, cultural, psychological and economic backgrounds.^{23,24} Ascertaining the degree to which women and/or couples want autonomy in their decision-making is important when providing contraceptive counselling, as is understanding when provider involvement is wanted by the woman.^{21,22,25}

Evidence level 4

All efforts should be made to increase women's knowledge and positive attitude towards the use of effective contraceptive methods through counselling and information provision. This will enable women to make safe and effective contraceptive choices for themselves.

Information about contraception that is easily understood, unbiased and accurate should be made available to women in different languages and formats including audio-visual. This is important as national reports on adult literacy^{26–29} have estimated that a sizeable proportion of adults in the UK have low levels of literacy. This suggests that many women may not be able to understand the content of written information leaflets.

Women should also be advised about where to find information online about contraception and SRH services (e.g. [NHS Choices website](#)³⁰ or the [Family Planning Association \(FPA\) website/app](#)³¹) or their local SRH website, which can also provide accurate information on referral pathways into primary care or community SRH services.

1.4.5 Provision of contraception



Services providing care to pregnant women should be able to offer all appropriate methods of contraception, including LARC, to women before they are discharged from the service.



Services should ensure that there are sufficient numbers of staff able to provide intrauterine contraception (IUC) or progestogen-only implants (IMP) so that women who choose these methods and are medically eligible can initiate them immediately after pregnancy.



Women 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.

Services providing care to pregnant women should ensure that they have appropriately trained staff and the facilities to provide women with their chosen method of contraception (where medically eligible and appropriate) after pregnancy. Maternity, abortion and early pregnancy loss services should include staff able to provide intrauterine contraception (IUC), including the copper intrauterine device (Cu-IUD) and the levonorgestrel-releasing intrauterine system (LNG-IUS) or IMP.

The FSRH offers online and practical training leading to certification (Letter of Competence)³² for doctors, nurses, midwives and health visitors wishing to undertake implant insertion. The Diplomate Assessment of the FSRH for nurses (NDFSRH) is available to nurses and midwives registered with the UK Nursing & Midwifery Council. Access to training and use of patient group directions (PGDs) should be available for nurses and midwives, to deliver contraception, including LARC.

If services are unable to provide women with their chosen method of contraception, they should inform women about where they can access contraception (e.g. GP, specialist contraceptive services) or direct them to an appropriate service in the local community if available. A temporary (bridging) method should be provided until the woman's chosen method of contraception can be initiated.

1.4.6 Discussing women's contraceptive needs



Clinicians should discuss with the woman any medical or social factors that may be relevant to her choice of contraceptive method after pregnancy.

Some women may not wish or need to use contraception after pregnancy for cultural, religious, relationship or other reasons. Conversely, women who have needed fertility treatment in the past are not necessarily infertile and so may now require contraception. Consideration should always be given to women's risk of acquiring or transmitting STIs. Condoms may be needed to reduce the risk of STI acquisition or transmission as well as preventing pregnancy, either alone or as backup to another contraceptive method.

Prior to prescribing any form of contraception for use after pregnancy, clinicians should take into consideration a woman's:

- ▶ Contraceptive needs (e.g. degree of efficacy required)
- ▶ Sexual activity and sexual problems
- ▶ Personal beliefs, attitudes and preferences
- ▶ Sociocultural practices that may impact on choice of method
- ▶ Social factors (e.g. return to work, ability to access services for initiation/follow-up)
- ▶ Medical history [e.g. hypertension, migraine, venous thromboembolism (VTE), obesity, cholestasis, trophoblastic disease] and status [e.g. human immunodeficiency virus (HIV) status]
- ▶ Risk of acquiring or transmitting STIs.

Further, an assessment should be made to determine whether:

- ▶ The woman plans to breastfeed
- ▶ Ovulation is likely to have resumed
- ▶ The woman could be pregnant.

For guidance on sexual history taking and STI testing, please refer to the [British Association for Sexual Health and HIV \(BASHH\) website](#).

1.4.7 Record keeping and obtaining valid consent



Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method.

The FSRH guidance *Service Standards for Record Keeping*³³ highlights the importance of diligent recording so that clinicians and other staff can readily access information to provide high-quality care. This facilitates continuity of care when a woman receives care from multiple members of staff within a service and/or when women are referred to other services.

Evidence level 4

The FSRH guidance *Service Standards on Obtaining Valid Consent in Sexual Health Services*³⁴ highlights that clinicians should be aware of the procedures for obtaining valid consent, which includes the purpose, process, assessment of capacity, provision of information and assessment of a patient's autonomy. The clinician providing contraception to the woman is responsible for ensuring that the woman has given valid consent before initiating the method. Valid consent may be given in a number of ways but should always be documented.

Evidence level 4

Clinicians should clearly document the method of contraception provided to women. If this is IUC or IMP, then the type of device, and when replacement is required, should be clearly documented. Women who have been fitted with IUC should be provided with clear verbal and written information on what signs and symptoms would indicate that they should seek medical attention for a possible complication, when to have a thread check and when the device needs replacing.

1.4.8 Provision of continuing care and support

✓	Clinicians should facilitate opportunities to discuss issues with the woman in private without a partner, friend or relative being present.
D	Clinicians should know how to enquire about gender-based violence (GBV) and how to support women affected by GBV and abuse, including providing access to information and referral to specialist support.
✓	Services involved in the care of pregnant women should have agreed pathways of care to local community sexual and reproductive health (SRH) services for women with complex medical conditions or needs which may require specialist contraceptive advice.
✓	Services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

While the focus of this clinical guideline is mainly on the safe and appropriate use of contraception by women after pregnancy, clinicians should also be aware of other SRH and non-SRH issues that may be relevant when ensuring that women (and, if appropriate, their baby, partner and family) receive the care they need after pregnancy.^{35,36} Issues that should be considered include:

- ▶ Domestic violence/gender-based violence (GBV)^{37–40}
- ▶ Female genital mutilation (FGM)⁴¹
- ▶ Emotional well-being and mental health⁴²
- ▶ Any sexual problems
- ▶ Substance misuse and sexual risk-taking
- ▶ Body recovery, nutrition and physical health
- ▶ Social and financial support (including safe housing).

Whilst partners may be engaged in the process of shared decision-making on contraception, clinicians should facilitate opportunities to discuss issues with the woman in private to ensure that women are not being coerced into a particular contraceptive decision.

The GDG acknowledged that not all services involved in the care of pregnant women are able to provide the full range of contraceptive options or address other SRH and non-SRH issues after pregnancy. It is therefore important that healthcare services have an agreed pathway of care to local community services to ensure that women receive the care they need after they are discharged.

If services are unable to provide women with their chosen method of contraception, clinicians should inform women about where they can access contraception (e.g. GP, specialist contraceptive services) or provide a referral to an appropriate service in the local community. Women can be referred to an SRH specialist if specialist advice and/or expert clinical judgement is needed, for example, women with complex medical conditions. Where appropriate, records of prior contraceptive discussions and decisions should be passed on to facilitate contraceptive decision-making.

Women identified as being from a vulnerable group and/or known to have additional non-medical care or support issues should be informed about appropriate services for continuing care and support as necessary.

2. Contraception After Childbirth

2.1 Discussion and provision of contraception after childbirth

2.1.1 When should contraception after childbirth be discussed/provided?

✓	Maternity services (including services providing antenatal, intrapartum and postpartum care) should give women opportunities to discuss their fertility intentions, contraception and preconception planning.
✓	Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.
D	Effective contraception after childbirth should be initiated by both breastfeeding and non-breastfeeding women as soon as possible, as sexual activity and ovulation may resume very soon afterwards.
✓	Maternity service providers should ensure that all women after pregnancy have access to the full range of contraceptives, including the most effective LARC methods, to start immediately after childbirth. This should not be limited to those women with conditions that may pose a significant health risk during pregnancy and vulnerable groups (including young people) at risk of a short interpregnancy interval (IPI) or an unintended pregnancy.

There is growing recognition in the UK that women's need for effective contraception in the period immediately after delivery may be underestimated.^{43,44} Sexual activity and fertility may return quickly after childbirth, and the requirements of looking after a young baby can add to the existing barriers to accessing effective methods of contraception.

Evidence level 4

Effective contraception after childbirth should be initiated by women who are breastfeeding and those who are not as soon as possible to avoid an unintended pregnancy or a short interpregnancy interval (IPI). Pregnancies soon after childbirth are not uncommon.

A recent UK study⁴ reported that almost 1 in 13 women presenting for an abortion or delivery had conceived within a year of a previous birth. This rises to almost 1 in 8 among parous women. A short IPI (less than 12 months) increases the risk of complications including preterm birth, low birthweight, stillbirth and neonatal death.⁵

Evidence level 2+

Maternity services (including services providing antenatal, intrapartum and postpartum care) should be designed to meet the sexual and reproductive health (SRH) needs of all women who may require additional care and support. This includes women with conditions that may pose a significant health risk during pregnancy¹⁸ and vulnerable groups (including young people)¹¹ at high risk of an unintended pregnancy or a short IPI, as indicated in national SRH strategies.⁸⁻¹¹ These women should be advised to consider using highly effective long-acting reversible contraceptive (LARC) methods.¹⁹



Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after childbirth.

[See Section 1.4.3](#)

Click [here](#) to access a table which compares the percentage of women experiencing an unintended pregnancy during the first year of contraceptive use when the method is used 'typically' (which includes both incorrect and inconsistent use) or 'perfectly' (correct and consistent use).

D

Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.



Clinicians who are giving advice to women about contraception after childbirth should ensure that this information is timely, up-to-date and accurate.



Comprehensive, unbiased and accurate information on contraceptive methods postpartum should be made available in different languages and in a range of formats including audio-visual.

[See Section 1.4.4](#)

Should antenatal contraceptive counselling be provided?



Contraceptive counselling should be made available to women in the antenatal period to enable them to choose the method they wish to use after childbirth.



Any contraceptive counselling (general or specialist) needs to be given in conjunction with easy access to contraception in the immediate postpartum period.

Although a National Institute for Health and Care Excellence (NICE) guideline¹⁹ has previously recommended that contraception should be discussed within the first week after delivery, advice about contraception after childbirth may be better discussed antenatally, especially since many methods can be provided at the time of delivery [e.g. intrauterine contraception (IUC)] or during the hospital stay.⁴⁵ Prior to giving birth, women may have more time to think through their options than immediately after giving birth when the requirements of caring for a baby and recovering from delivery may take priority over contraceptive decision-making.

Evidence level 4

The effectiveness of postpartum contraceptive counselling has not yet been established.^{46,47} One Cochrane review,⁴⁶ which identified six non-randomised controlled trials (RCTs) of educational interventions, reported that women in the intervention groups were more likely to use highly effective methods rather than methods which are least effective or no method, compared to women who received standard counselling/information-giving. Another Cochrane review,⁴⁷ of ten RCTs that evaluated the effectiveness of postpartum education on contraceptive use, reported that half of these interventions led to fewer pregnancies or more contraceptive use. However, the studies included in both reviews were of low to moderate quality, limiting the reliability of their findings. Many of the studies are either from the USA or low-income countries where barriers to contraceptive use are likely to be different from the UK.

Evidence
level 1+

One multinational RCT,⁴⁸ which included Edinburgh, Shanghai and Cape Town, showed that specialist antenatal contraceptive counselling is no better than standard contraceptive advice. In this study women attending antenatal clinics were randomised to receive either specialist ($n=771$) or standard contraceptive advice ($n=866$). No significant differences were found between the two groups in the prevalence of contraceptive use or unintended pregnancies (based on abortion rates) at 1 year. However, this study was conducted before the widespread availability of highly effective LARC, including the single-rod progestogen-only implant (IMP) or the levonorgestrel-releasing intrauterine system (LNG-IUS) and before women were offered immediate insertion of IUC after childbirth.

Evidence
level 1+

Recent evidence from the USA has shown that an antenatal discussion may be beneficial as it may identify women who wish to opt for insertion of LARC in the immediate postpartum period before discharge from hospital.⁴⁹ According to a UK survey of postpartum mothers,⁴ 43% would choose LARC immediately after delivery if this was available. However, in order to be able to choose LARC at this time, women need to have made this decision before giving birth and therefore should be made aware of their contraceptive options antenatally.

Evidence
level 2-

It is therefore important that any contraceptive counselling (general or specialist) be given in conjunction with easy access to contraception in the immediate postpartum period.

2.1.2 When can contraception after childbirth be initiated?

D	The choice of contraceptive method should be initiated by 21 days after childbirth.
D	A woman's chosen method of contraception can be initiated immediately after childbirth if desired and she is medically eligible.
C	Women should be advised that intrauterine contraception (IUC) and progestogen-only implant (IMP) can be inserted immediately after delivery.

B

Clinicians should be aware that insertion of IMP soon after childbirth is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk of unintended pregnancy.

B

Clinicians should be aware that insertion of IUC at the time of either vaginal or caesarean delivery is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk of unintended pregnancy.

A woman's chosen method of contraception, including lactational amenorrhoea method (LAM), should be initiated immediately if she is medically eligible. Contraception should be initiated by 21 days after childbirth.⁵⁰ Evidence level 4

The provision of IMP and IUC immediately after childbirth is associated with reduced risk of unintended pregnancy and helps women optimise their spacing of children.⁵¹ High continuation rates of LARC [i.e. copper intrauterine device (Cu-IUD), LNG-IUS and IMP] at 12 months have been reported with immediate insertion after childbirth.^{43,44,52} Findings from a decision-analysis model based on data from the USA⁵³ estimated that immediate insertion of IUC after childbirth could prevent 88 unintended pregnancies per 1000 women over a 2-year period. Evidence level 2+

The provision of LARC at the time of delivery is convenient for women who wish to initiate contraception immediately, avoiding the need for an extra visit which has been identified as a barrier to uptake of LARC after childbirth. In a recent RCT⁵⁴ of women randomised to insertion of an implant 1–3 days (early group) or 4–8 weeks (standard group) after childbirth, only 3% of women in the early group failed to attend for insertion, compared with 32% of women randomised to delayed insertion. Evidence level 1+

In a USA study,⁴⁹ only 50% of mothers wishing to use IUC after childbirth returned for the appointment to have it inserted. In primary care, one qualitative study⁵⁵ in Scotland explored the views of 13 general practitioners (GPs) in relation to the provision of contraceptive advice and LARC at the visit 6 weeks postpartum. The Scottish GPs reported that the contraceptive discussion was typically the last item to be covered from a 'long list' at these appointments. Furthermore, women from deprived areas and young women who might be at higher risk of unintended pregnancy were least likely to attend this visit. In addition, not all practices could provide IMP or IUC. Among those that did fit IUC, the waiting time for fitting could be as much as 2 or 3 months. Evidence level 3

2.1.3 How long should a woman wait before trying to conceive again?

B

Women should be advised that an interpregnancy interval (IPI) of less than 12 months between childbirth and conceiving again is associated with an increased risk of preterm birth, low birthweight and small for gestational age (SGA) babies.

Women who wish to conceive again should wait at least 12 months after childbirth. A Scottish retrospective cohort study⁶ reported that a short IPI of less than 12 months is an independent risk factor for complications including preterm birth, low birthweight, stillbirth and neonatal death. These findings are also supported by a review⁵ (which included 20 studies on live births and three studies on stillbirth from low- and high-income countries) which reported that the most common pregnancy complications consistently associated with a short IPI (of less than 12 months) included preterm birth, premature rupture of membranes, low birthweight and small for gestational age (SGA) babies. Adverse fetal/neonatal outcomes associated with a short IPI included birth defects, fetal/early neonatal death and adverse neurodevelopmental outcomes. Currently, the World Health Organization (WHO) recommends a 24-month IPI after childbirth.⁷

Evidence
level 1+

2.1.4 Who should provide contraception to women after childbirth?

✓	Appropriately trained clinicians including sexual and reproductive health (SRH) doctors and nurses, obstetricians, midwives, nurses, general practitioners (GPs) and health visitors should be able to provide women with contraception after childbirth.
✓	Maternity services should be able to provide IUC and progestogen-only methods, including IMP, injectable (POI) or pill (POP), to women before they are discharged from the service after childbirth.
✓	Maternity services should ensure that there are sufficient numbers of staff able to provide IUC or IMP so that women who choose these methods and are medically eligible can initiate them immediately after childbirth.
✓	Women 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.

[See Section 1.4.5](#)

✓	Maternity services should have agreed pathways of care to local specialist contraceptive services (e.g. community SRH services) for women with complex medical conditions or needs which may require specialist contraceptive advice.
✓	Maternity services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

[See Section 1.4.8](#)

Referrals to specialist contraceptive services (e.g. community SRH) should ideally be made antenatally, if required, so that a plan for contraception can be made before delivery and contraception can be initiated as soon as possible after childbirth.

2.1.5 Record keeping and obtaining valid consent

D

Clinicians should clearly document the discussion and provision of contraception after childbirth. Valid consent must be obtained before providing women with their chosen method.

[See Section 1.4.7.](#) Women who choose to have IUC or sterilisation should have their decision clearly documented before they are admitted for delivery.

2.2 Medical eligibility

2.2.1 Which methods of contraception are safe to use after childbirth?

C

Women should be advised that although contraception is not required in the first 21 days after childbirth, most methods can be safely initiated immediately, with the exception of combined hormonal contraception (CHC).

The current evidence-based UK Medical Eligibility Criteria (UKMEC)¹⁸ that apply to breastfeeding and non-breastfeeding women after childbirth are outlined in [Table 3](#). There are some restrictions on the use of combined hormonal contraception (CHC) — including combined oral contraceptive pills (COC), combined contraceptive vaginal ring (CVR) and combined transdermal patches (patch) — by women in the weeks after childbirth due to increased risk of venous thromboembolism (VTE) in this period.

Evidence level 4

IUC (including Cu-IUD and LNG-IUS) can be inserted immediately after childbirth (0–48 hours). There is limited evidence on the use of IUC between 72 hours and 4 weeks after childbirth, therefore after 48 hours it is recommended that insertion is delayed until at least 4 weeks. The recommendations for LNG-IUS are based only on studies on the 52 mg LNG-IUS but expert opinion is that they can be extrapolated to include the 13.5 mg LNG-IUS.

Although contraception is not required before Day 21, the initiation of IUC or progestogen-only contraception immediately after childbirth is safe.¹⁸ Women who have additional risk factors for VTE should not use CHC prior to 6 weeks after childbirth. Women who do not have additional risk factors for VTE and who are not breastfeeding may use CHC from Day 21.

Progestogen-only contraception can be safely used by breastfeeding and non-breastfeeding women. While there is no robust evidence to support a causal link between depot medroxyprogesterone acetate (DMPA) and VTE,^{56–58} given that the risk of VTE is greatest in the first 6-week postpartum period, the UKMEC classification is higher for DMPA (UKMEC 2) than other progestogen-only methods (UKMEC 1) for use by women in the first 6 weeks after childbirth.

Evidence level 2+

Table 3: Summary of UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) categories applicable to women after childbirth¹⁸

Condition	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
Postpartum (in breastfeeding women)						
a) 0 to <6 weeks	See below		1	2	1	4
b) ≥6 weeks to <6 months (primarily breastfeeding)			1	1	1	2
c) ≥6 months			1	1	1	1
Postpartum (in non-breastfeeding women)						
a) 0 to <3 weeks	See below					
(i) With other risk factors for VTE*			1	2	1	4
(ii) Without other risk factors			1	2	1	3
b) 3 to <6 weeks						
(i) With other risk factors for VTE*			1	2	1	3
(ii) Without other risk factors			1	1	1	2
c) ≥6 weeks			1	1	1	1
Postpartum (in breastfeeding or non-breastfeeding women, including post-caesarean section)						
a) 0 to <48 hours	1	1	See above			
b) 48 hours to <4 weeks	3	3				
c) ≥4 weeks	1	1				
d) Postpartum sepsis	4	4				

* In the presence of other risk factors for VTE, including immobility, transfusion at delivery, body mass index ≥30 kg/m², postpartum haemorrhage, post-caesarean delivery, pre-eclampsia or smoking, use of CHC may pose an additional increased risk for VTE.

CHC, combined hormonal contraception; Cu-IUD, copper intrauterine device; DMPA, progestogen-only injectable; depot medroxyprogesterone acetate; IMP, progestogen-only implant; LNG-IUS, levonorgestrel-releasing intrauterine system; POP, progestogen-only pill; VTE, venous thromboembolism.

Definition of the UKMEC categories can be found [here](#).

2.2.2 Can women who develop medical problems during pregnancy safely use contraception after childbirth?

D

Clinicians should discuss with the woman any personal characteristics or existing medical conditions, including those that have developed during pregnancy, which may affect her medical eligibility for contraceptive use.

Women can develop various medical conditions during pregnancy that may impact on their eligibility to use certain types of contraception after childbirth. The UKMEC¹⁸ includes recommendations for history of high blood pressure during pregnancy, history of pregnancy-related cholestasis (obstetric cholestasis) and diabetes (history of gestational disease) shown in [Table 4](#). All methods of contraception can be safely used by women with a history of these conditions.

Evidence level 4

Table 4: Summary of UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) categories applicable to a woman with a history of pregnancy-related conditions¹⁸

Condition	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
History of high blood pressure during pregnancy	1	1	1	1	1	2
History of cholestasis (pregnancy-related)	1	1	1	1	1	2
Diabetes (history of gestational disease)	1	1	1	1	1	1

CHC, combined hormonal contraception; Cu-IUD, copper intrauterine device; DMPA, progestogen-only injectable: depot medroxyprogesterone acetate; IMP, progestogen-only implant; LNG-IUS, levonorgestrel-releasing intrauterine system; POP, progestogen-only pill.

Definition of the UKMEC categories can be found [here](#).

In addition, the UKMEC¹⁸ recommends that other conditions including obesity, hypertension or dyslipidaemias should also be taken into consideration when making a clinical judgement on the most suitable method for each woman after childbirth. Evidence level 4

2.2.3 Is emergency contraception (EC) safe to use after childbirth?



Emergency contraception (EC) is indicated for women who have had unprotected sexual intercourse (UPSI) from 21 days after childbirth, but is not required before this.



Oral EC levonorgestrel 1.5 mg (LNG-EC) and ulipristal acetate 30 mg (UPA-EC) are safe to use from 21 days after childbirth. The copper intrauterine device (Cu-IUD) is safe to use for EC from 28 days after childbirth.

The guideline development group (GDG) recommends that emergency contraception (EC) is indicated for a woman who has had unprotected sexual intercourse (UPSI) from 21 days after childbirth. All methods of EC including oral EC levonorgestrel 1.5mg (LNG-EC) and ulipristal acetate 30 mg (UPA-EC) and the Cu-IUD can be safely used after childbirth.¹⁸

Given limited evidence on insertion of Cu-IUD 3–4 weeks after childbirth, the GDG recommends that until further evidence emerges, the insertion of emergency Cu-IUD between 3 and 4 weeks should be based on clinical judgement (i.e. UKMEC 3).

A Cu-IUD is the most effective form of EC. The pregnancy rate after Cu-IUD for EC is about 1 in 1000.⁵⁹ The use of Cu-IUD for EC carries the same contraindications as use for regular contraception.¹⁸ A Cu-IUD can be used from Day 28 postpartum. A Cu-IUD inserted for EC can be retained until the next menstrual period and then removed, or it can be retained for ongoing contraception for 5 years or more, depending on the device.

Use of EC by women who breastfeed

C	Women who breastfeed should be informed that available limited evidence indicates that LNG-EC has no adverse effects on breastfeeding or on their infants.
D	Women who breastfeed should be advised not to breastfeed and to express and discard milk for a week after they have taken UPA-EC

LNG-EC or UPA-EC can be used without restriction (UKMEC 1) by women after childbirth, whether they are breastfeeding or not. Woman can be advised to continue to breastfeed after using LNG-EC as evidence shows no adverse effect of progestogen on breastfeeding or infant outcomes.⁶⁰

Evidence level 2+

One recently published systematic review⁶⁰ reported that limited direct and indirect evidence did not suggest any specific safety concerns regarding the use of LNG-EC or UPA-EC in women who breastfeed.

Evidence level 1+

Ulipristal acetate (UPA) is excreted in breast milk, but the effect on infants has not been studied. The GDG recommends that women who breastfeed should not breastfeed for 7 days after the use of UPA-EC as stated in the Summary of Product Characteristics (SPC) for ellaOne®.⁶¹ Women who breastfeed are advised to express and discard the breast milk in order to maintain ongoing lactation.

Evidence level 4

2.2.4 Is additional contraception required after initiation of a method after childbirth?

✓	Women should be advised that additional contraceptive precautions (e.g. barrier method/abstinence) are required if hormonal contraception is started 21 days or more after childbirth. Additional contraceptive precaution is not required if contraception is initiated immediately or within 21 days after childbirth.
----------	---

The GDG recommends no additional contraception is necessary if any contraceptive method is initiated before Day 21 after childbirth. However, if hormonal contraception is started 21 days or more after childbirth, the woman is at risk of another pregnancy and thus additional contraceptive precautions (e.g. barrier methods/abstinence) may be required (see [Table 5](#)).

Table 5: Requirements for abstinence or additional contraception when a method of contraception (which the woman is medically eligible to use) is initiated after childbirth

Methods of contraception the woman is medically eligible to use	Initiation <21 days after childbirth	Initiation ≥21 days after childbirth
	Number of days of additional contraceptive precautions required (days)	
Copper intrauterine device	None for insertion 0 to <48 hours	None
Levonorgestrel-releasing intrauterine system	Insertion between 48 hours and <4 weeks may not be appropriate (UKMEC 3)	7
Progestogen-only pill (traditional/desogestrel)	None	2
Progestogen-only implant or injectable	None	7
Combined hormonal contraception	Use not recommended	7*

*Except Qlaira® which requires 9 days of additional contraceptive precautions.

2.3 Breastfeeding and contraception

2.3.1 Does initiation of hormonal contraceptives affect breastfeeding or infant outcomes?

A	Women who are breastfeeding should be informed that the available evidence indicates that progestogen-only methods of contraception (LNG-IUS, IMP, POI and POP) have no adverse effects on lactation, infant growth or development.
B	Women who are breastfeeding should wait until 6 weeks after childbirth before initiating a CHC method.
B	Women who are breastfeeding should be informed that there is currently limited evidence regarding the effects of CHC use on breastfeeding. However, the better-quality studies of early initiation of CHC 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).

Although contraceptive hormones are excreted into breast milk in very small amounts (less than 1% of the maternal dose), there have been concerns about their potential impact on breastfeeding and on infant growth and development. A Cochrane review⁶² which included 11 randomised trials (RCTs) that compared CHC, non-hormonal contraception and progestogen-only contraception use among women who breastfeed found that most trials did not show or report significant differences between study arms in breastfeeding duration, breast milk composition, or infant growth.

Evidence level 1++

Progestogen-only contraception

A systematic review⁶³ which included 47 studies reported that use of progestogen-only contraception [including LNG-IUS, IMP, progestogen-only implant (POI) and progestogen-only pill (POP)] among women who breastfeed, concluded that progestogen-only contraception was not associated with adverse breastfeeding outcomes or negative health outcomes in infants (e.g. restricted growth, health problems or impaired development).

Evidence
level 1++

Intrauterine contraception (IUC)

A systematic review⁶⁴ which examined the use of IUC after caesarean section and during lactation reported that 12 studies of lactation in women using LNG-IUS or Cu-IUD showed no significant effect on milk production and/or infant growth.

Evidence
level 1++

Combined hormonal contraception (CHC)

CHC can be safely initiated by women who are medically eligible for this method, from 3 weeks after childbirth as long as they have no additional risk factors for VTE (including immobility, transfusion at delivery, body mass index (BMI) ≥ 30 kg/m², postpartum haemorrhage, post-caesarean delivery, pre-eclampsia or smoking) and are not breastfeeding. In the presence of other risk factors for VTE, use of CHC may pose an additional increased risk for VTE. Women who are breastfeeding, without additional risk factors for VTE and who wish to use CHC should wait until 6 weeks after childbirth before initiating a CHC method. [See Section 2.4](#) on the method-specific considerations for CHC.

Evidence
level 1+

A systematic review⁶⁵ which included 13 studies demonstrated inconsistent effects of COC on breastfeeding performance (duration of breastfeeding, exclusivity and timing of initiation of supplemental feeding), whether COC initiation occurred before 6 weeks (early initiation) or after 6 weeks (later initiation) following childbirth. The systematic review reported conflicting results on whether early initiation of COC affects infant outcomes (growth, health and development) but generally found no negative impact on infant outcomes with later initiation of COC.

The systematic review⁶⁵ reported that when COC was used at or before 6 weeks after childbirth, some studies found less weight gain in infants of COC users compared to non-users while other studies did not find any effect. No study demonstrated an effect on infant weight gain when COC were started after 6 weeks after childbirth. No study found an effect on other infant health outcomes regardless of time of COC initiation. The body of evidence is limited by older studies using different formulations/doses of estrogen than currently used preparations and poor methodological quality of the studies.

Evidence
level 1+

The most recent RCT⁶⁶ of fair methodological quality, which randomised women to use either COC ($n=64$) or POP ($n=63$) initiated at 2 weeks after childbirth, found that there was no statistical difference in breastfeeding continuation or supplementation between the two groups 8 weeks after childbirth. There was no statistical difference between the two groups in breastfeeding continuation 6 months after childbirth.

Furthermore, at 8 weeks after childbirth, there were no differences between the two groups in terms of infant growth, as measured by weight, length and head circumference. Evidence level 1+

Women should be informed about the full range of safe alternative contraceptive methods they can use, particularly during the first 6 weeks after childbirth when the risk of VTE is highest, and that use of CHC methods may exacerbate this risk.

2.3.2 Can women who breastfeed effectively use lactational amenorrhoea method (LAM) as contraception?

C

Women may be advised that, if they are less than 6 months postpartum, amenorrhoeic and fully breastfeeding, the lactational amenorrhoea method (LAM) is a highly effective method of contraception.

C

Women using LAM should be advised that the risk of pregnancy is increased if the frequency of breastfeeding decreases (e.g. 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.

The use of breastfeeding as contraception is known as the lactational amenorrhoea method (LAM). Suckling suppresses the resumption of ovarian activity and the return of menses after childbirth.⁶⁷ Full breastfeeding includes exclusive (when no other liquids or solids are given) or almost exclusive (when vitamins, water or juice is given infrequently in addition to breastfeeds).

Women who are fully breastfeeding have reduced fertility and breastfeeding can be used to reduce risk of an unintended pregnancy.⁶⁸ However, when the frequency and duration of suckling decreases, ovarian activity may be restored and the likelihood of restarting periods increases.⁶⁹ Evidence level 2-

Women who breastfeed and experience a bleed in the first 6 months after childbirth have been shown to have a higher risk of pregnancy than those who remain amenorrhoeic.⁷⁰ Therefore, for breastfeeding to be used as an effective contraceptive method it is recommended that women must fulfil all three criteria below: Evidence level 2+

- ▶ Fully or nearly fully breastfeeding day and night (no other liquids given or only water, juice or vitamins given infrequently in addition to breastfeeds). No long intervals between feeds day or night (e.g. more than 4 hours during day and more than 6 hours at night)
- ▶ Amenorrhoeic
- ▶ Less than 6 months postpartum.

Studies^{71–73} have consistently shown that when the rules of LAM are applied, the failure rates are less than 2%. When suckling frequency and duration decreases, perhaps as a result of the introduction of pacifiers/dummies, maternal or infant illness or introduction of supplementary feeding, ovarian activity and the risk of pregnancy increases.^{69,74,75} In a multicentre prospective study⁷² of 4118 breastfeeding women, cumulative pregnancy rates for fully breastfeeding amenorrhoeic women ranged between 0.9% [95% confidence interval (CI) 0–2.0] and 1.2% (95% CI 0–2.4) in the first 6 months. In comparison, at 12 months the rates ranged from 6.6% (95% CI 1.9–11.2) to 7.4% (95% CI 2.5–12.3).

Evidence
level 2+

There are limited studies on the effect of expressing milk on the effectiveness of LAM. However, most women who breastfeed do express milk, so it is important to consider this evidence and its implications carefully. A study⁷⁶ of 170 women designed to examine the effectiveness of LAM in working women who were manually expressing milk reported a pregnancy rate of 5.2%. The study had a number of limitations including no comparative group, high drop-out rates and lack of information about sexual activity, but it suggests that expressing breast milk may reduce the efficacy of LAM.

Evidence
level 2-

Whilst women who are fully breastfeeding, within 6 months after childbirth and amenorrhoeic may choose to rely on LAM alone until breastfeeding reduces or other LAM criteria are no longer fulfilled, the proportion of mothers who fulfil these criteria in the UK is likely to be small. Breastfeeding varies by geographical region, mother's age and deprivation in the UK. Data from Scotland⁷⁷ show that at 6–8 weeks, only 38% of babies were exclusively breastfed in 2014/2015. The corresponding figure for mothers under 20 years of age was even lower with only 5.0% exclusively breastfeeding. The 2010 infant feeding survey,⁷⁸ which included mothers from England, Wales, Scotland and Northern Ireland, found that 3 months after giving birth, 17% of women are still exclusively breastfeeding. Women may only choose to use LAM for the first few weeks or months after giving birth but it is still an important contraceptive option for some women at this time.

Evidence
level 3

A woman who wishes to switch from LAM to a different method of contraception will require additional contraceptive precautions for a number of days in accordance with [Table 5](#).

2.4 Method-specific considerations

2.4.1 Intrauterine contraception (IUC)

B

IUC can be safely 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. After 48 hours, insertion should be delayed until 28 days after childbirth.

The insertion of IUC can take place as soon as the placenta is delivered at caesarean section or after vaginal delivery (within 10 minutes of delivery of placenta and up to 48 hours after delivery). A Cochrane review⁷⁹ concluded that IUC insertion at this time is safe and effective. Contraindications to IUC insertion at this time include prolonged rupture of membranes, unresolved postpartum haemorrhage and sepsis.

Evidence
level 1+

For women in the UK who would like to use an effective contraceptive after childbirth, IUC can be extremely convenient. A trained healthcare provider is present at childbirth and many women will have had an epidural or another form of analgesia. Furthermore, insertion of IUC immediately after delivery is cost effective from a service perspective since it does not involve an additional visit to a health service.

Clinicians providing IUC should clearly document the type of device, and when replacement is required. Women who have been fitted with IUC should be provided with clear verbal and written information on what signs and symptoms would indicate that they seek medical attention for a possible complication, when and where to have a thread check (e.g. at the 6-week GP appointment) and when the device needs replacing. As at any time, a sexually transmitted infection (STI) screen should be offered to all women who are identified as being at risk of STIs when requesting IUC.⁸⁰

Evidence
level 4

There is limited evidence about IUC insertion between 48 hours and 4 weeks after childbirth. One recent RCT⁸¹ which included women randomised to receive IUC at either 3 weeks ($n=101$) or at 6 weeks ($n=100$) reported that there was no difference in complications between groups. Continuation rates did not significantly differ between groups at 3 (73% vs 75.3%, $p=0.72$) or 6 months (80.3% vs 82.8%, $p=0.71$). A higher proportion of women in the 6 weeks group had resumed intercourse prior to the IUC insertion (23.4% vs 7.3%, $p=0.1$). Pain during insertion (19.9% vs 25.1%, $p=0.21$) and satisfaction (89.6% vs 93.4%, $p=0.23$) was not significantly different between groups.

Evidence
level 1+

One prospective study⁸² which included 50 women who had an IUC inserted at 2 weeks after childbirth found that it was feasible and acceptable to women. Of 43 women with follow-up data available, 40 (93%) would recommend it to a friend. Continuation rate at 6 months was 86% (37 women). There were two partial expulsions; one was symptomatic. This expulsion rate (4.6%) is consistent with the rate of interval insertion and lower than immediate postplacental insertion. No uterine perforations were reported.

There is no evidence of increased risk of uterine perforation if IUC is inserted immediately after delivery of the placenta or within 48 hours of delivery, compared to delayed insertion (after 4 weeks) after childbirth. The risk may actually be reduced compared to delayed insertion since the myometrium is thick in the period immediately after childbirth. There is also no increase in the risk of infection.

The insertion of IUC immediately after childbirth is associated with higher expulsion rates but also higher continuation rates 6–12 months postpartum, regardless of IUC type or mode of delivery.^{51,79} Expulsion is most likely to occur in the first 3 months after insertion. Expulsion rates may be lower for postplacental insertion after caesarean delivery than after vaginal delivery.^{79,83} A meta-analysis⁷⁹ that included both vaginal and caesarean section deliveries from four RCTs examining immediate IUC insertion versus delayed insertion (4–12 weeks after childbirth) demonstrated that expulsion by 6 months was more likely in the immediate insertion group [odds ratio (OR) 4.89, 95% CI 1.47–16.32]. However, IUC use at 6 months was more likely with immediate insertion than delayed insertion (OR 2.04, 95% CI 1.01–4.09). The benefits of the insertion of highly effective IUC immediately after delivery (vaginal or caesarean section) may outweigh the disadvantage of increased risk for expulsion.⁷⁹ Expulsion *per se* is likely to be less indicative of the value of the method than overall continuation over time.⁵¹ As long as expulsion is recognised and alternative contraception provided or a replacement IUC inserted, this should not be regarded as a reason for not providing IUC immediately after delivery.

Evidence
level 1+

Given limited evidence on insertion of Cu-IUD 3–4 weeks after childbirth, the GDG recommends that until further evidence emerges, the insertion of Cu-IUD between 3 and 4 weeks should be based on clinical judgement (i.e. UKMEC 3).

Vaginal delivery

Two RCTs^{84,85} examined LNG-IUS use after vaginal delivery. In one prospective pilot study,⁸⁴ 46 women were randomised into one of three groups: immediate insertion (within 10 minutes of placenta delivery), early insertion (10 minutes to 48 hours after childbirth) or interval insertion (6+ weeks after childbirth). There was no difference in continuation rates at 3 and 6 months among groups. Expulsion rates were significantly higher and pain during insertion was significantly lower in the immediate and early insertion groups ($p < 0.001$) when compared to the interval group. In another RCT,⁸⁵ equal numbers of the 102 women planning vaginal deliveries and desiring a postpartum LNG-IUS were randomised to receive either immediate or delayed (6–8 weeks after childbirth) insertion. The LNG-IUS was successfully inserted in 50/51 women (98.0%) and 46/51 women (90.2%) in the immediate and delayed groups, respectively. At 6 months, the expulsion rate in the immediate group was significantly higher (24% vs 4.4%, $p < 0.01$), but continuation rates were not significantly different (84.3% vs 76.5%, $p = 0.32$). Five (10%) of the women in the delayed group did not attend the follow up for LNG-IUS insertion.

Evidence
level 1+

Caesarean section delivery

There are three recent RCTs^{86–88} involving IUC insertion at the time of caesarean delivery. In one RCT,⁸⁶ 42 women who wished to use a LNG-IUS were randomised to receive immediate insertion at the time of caesarean section ($n = 20$) or delayed insertion 4–8 weeks postpartum ($n = 22$). Confirmed use of the LNG-IUS 12 months after delivery was higher in the immediate insertion group (60.0% vs 40.9%, $p = 0.35$), although this difference was not statistically significant.

Evidence
level 1+

In another RCT,⁸⁷ among the 68 women who wished to use the Cu-IUD, the Cu-IUD was inserted in 100% (34/34) of the women in the immediate insertion group and in 53% (18/34) of the delayed (6 weeks after childbirth) group. At 6 months, the continuation rate was higher in the immediate insertion group (93% vs 50%, $p < 0.0001$). Infection and expulsion were rare and did not differ between groups. In another RCT,⁸⁸ 112 women received either the LNG-IUS or Cu-IUD at caesarean section (immediate group) or at 6+ weeks after childbirth (interval group). Data regarding IUC use at 6 months after childbirth were available for 48 and 50 women in the immediate and interval groups, respectively. At 6 months, significantly more women (40/48, 83%) in the immediate group were using an IUC compared with 32/50 (64%) women in the interval group [relative risk (RR) 1.3, 95% CI 1.02–1.66]. Among the 56 women randomised to the interval group, 22 (39%) never received IUC, 14 (25%) never returned for IUC placement, five (9%) declined IUC and three (5%) had a failed IUC placement.

Evidence
level 1+

2.4.2 Progestogen-only implant (IMP)

C

IMP can be safely started at any time after childbirth including immediately after delivery.

Although the insertion of IMP immediately after childbirth is outside the current product licence, studies have shown that insertion at this time is safe and highly acceptable to women. Six cohort studies^{52,89–93} which included young mothers^{52,92,93} reported that continued use of IMP at 6 months was as high as 98%,⁹⁰ while at 12 months continuation rates were as high as 86% in three studies^{52,91,92} and 84% in another.⁹⁰ One retrospective cohort study⁸⁹ of 262 women who had IMP inserted immediately after childbirth found that the continuation rate over its 3-year lifespan was high (66.3%).

Evidence
level 2+

Uptake of IMP by young mothers immediately at or soon after childbirth was associated with a reduction in the number of women with short IPI. An Australian study⁹³ of teenage mothers (aged 18 years and under) found that young mothers who use IMP after childbirth became pregnant later than women who chose to use other methods ($p = 0.022$) with the mean time to another pregnancy of 23.8 months (95% CI 22.2–25.5) compared to 18.1 months (95% CI 15.1–20.7) for COC/DMPA and 17.6 months (95% CI 14.0–21.3) for barrier or no methods. In a USA study⁹² of just under 300 mothers (less than 25 years of age) choosing IMP after childbirth, the proportion of women pregnant again at 12 months was only 2.6% in the IMP group compared with 18.6% of their counterparts using other methods.

Evidence
level 2+

With regard to bleeding patterns, one RCT⁵⁴ which included 35 women assigned to early insertion (1–3 days after childbirth) and 34 women to standard insertion (4–8 weeks after childbirth) found that women's self-reported bleeding patterns at 6 months were not statistically different between the groups.

Evidence
level 1+

A retrospective cohort study⁹¹ found no difference in removal rates for IMP due to vaginal bleeding between women who had IMP inserted immediately after childbirth (within 96 hours of delivery), delayed (6–12 weeks after childbirth) or as an interval method (after 12 weeks following childbirth or unrelated to a pregnancy event). The study found that 19.3% of women in the immediate insertion group requested removal due to irregular bleeding compared to 18.4% in the delayed group (OR 1.06, 95% CI 0.48–2.33) and 20.8% in the interval group (OR 0.91, 95% CI 0.52–1.60). A pilot study⁹⁴ which included 20 women exclusively breastfeeding randomised to receive IMP 24–48 hours after delivery reported that IMP was not associated with deleterious maternal clinical effects, significant maternal metabolic alterations or decreased infant weight gain. In addition, another study⁹⁵ found that IMP was not associated with physiological variations of the haemostatic system during the first 6 weeks after childbirth.

Evidence
level 2+

2.4.3 Progestogen-only injectable (POI)

C

POI can be started at any time after childbirth, including immediately after delivery.

There are theoretical concerns that use of DMPA may be associated with an increased risk of VTE compared to other progestogen-only methods. Hence the UKMEC classification is higher for DMPA (UKMEC 2) than the IMP and POP (UKMEC 1) for use by women in the first 6 weeks after childbirth.¹⁸

Evidence
level 4

The SPC for Depo-Provera^{®96} and Sayana Press^{®97} recommend that DMPA should be used with caution by women after childbirth because of its potential to alter bleeding patterns. However, two low-quality, non-randomised studies^{98,99} did not report a statistical difference in bleeding patterns in women using DMPA after childbirth. Further evidence is required to substantiate an association between DMPA and altered bleeding in the puerperium. Women should be informed of the potential for problematic bleeding; however, use of DMPA in the period after childbirth should not be restricted for this reason.

Evidence
level 2+

POI including DMPA administered intramuscularly (IM) or subcutaneously (SC) can be initiated immediately or before Day 21 to inhibit the first ovulation after childbirth without the need for additional contraceptive precautions. Women may find the initiation of the method before discharge from maternity services to be convenient as it avoids the need for a follow-up appointment.

2.4.4 Progestogen-only pills (POP)

C POP can be started at any time after childbirth, including immediately after delivery.

Evidence has shown that POP have minimal effects on coagulation factors, blood pressure or lipid levels and thus represent an appropriate contraceptive choice for women after childbirth who have no contraindications to their use.⁵⁶

Evidence level 2+

POP can be initiated immediately after childbirth and before 21 days without the need for additional precautions. If started on Day 21, then additional contraception is necessary for 2 days.

2.4.5 Combined hormonal contraception (CHC)

C All women should undergo a risk assessment for VTE postnatally. CHC should not be used by women who have risk factors for venous thromboembolism (VTE) within 6 weeks of childbirth. These include immobility, transfusion at delivery, body mass index (BMI) ≥ 30 kg/m², postpartum haemorrhage, post-caesarean delivery, pre-eclampsia or smoking. This applies to both women who are breastfeeding and not breastfeeding.

B Women who are not breastfeeding and are without additional risk factors for VTE should wait until 21 days after childbirth before initiating a CHC method.

There are restrictions on the use of CHC by women after childbirth depending on whether the woman is breastfeeding and how many weeks have elapsed since childbirth.

Breastfeeding performance and infant outcomes

The use of CHC in women who are breastfeeding is outside the terms of the product licence.¹⁰⁰

[See also Section 2.3](#) on breastfeeding and contraception.

The UKMEC¹⁸ recommends that women who breastfeed should not use CHC until 6 weeks after childbirth (UKMEC 4).

Evidence level 1+

A systematic review⁶⁵ which included 13 studies demonstrated inconsistent effects of COC on breastfeeding performance (duration of breastfeeding, exclusivity and timing of initiation of supplemental feeding) whether COC initiation occurred before 6 weeks (early initiation) or after 6 weeks (later initiation) following childbirth. The systematic review reported conflicting results on whether early initiation of COC affects infant outcomes (growth, health and development) but generally found no negative impact on infant outcomes with later initiation of COC.

Risk of venous thromboembolism (VTE) after childbirth

All women should undergo a risk assessment for VTE postnatally.¹⁰¹ [See Resource 1](#) for a table of risk factors for VTE in pregnancy and the puerperium. In addition to the range of conditions and risk factors that affect a woman's eligibility for CHC, the UKMEC¹⁸ recommends that CHC should not be used by women within 6 weeks of childbirth if there are additional risk factors for VTE, including immobility, transfusion at delivery, body mass index (BMI) ≥ 30 kg/m², postpartum haemorrhage, post-caesarean delivery, pre-eclampsia or smoking. This applies to both women who are breastfeeding and not breastfeeding.

Evidence
level 4

The risk of VTE is considered the same in women after childbirth, whether or not they are breastfeeding. The increased risk of VTE is most pronounced during pregnancy and in the first 3 weeks after childbirth. This risk declines rapidly during those first 3 weeks as coagulation factors return to pre-pregnancy levels and are nearing normal levels by 6 weeks.^{102–106}

Evidence
level 2+

A systematic review conducted to inform the World Health Organization Medical Eligibility Criteria (WHOMECE)¹⁰⁷ recommendation for CHC use among women after childbirth identified one cohort study¹⁰⁸ which provided direct evidence. The study¹⁰⁸ included 485 VTE reported events in 773 017 person-years and compared the risk of VTE between users and non-users of COC within the first year after childbirth. The study found that VTE rates were higher for CHC users compared to non-users at all time points after childbirth, but this was only statistically significant after 13 weeks following childbirth.

2.4.6 Female sterilisation

A Female sterilisation is a safe option for permanent contraception after childbirth.

A For sterilisation after childbirth, both Filshie clips and modified Pomeroy technique are effective. Filshie clip application is quicker to perform.

D Women should be advised that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits. However, women should not feel pressured into choosing LARC over female sterilisation.

Female sterilisation is a safe and effective method of permanent contraception for women.^{109,110} A Cochrane review¹⁰⁹ which included 19 RCTs involving 13 209 women reported that 1 year after sterilisation failure rates were low ($<5/1000$ women) for all methods of tubal occlusion, regardless of whether it was performed postpartum or as an interval procedure. There were no deaths reported with any method, and major morbidity related to the occlusion technique was rare. Of the studies, three RCTs (1632 women) related exclusively to postpartum sterilisation.

Evidence
level 1++

Sterilisations immediately after childbirth and as an interval procedure are commonly performed using partial salpingectomy and tubal occlusion (e.g. Filshie clips). The US Collaborative Review of Sterilization (CREST) trial¹¹¹ reported that postpartum partial salpingectomy has one of the lowest failure rates of all sterilisation techniques, with a 1-year failure rate of 0.6 per 1000 procedures and a 10-year failure rate of 7.5 per 1000 procedures. The failure rates for interval partial salpingectomy at 1 and 10 years were 7.3 and 20.1 per 1000 procedures, respectively.

Evidence
level 1++

A multicentre (Taiwan, Thailand, Panama and the Philippines) RCT¹¹² involving 14 000 postpartum women randomised to receive sterilisation by Filshie clip ($n=698$) or partial salpingectomy ($n=702$) reported a statistically significant difference in the cumulative pregnancy rates between the 2 groups. The 24-month pregnancy probability for the Filshie clip group was 0.017 compared to with 0.004 in the partial salpingectomy group ($p=0.04$). This increased risk of method failure associated with the Filshie clip was thought to relate to the physiological changes in the fallopian tubes as a result of pregnancy, which may interrupt the complete tubal occlusion by the Filshie clips; histological evidence has demonstrated a higher incidence of oedema in fallopian tubes of women after childbirth.¹¹³

However, a systematic review¹¹⁴ which included a pooled analysis of data from one RCT and three observational studies comparing the modified Pomeroy method and Filshie clip for postpartum sterilisation found no difference between the failure rates of the two methods (OR 0.76, 95% CI 0.30–1.95); and complication rates were similar. Based on one RCT,¹¹⁵ the review also reported that the use of Filshie clips was quicker to perform and was the preferred occlusion method of surgeons. Therefore, the review recommended that Filshie clips could be used as an alternative to the modified Pomeroy technique for sterilisation after childbirth.

Evidence
level 1+

Few medical conditions would absolutely restrict an individual's eligibility for female sterilisation. Specific precautions may apply in certain circumstances. These precautions are highlighted in the FSRH clinical guideline on *Male and Female Sterilisation*¹¹⁰ and the WHOMEC.¹⁰⁷

Evidence
level 4

All methods of contraception, including vasectomy (if appropriate), should be discussed with women requesting female sterilisation. Women should be made aware that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits such as reducing uterine bleeding with LNG-IUS use. However, it is important that women do not feel pressured into choosing LARC over female sterilisation.

C

Tubal occlusion should ideally be performed after some time has elapsed following childbirth. Women who request tubal occlusion to be performed at the time of a delivery should be advised of the possible increased risk of regret.

C

Clinicians should ensure that written consent to be sterilised at caesarean section is obtained and documented at least 2 weeks in advance of a planned elective caesarean section.

There is a need for women to be carefully counselled when sterilisation is requested in association with pregnancy. Regret has also been shown to increase after sterilisation associated with vaginal delivery.¹¹⁶ A number of studies^{117–119} have reported that the incidence of regret and dissatisfaction are increased when sterilisation is performed at the same time as caesarean section, particularly if women have felt pressured by a clinician.¹¹⁷ Data from the large, prospective, multicentre CREST cohort study¹¹⁸ undertaken in the USA reported that the relative risk of regret after combined caesarean section and sterilisation compared with interval sterilisation was 5.8 after 1 year and 3.3 after 2 years. This difference persisted for at least 5 years after sterilisation, when the incidence of regret in the combined caesarean section and sterilisation cohort was still twice that of the interval sterilisation cohort. Thus, sterilisation should not be performed concomitantly with caesarean section unless counselling has taken place and the decision is made at a time separate from caesarean section or labour.

Evidence level 2+

Consent to conduct sterilisation at caesarean section should be obtained and documented at least 2 weeks in advance of a planned elective caesarean section.¹¹⁰ The decision to conduct sterilisation at an emergency or a planned caesarean section that is conducted preterm requires careful consideration, counselling and documentation.

Evidence level 4

Removal of the fallopian tubes and ovarian cancer

There is epidemiological evidence suggesting bilateral salpingectomy may protect against developing high-grade serous ovarian cancer. It is postulated that this may be because some epithelial cancers may originate in tubal epithelium.¹²⁰ The RCOG advised that women should be carefully counselled for removal of fallopian tubes, if their family is complete and they are undergoing pelvic surgery.¹²¹ This may be also relevant to women being sterilised after childbirth.

2.4.7 Barrier methods

D

Male and female condoms can be safely used by women after childbirth.

D

Women choosing to use a diaphragm should be advised to wait at least 6 weeks after childbirth before having it fitted because the size of diaphragm required may change as the uterus returns to normal size.

Condoms (male and female) can be used without restriction at any time by women after childbirth.¹⁰⁷ However, given their high failure rates (percentage of women experiencing an unintended pregnancy within the first year of use) with typical use, they are considered one of the least effective contraceptive methods.²⁰

Evidence level 4

Diaphragms are unsuitable until 6 weeks after childbirth when uterine involution is complete and discomfort has been resolved.¹⁰⁷ A different size of diaphragm may be required for postpartum women who have used this method previously. Another method of contraception should be used from Day 21 until the woman is able to insert and remove a correctly fitted diaphragm.

Evidence
level 4

2.4.8 Fertility awareness methods (FAM)

D

Fertility awareness methods (FAM) can be used by women after childbirth. However, women should be advised that because FAM relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after childbirth and during breastfeeding.

Women should be advised that fertility awareness methods (FAM) should be used carefully in order to ensure maximum effectiveness. The effectiveness of FAM can be improved when a combination of indicators are used and are taught by trained FAM practitioners.¹²² High failure rates are associated with typical use.²⁰ Refer to the FSRH guideline *Fertility Awareness Methods* for further guidance.¹²³

Evidence
level 4

Within the first 4 weeks after childbirth, women who are not breastfeeding are unlikely to have sufficient ovarian function to produce detectable fertility signs or require FAM. Although the risk of pregnancy is low during the first 4 weeks following childbirth, women wishing to use a method of contraception during this time should be offered an alternative method ([See Section 2.3](#)) Women who are not breastfeeding can rely on FAM as contraception from 4 weeks after childbirth as this is when ovarian function resumes and the fertility signs and/or hormonal changes become detectable.¹²³

Women who are primarily breastfeeding are unlikely to have sufficient ovarian function to produce detectable fertility signs and hormonal changes during the first 6 months following childbirth. Women wishing to use a method of contraception during this time should be offered an alternative method ([See Section 2.3](#)).

2.5 Useful links and support group: Contraception after childbirth

- ▶ [NHS Choices: Contraception guide](#)
- ▶ [NHS Choices: Pregnancy and baby](#)
- ▶ [The Family Planning Association \(FPA\)](#)

3. Contraception After Abortion

3.1 Discussion and provision of contraception after abortion

The clinical guideline and the recommendations in this section focus on the discussion and provision of contraception to women who have recently had an abortion and complements the RCOG clinical guideline on *The Care of Women Requesting Induced Abortion*,¹³ which considers the care of women from the point of requesting induced abortion.

3.1.1 When should contraception after abortion be discussed/provided?

D

Abortion service providers should give women requesting abortion opportunities to discuss contraception.

✓

Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.

The abortion assessment visit (when women attend to request an abortion) is an excellent opportunity for clinicians to discuss a woman's future fertility intentions and use of effective contraception after abortion.¹³ It is important that women are provided with information and counselling to help them make informed choices on suitable contraceptive methods after abortion.

Evidence level 4

However, two systematic reviews and meta-analyses^{23,124} showed that pre-abortion specialist contraceptive counselling alone did not influence effective contraceptive uptake or subsequent abortion.

Evidence level 1+

Studies from the UK^{125,126} reported that women value the opportunity to discuss contraception and to be offered their chosen method. One qualitative UK study¹²⁶ reported that more than half of the 46 women interviewed wanted or were happy to address contraceptive needs at the pre-abortion assessment visit and suggested that it was an 'obvious' time to do so. However whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.

Evidence level 3

After contraceptive discussion and counselling women need to be encouraged to make an informed choice and to reach a decision about their chosen method so that this can be initiated or planned for without delay.

✓

Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after abortion.

[See Section 1.4.3](#)

Click [here](#) to access a table that compares the percentage of women experiencing an unintended pregnancy during the first year of contraceptive use when the method is used ‘typically’ (which includes both incorrect and inconsistent use) or ‘perfectly’ (correct and consistent use).

C

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.

Women having an abortion should be provided with effective methods of contraception at the time of abortion or soon after since ovulation can resume very soon after abortion. Ovulation has been shown to occur within 1 month of first-trimester abortions in over 90% of women^{127–130} and has been reported to occur as early as 8 days after early medical abortion (EMA).¹³¹ Moreover, more than 50% of women have been reported to resume sexual activity within 2 weeks after abortion.¹³² If the immediate initiation of a woman’s chosen method is not appropriate or not preferred then a temporary (bridging) method should be offered until she can initiate her chosen method of contraception.

Evidence level 2+

Evidence from randomised controlled trials (RCTs) has shown that immediate initiation of contraception is associated with higher continuation rates and reduced risk of another unintended pregnancy ([see Section 3.1.2](#)).

Evidence level 1+

D

Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.

✓

Clinicians who are giving advice to women about contraception after abortion should ensure that this information is timely, up-to-date and accurate.

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.

[See Section 1.4.4](#)

Audio-visual formats can be useful in providing high-quality information about contraception in a non-judgemental way as part of routine care to women attending abortion services. Studies^{133,134} conducted in the UK have demonstrated that patient information provided via a digital video disk (DVD) was highly acceptable and informative to women attending abortion services.

Evidence level 2-

3.1.2 When can contraception be initiated after abortion?

B

A woman’s chosen method of contraception should be initiated immediately after abortion (medical and surgical).

B

Clinicians should be aware that insertion of intrauterine contraception (IUC) at the time of abortion is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk for another unintended pregnancy than when provision of IUC is delayed.

B

Clinicians should be aware that insertion of progestogen-only implants (IMP) at the time of abortion is convenient and highly acceptable to women. This has been associated with high continuation rates and a reduced risk for another unintended pregnancy than when provision of IMP is delayed.

[See Section 3.2](#)

Provision of highly effective contraceptive methods at the time of abortion has distinct advantages as (1) the woman is known not to be pregnant, (2) her motivation to use effective contraception may be high and (3) she is already accessing healthcare services. This is particularly relevant for methods such as the progestogen-only implant (IMP) and intrauterine contraception (IUC), which require the availability of a skilled clinician for insertion of the method.

The provision of long-acting reversible contraception (LARC) at the same time as abortion is both convenient and highly acceptable to women who wish to initiate LARC methods, avoiding the need for an extra visit which has been identified as a barrier to the uptake of LARC after abortion.^{43,135} Studies have reported that up to 50% of women scheduled for IUC insertions 2–3 weeks after surgical or medical abortion did not return for their appointment.^{136–138}

Evidence
level 3

A Cochrane review¹³⁹ showed that women were more likely to be ongoing IUC users at 6 months after surgical abortion if they had the device inserted immediately rather than given an appointment for insertion several weeks later. In addition, a RCT of immediate versus delayed insertion of IMP at medical abortion (1 hour after mifepristone administration) or 2–4 weeks later showed higher preference for immediate insertion, higher continuation rates of the IMP and fewer unintended pregnancies and abortion in the subsequent 6 months in the group randomised to immediate IMP.¹⁴⁰

Evidence
level 1+

3.1.3 Who should provide contraception to women after abortion?



Abortion service providers should be able to offer all methods of contraception, including LARC, to women before they are discharged from the service after abortion.



Abortion services should ensure that there are sufficient numbers of staff able to provide IUC or IMP so that women who choose these methods and are medically eligible can initiate them immediately after abortion.



Women 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.

[See Section 1.4.5](#)



Abortion services should have agreed pathways of care to local specialist contraceptive services [e.g. community sexual and reproductive health (SRH) services] for women with complex medical conditions or needs which may require specialist contraceptive advice.



There should be agreed pathways of care to local services for women who may require additional non-medical care and support.

[See Section 1.4.8](#)

3.1.4 Which contraceptive methods are most effective in preventing another abortion?



Clinicians should be aware that women who choose to commence LARC immediately after abortion have a significantly reduced likelihood of undergoing another abortion within 2 years, compared with women provided with medium-acting, short-acting or no contraceptive methods.

The risk of a woman presenting for another abortion is strongly associated with the type of contraceptive method she uses after abortion. RCTs and observational studies^{138,141–148} from a number of countries have reported that women provided with LARC immediately after abortion have a significantly reduced likelihood of another abortion within the subsequent 2 years compared with women provided with medium-acting, short-acting or no methods.

Evidence level 1++

IUC is highly effective in preventing another abortion. In one RCT,¹⁴¹ 751 women seeking first-trimester induced abortions were randomised into two groups. The intervention group ($n=375$) was provided with either the copper intrauterine device (Cu-IUD) or the levonorgestrel-releasing intrauterine system (LNG-IUS) immediately after surgical abortion (18.1%) or 2–4 weeks after medical abortion (81.9%). Women in the control group were prescribed oral contraceptives and advised to contact their primary healthcare unit for a follow-up visit and further contraceptive services according to national guidelines. At 1 year, the number of women requesting subsequent abortion was significantly lower in the intervention group than in the control group (5.4% vs 24%, $p=0.038$).

Observational studies have also found that the risk of having another abortion was statistically lower in women who used IUC after abortion compared to those who used oral contraceptives (OC). An odds ratio (OR) of 0.05 (95% confidence interval (CI) 0.01–0.41) was reported in one study¹³⁸ and an OR of 0.36 (95% CI 0.17–0.77) was reported in another study.¹⁴⁷ In one study¹⁴⁶ where women using IUC were compared to women using all other methods, the hazard ratio (HR) was 0.37 (95% CI 0.26–0.52). Compared to women using short-acting methods of contraception, the HR of subsequent abortion for women using the Cu-IUD and LNG-IUS were found to be 0.46 (95% CI 0.36–0.58) and 0.26 (95% CI 0.16–0.44), respectively.

Evidence
level 2++

Observational studies^{138,145,148} have reported that women who choose to use IMP after abortion have also been shown to have a reduced likelihood of subsequent abortion. One UK study¹³⁸ found that compared to women who used OC, the OR of women who used IMP after abortion having another abortion within 2 years was 0.06 (95% CI 0.02–0.23).

Observational studies^{138,142,147} have yielded inconsistent findings regarding the initiation of depot medroxyprogesterone acetate (DMPA) immediately after abortion and the risk of subsequent abortion. For example, one observational study in the UK¹³⁸ reported that compared to women using OC, women who used DMPA had a non-significant reduction in the likelihood of having another abortion within 2 years (OR 0.5, 95% CI 0.2–1.2). This may be because DMPA is a medium-acting method and requires greater user compliance for efficacy.

3.1.5 Record keeping and obtaining valid consent

D

Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method.

[See Section 1.4.7](#)

3.2 Medical eligibility

3.2.1 Which methods of contraception are safe to use after abortion?

D

Women should be advised that any method of contraception can be safely initiated immediately after an uncomplicated abortion.

D

IUC should not be inserted in the presence of postabortion sepsis.

According to the evidence-based 2016 UK Medical Eligibility Criteria (UKMEC),¹⁸ all methods of contraception are safe to use by women who have had an uncomplicated abortion ([see Table 6](#)). IUC should not be inserted in the presence of postabortion sepsis. When supporting a woman to choose an effective and acceptable method of contraception after an abortion, consideration must be given to the woman's personal characteristics and other existing medical conditions.

Evidence
level 4

Table 6: UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) categories applicable to a woman after an abortion¹³

Post-abortion	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
a) First trimester	1	1	1	1	1	1
b) Second trimester	2	2	1	1	1	1
c) Postabortion sepsis	4	4	1	1	1	1

CHC, combined hormonal contraception; Cu-IUD, copper intrauterine device; DMPA, depot medroxyprogesterone acetate (progestogen-only injectable); IMP, progestogen-only implant; LNG-IUS, levonorgestrel-releasing intrauterine system; POP, progestogen-only pill.

Definition of the UKMEC categories can be found [here](#).

The RCOG guideline on *The Care of Women Requesting Induced Abortion*¹³ recommends that any chosen method of contraception may be initiated immediately after uncomplicated abortion. The World Health Organization guideline on *Safe Abortion: Technical and Policy Guidance for Health Systems*¹⁴⁹ states that for medical abortion, hormonal contraception can be started by the woman after taking the first pill of a medical abortion regimen, but confirmation that the abortion is complete should precede insertion of an IUC or sterilisation.

Evidence level 4

3.2.2 Is emergency contraception (EC) safe to use after abortion?



Emergency contraception (EC) is indicated for women who have had unprotected sexual intercourse (UPSI) from 5 days after abortion.



Women should be advised that any method of EC can be safely used after an uncomplicated abortion.

The guideline development group (GDG) recommends that emergency contraception (EC) is indicated for women who have had unprotected sexual intercourse (UPSI) from 5 days after abortion.

All methods of EC including oral levonorgestrel emergency contraception (LNG-EC) 1.5 mg and ulipristal acetate emergency contraception (UPA-EC) 30 mg and the copper intrauterine device (Cu-IUD) can be safely used by women after an abortion.¹⁸ A Cu-IUD is the most effective form of EC. The pregnancy rate after Cu-IUD for EC is about 1 in 1000.⁵⁹ The use of Cu-IUD for EC carries the same contraindications as use for regular contraception.¹⁸

3.2.3 Is additional contraception required after initiation of a method after abortion?



Women should be advised that additional contraceptive precautions (e.g. 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.

Table 7: Requirements for abstinence or additional contraceptive precautions when a method of contraception (which the woman is medically eligible to use) is initiated after abortion

Methods of contraception the woman is medically eligible to use	Initiation <5 days after abortion	Initiation ≥5 day after abortion
	Number of days of additional contraceptive precautions required (days)	
Copper intrauterine device	None**	None
Levonorgestrel-releasing intrauterine system		7
Progestogen-only pill (traditional/desogestrel)		2
Progestogen-only implant or injectable		7
Combined hormonal contraception		7*

*Except Qlaira[®] which requires 9 days of additional contraceptive precautions.

**Except estradiol-containing combined oral contraceptives which require additional precautions if started after Day 1

The GDG recommends that no additional contraception is necessary if contraception (for which the woman is medically eligible) is initiated immediately or within 5 days of abortion. However, if hormonal contraception is started 5 days or more after abortion, a woman is at risk of another pregnancy and thus additional contraceptive precautions (e.g. barrier methods/abstinence) are required ([see Table 7](#)).

3.3 Method-specific considerations

3.3.1 Intrauterine contraception (IUC)

A

IUC can be safely used by women after an uncomplicated abortion. Women may be advised that they may benefit from reduced uterine bleeding when using levonorgestrel-releasing intrauterine system (LNG-IUS).

There is little evidence on the insertion of IUC on the same day as medical abortion (expulsion of pregnancy). Available evidence for same-day insertion relates to reports within observational studies.¹³⁷ Most evidence for IUC insertion following medical abortion relates to insertion after several days have elapsed from expulsion.^{139,150}

Evidence level 1++

There is evidence from a Cochrane review¹³⁹ and a systematic review¹⁵¹ that the insertion of IUC immediately after uncomplicated surgical abortion is safe and practical. A meta-analysis of three RCTs reported in a Cochrane review¹³⁹ of 12 studies found that expulsion by 6 months was more likely in the group assigned to immediate insertion than in the group assigned to delayed insertion (RR 2.64, 95% CI 1.16–6.00) after surgical abortion. Ongoing use at 6 months was greater in the immediate insertion group compared to the delayed insertion group (RR 1.40, 95% CI 1.24–1.58). The analysis also showed a three-fold increase in risk of pregnancy in the delayed group compared with the immediate insertion group, although this was not statistically significant (RR 2.70, 95% CI 0.8–8.33). Risk of infection of the upper genital tract was similar for the two groups (OR 1, 95% CI 0.33–3.07).

Similarly, a systematic review of 19 studies¹⁵¹ reported that IUC insertion immediately after surgical abortion is not associated with an increased risk of adverse outcomes compared with use of other contraceptive methods or with no IUC insertion after abortion. It also found no increased risk of adverse outcomes compared with IUC insertion at times other than immediately after abortion.

Evidence
level 2++

IUC expulsion rates, while generally low, were higher in insertions performed after late first-trimester surgical abortions compared with those done after early first-trimester surgical abortions. Expulsion rates were also higher with IUC insertions performed after second-trimester surgical abortions compared with first-trimester surgical abortions. More recent RCTs not included in either systematic review reached the similar conclusion that immediate insertion of an IUC after abortion is safe.^{150,152,153}

There is some evidence that women who choose an LNG-IUS after surgical or medical abortion benefit from reduced menstrual blood loss.^{150,153} An RCT¹⁵³ which compared bleeding patterns of women who had Cu-IUD or LNG-IUS inserted immediately after surgical abortion found that LNG-IUS users experienced a higher incidence of amenorrhoea and an increased number of spotting days throughout the follow-up period. At 6 months, 35/37 (94.5%) women who used Cu-IUD reported normal bleeding patterns and the other two women had heavy bleeding. Of 34 women who used LNG-IUS, 19 (55.9%) reported a normal bleeding pattern, four (11.7%) reported amenorrhoea, five (14.7%) reported spotting and five (14.7%) reported heavy bleeding. The other RCT¹⁵⁰ which compared women randomised to early (5–9 days after mifepristone) or delayed (3–4 weeks after mifepristone) insertion of IUC reported no difference with regard to bleeding patterns between the two groups. The amount of postabortion bleeding was reduced in women with insertion of LNG-IUS compared to women with Cu-IUD.

Evidence
level 1+

D

With medical abortion, IUC can be inserted any time after expulsion of the pregnancy.

A

With surgical abortion IUC, can be inserted immediately after evacuation of the uterine cavity.

Given that many women having EMA (less than 9 weeks' gestation) go home to pass the pregnancy, there is little published evidence on insertion of IUC on the same day of expulsion with medical abortion. There is also a lack of evidence on insertion of IUC after mid-trimester abortion. Given the demonstration that insertion of IUC within 1 week of mifepristone is as safe as delayed insertion (2–3 weeks later) and the safety of insertion of IUC in the immediate postpartum period, the GDG recommends that IUC can be safely inserted after medical abortion immediately after expulsion of the pregnancy.

If women choose to delay the insertion of IUC, the return visit for insertion should be scheduled as soon as possible since women are more likely to attend and less likely to have resumed intercourse, according to one RCT.¹⁵⁰ There is no difference in complication rates between insertion conducted within 1 week of taking mifepristone or conducted 2–3 weeks later.¹⁵⁰

Evidence level 1+

For women having EMA for whom successful abortion has not been confirmed (e.g. who go home to pass the pregnancy), exclusion of ongoing pregnancy is necessary before insertion of IUC. Whilst an ultrasound will reliably exclude ongoing pregnancy, the presence of ultrasonically visible but clinically unimportant clot/tissue can lead to unnecessary intervention. Clinicians should only make a decision to evacuate the uterus on clinical signs and symptoms of incomplete abortion.

Evidence level 1+

Alternative methods of excluding an ongoing pregnancy after medical abortion (up to 63 days) include use of a low-sensitivity urine pregnancy test [detection limit 1000 international units (IU) human chorionic gonadotrophin (hCG)] conducted at 2 weeks after misoprostol administration.^{154–157} The use of a high-sensitivity urinary pregnancy test (HSUP) (typically 10–25 IU hCG) after EMA to exclude ongoing pregnancy is limited, due to false-positive results from the residual low circulating levels of hCG in the weeks after EMA. If a HSUP is used at 1 month after EMA then approximately one-quarter of women will have a positive result.¹⁵⁸ Multilevel urinary pregnancy tests that have a range of sensitivities for hCG have shown promise for excluding ongoing pregnancy from as early as Day 3 after medical abortion, but are not yet available for this purpose in the UK.¹⁵⁹

Thus, for exclusion of ongoing pregnancy prior to 2 weeks after EMA, ultrasound examination is required.

3.3.2 Progestogen-only contraception

B

Progestogen-only contraception can be safely started at any time, including immediately, after medical or surgical abortion.

The UKMEC¹⁸ recommends that progestogen-only contraception can be safely started at any time after surgical or medical abortion. Observational studies^{160,161} suggest that women who have immediate insertion of IMP after abortion report insertion at this time to be highly acceptable. Women who have immediate insertion also have higher continuation rates after 1 year compared with women who have delayed placement of IMP.^{92,162–164}

Evidence level 2+

B

Women should be advised that IMP can be safely initiated at the time of mifepristone administration.

Progestogen-only contraception can be safely initiated at the time of administration of mifepristone. There has been a concern that commencing progestogen-only contraception at the same time as mifepristone (a progesterone receptor modulator) might reduce the efficacy of medical abortion due to competition at the progesterone receptor. One RCT¹⁶⁵ from Mexico and the USA, which included 476 women undergoing EMA (≤ 9 weeks) randomised into receiving IMP either with mifepristone (Quickstart group, $n=236$) or after the abortion was complete (Afterstart group, $n=240$), showed no differences in success of the medical abortion. The study found that 3.9% and 3.8% of women in the Quickstart and Afterstart groups, respectively, had surgery to complete the abortion. The median days of bleeding was slightly but significantly higher in the Quickstart group than in the Afterstart group (12 vs 10, $p=0.03$). The incidence of heavy bleeding was nearly identical in both groups. The study also found that quick starting IMP enhanced patient satisfaction but found no evidence that it decreased unintended pregnancies 6 months later.

Evidence level 1+

A further randomised-controlled, equivalence trial¹⁴⁰ from Sweden and the UK included 538 women undergoing EMA (≤ 9 weeks) randomised to insertion of IMP 1 hour after mifepristone (immediate group, $n=277$) or at a follow-up 2–3 weeks later (delayed group, $n=261$). There was no significant difference in the efficacy of medical abortion in the immediate insertion group and the delayed insertion groups (94.2% vs 96.0%). However, a significantly ($p<0.001$) higher proportion of women in the immediate group received the IMP (98.9% insertion) compared to the delayed group (71.6% insertion). In addition, the study reported significantly fewer unintended pregnancies at 6 months in the immediate group compared to the delayed group (0.8% vs 3.8%, $p=0.018$). The study findings (which may be more relevant to the UK setting) suggest that IMP inserted on the day of mifepristone is safe, preferred by women, does not affect efficacy of medical abortion, but is associated with higher uptake and fewer subsequent unintended pregnancies than insertion several weeks later.

B

Women 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.

There is currently limited evidence on a possible impact of immediate initiation of DMPA on EMA. A recent RCT¹⁶⁶ from Mexico and the USA, which included 461 women undergoing medical abortion (up to 75 days' gestation) using a regimen of 200 mg mifepristone followed by 800 μ g misoprostol administered buccally 24–48 hours later at home. Women were randomised into receiving DMPA [150 mg intramuscular (IM)] either at the time of mifepristone administration (Quickstart group, $n=220$) or after the abortion (Afterstart group, $n=226$). The study showed no difference in need for surgical intervention between the groups. However, the study found that ongoing pregnancy rates were higher in the Quickstart group (8/220, 3.9%) compared to the Afterstart group (2/226, 0.9%). The difference was 2.7% (95% CI 0.4–5.6). The paper did not report the gestational age at treatment of those failures.

Evidence level 1+

The study also found that quick starting DMPA enhanced patient satisfaction and resulted in more women using the method in the short term (at 1 month) but no difference in use at 6 months.

Evidence level 1+

The study was designed and powered to examine needs for surgical intervention rather than ongoing pregnancy (which is less common). In addition, it is unknown whether similar findings would be observed with use of the subcutaneous SC formulation (Sayana Press[®]) at mifepristone since Sayana Press is a lower-dose (104 mg) preparation than the IM preparation (150 mg). Nevertheless, the GDG recommends that women should be advised that administration of DMPA (IM or SC) at the same time as mifepristone may be associated with a small increase in the risk of failure of EMA. Women who wish to start DMPA at time of mifepristone should be advised of the importance of confirming success of the procedure according to local clinic protocols. Women should be reminded that scant or absent bleeding may be due to failed medical abortion rather than hormonal method used. Under such circumstances, urgent medical review should be sought.

There is no evidence of an adverse effect of mifepristone on the efficacy of ongoing contraception. Two RCTs^{167,168} that have examined the impact of the progesterone receptor modulator ulipristal acetate (UPA) which is licensed for EC, have shown no effect on contraceptive action (number of days of pill-taking required to induce ovarian quiescence or hostile cervical mucus) of either a desogestrel-containing progestogen-only pill (POP) or combined oral contraceptive (COC) pill when commenced the day following administration of UPA.



Women 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.

Given the association between progestogen-only contraceptive methods and amenorrhoea, there is concern that women with a failed EMA (ongoing pregnancy) might wrongly attribute the lack of bleeding post-procedure to the fact they are using progestogen-only contraception. Women who commence progestogen-only contraception at the time of EMA should be clearly instructed on the signs/symptoms of an ongoing pregnancy, which should prompt the need for medical review even before any scheduled follow-up or urine pregnancy testing. The symptoms and signs of an ongoing pregnancy after an abortion include:

- ▶ Absent or scant bleeding
- ▶ Persisting symptoms of pregnancy such as nausea, breast tenderness, abdominal swelling
- ▶ Missed menstrual periods.

3.3.3 Combined hormonal contraception (CHC)

B Combined hormonal contraception (CHC) can be safely started immediately at any time after abortion.

A systematic review¹⁶⁹ which included three RCTs and four cohort studies reported that the use of COC immediately after completion of surgical or medical abortion is safe. Two RCTs^{170,171} have shown that immediate use of COC does not affect the success rate of the abortion procedure.

Evidence level 1+

Limited evidence from RCT and observational studies suggests that the combined transvaginal ring (CVR)¹⁷² and the combined transdermal patch (patch)^{173,174} are also safe to commence immediately after abortion.

The systematic review¹⁶⁹ also reported that immediate COC use after first-trimester medical^{170,171,175} or surgical abortion^{176–178} did not increase side effects or prolong vaginal bleeding compared with use of a placebo, Cu-IUD, non-hormonal contraceptive method or delayed COC use. Initiating COC after first-trimester surgical abortion is associated with a small, statistically significant increase in coagulation parameters compared with intrauterine device (IUD) use;¹⁷⁶ however, this is unlikely to be of clinical relevance.¹⁶⁹

3.3.4 Female sterilisation

D Female sterilisation is a safe option for permanent contraception after abortion.

✓

Women should be advised that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits. However, women should not feel pressured into choosing LARC over female sterilisation.

B

Tubal occlusion should ideally be performed after some time has elapsed after abortion. Women 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.

Few medical conditions would absolutely restrict an individual's eligibility for female sterilisation. Specific precautions may apply in certain circumstances as highlighted in the FSRH *Clinical Guideline on Male and Female Sterilisation*¹¹⁰ and the WHO Medical Eligibility Criteria (WHOMECE).¹⁰⁷

Evidence level 4

All methods of contraception, including vasectomy (if appropriate), should be discussed with women requesting female sterilisation. Women should be made aware that some methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits such as reducing uterine bleeding with LNG-IUS use. However, it is important that women do not feel pressured into choosing LARC over female sterilisation.

Tubal occlusion

The available evidence regarding risks of complication and failure associated with abortion at the time of sterilisation is conflicting. The FSRH/RCOG guideline¹¹⁰ notes that although the addition of sterilisation to a procedure for abortion does not seem to increase the complication rate already associated with abortion,¹⁷⁹ it has been argued that the complication rate associated with a combined procedure is higher than that associated with interval sterilisation.¹⁸⁰ Studies^{181–185} comparing abortion combined with laparoscopic sterilisation versus laparoscopic sterilisation alone found no significant differences in the complication rate between the two procedures. Given that concurrent surgical abortion and laparoscopic tubal ligation are typically performed under general anaesthesia, it had been suggested that anaesthesia-related risk can be minimised by performing the two procedures together.

Evidence
level 2+

An early casenote review study¹⁸⁶ that compared failure rates of laparoscopic sterilisation with non-laparoscopic methods found that the pregnancy rate was double if sterilisation was combined with abortion. However a large case-control study¹⁸⁷ failed to find any association between timing of the procedure and failure rate. The follow-up time was short and there were fewer suitable controls for the postabortion cases.

Some studies reported no difference in regret rates^{188–191} between women who underwent laparoscopic sterilisation at the same time as abortion (predominately first-trimester) and those who underwent interval sterilisation. Conversely, other studies^{192,193} have reported an increased rate of regret when sterilisation was performed at the same time as the abortion.

One RCT¹⁸¹ in which women were randomised to either undergo a combined abortion with laparoscopic sterilisation or an abortion with sterilisation as an interval procedure at least 6 weeks later reported that 32.8% of women did not return for their interval sterilisation. It is important to note that non-attendance does not necessarily indicate regret, but does suggest that some women may have changed their minds when they were able to reconsider their decision outside the stressful circumstances of an unintended pregnancy. This further emphasises the need for careful counselling when sterilisation is requested in association with pregnancy.

Evidence
level 1+

Transcervical approaches

There are no studies evaluating concurrent abortion and hysteroscopic tubal occlusion. The Essure[®] micro-insert manufacturer instructions for use¹⁹⁴ list both childbirth and abortion of a second-trimester pregnancy within the previous 6 weeks as contraindications for insertion. A recent narrative review on contraception after abortion noted that the procedure could be reasonably and safely accomplished before 6 weeks after the procedure in a woman who is no longer bleeding and has had adequate endometrial preparation with POP, DMPA or the LNG-IUS.¹⁹⁵

Evidence
level 4



Clinicians should ensure that consent from the woman to conduct female sterilisation at the same time as surgical abortion is taken and documented in advance of the abortion.

The GDG considered that consent to conduct a sterilisation at the same time as surgical abortion should be taken and documented in advance of the procedure. This requires careful consideration, counselling and documentation.

Removal of the fallopian tubes and ovarian cancer

There is epidemiological evidence suggesting bilateral salpingectomy may protect against developing high-grade serous ovarian cancer. It is postulated that this may be because some epithelial cancers may originate in tubal epithelium.¹²⁰ The RCOG advises that women should be carefully counselled for removal of fallopian tubes, if their family is complete and they are undergoing pelvic surgery.¹²¹ This may be also relevant to women being sterilised after abortion.

3.3.5 Barrier methods



Condoms (male and female) can be used by women after abortion.



Women choosing to use a diaphragm should be advised to wait at least 6 weeks after second-trimester abortion because the size of diaphragm required may change as the uterus returns to normal size.

Condoms (male and female) can be used without restriction at any time by women after abortion.¹⁰⁷ However, given their high failure rates (percentage of women experiencing an unintended pregnancy within the first year of use) with typical use, they are considered one of the least effective contraceptive methods.²⁰

Evidence level 4

Diaphragms are considered unsuitable until 6 weeks after second-trimester abortion as the required size of diaphragm may change as the uterus returns to normal size.¹⁰⁷ A different size diaphragm may be required for women who have used this method previously. Another method of contraception should be used until the woman is able to insert and remove a correctly fitted diaphragm.

3.3.6 Fertility awareness methods (FAM)



Fertility awareness methods (FAM) can be used by women after abortion. However, women should be advised that because FAM relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after abortion.

Women should be advised that fertility awareness methods (FAM) should be used carefully in order to ensure maximum effectiveness. The effectiveness of FAM can be improved when a combination of indicators are used and are taught by trained FAM practitioners.¹²² High failure rates are associated with typical use.²⁰ Refer to FSRH guideline *Fertility Awareness Methods* for further guidance.¹²³

Evidence
level 4

Shortly after abortion, signs of fertility may be disrupted and extreme caution is required. Any calendar-based method should not be relied upon until one menstrual period has occurred.

3.4 Useful links and support group: Contraception after abortion

- ▶ [NHS Choices: Contraception guide](#)
- ▶ [NHS Choices: Pregnancy and baby](#)
- ▶ [The Family Planning Association \(FPA\)](#)
- ▶ [British Pregnancy Advisory Service \(BPAS\)](#)
- ▶ [Marie Stopes UK](#)

4. Contraception After Ectopic Pregnancy or Miscarriage

4.1 Discussion and provision of contraception after ectopic pregnancy or miscarriage

For clinical guidance relating to the diagnosis and initial management of ectopic pregnancy and miscarriage, please refer to the RCOG Green-top guideline *Diagnosis and Management of Ectopic Pregnancy*¹⁵ and the NICE guideline *Ectopic Pregnancy and Miscarriage*.¹⁴

The recommendations covered in this section apply only to diagnosed/confirmed ectopic pregnancy (i.e. excludes pregnancy of unknown location) and/or miscarriage.

4.1.1 When should contraception be discussed/provided?

✓	Services providing care to women with ectopic pregnancy or miscarriage should give them opportunities to discuss their fertility intentions, contraception and preconception planning.
✓	Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.
D	If a woman wishes 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.
D	A woman's chosen method of contraception should ideally be initiated immediately after treatment for ectopic pregnancy or miscarriage.

Clinicians involved in the care of women who have had an ectopic pregnancy or miscarriage should give these women the opportunity to discuss their fertility intentions, use of contraception and preconception planning as part of their ongoing care. However, whenever contraceptive counselling is provided, care should be taken to ensure that women do not feel under pressure to choose a method of contraception. Most methods of contraception can be initiated immediately, but for some methods, such as intrauterine contraception (IUC), initiation will depend on whether the ectopic pregnancy or miscarriage is managed medically, surgically or expectantly.

If a woman wishes to delay or prevent a further pregnancy, contraception should be initiated as soon as possible given that ovulation can resume very soon after ectopic pregnancy or miscarriage. In the absence of direct evidence, the guideline development group (GDG) suggests that the resumption of ovulation after a miscarriage (first- or second-trimester) is likely to be similar to that after an induced abortion, which has been reported to occur as early as 8 days after a medical abortion.^{131,196}

Fertility can return within 1 month after surgical or medical treatment for ectopic pregnancy.^{197,198} A population-based cohort study¹⁹⁷ reported that among 140 women who had an ectopic pregnancy and attempted to become pregnant, 15% achieved a pregnancy within 1 month and 53% within 6 months.

Evidence level 2+



Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after ectopic pregnancy or miscarriage.

[See Section 1.4.3](#)

Click [here](#) to access a table that compares the percentage of women experiencing an unintended pregnancy during the first year of contraceptive use when the method is used 'typically' (which includes both incorrect and inconsistent use) or 'perfectly' (correct and consistent use).



Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.



Clinicians who are giving advice to women about contraception after ectopic pregnancy or miscarriage should ensure that this information is timely, up-to-date and accurate.



Comprehensive, unbiased and accurate information on contraceptive methods after ectopic pregnancy or miscarriage should be made available in different languages and in a range of formats including audio-visual.

[See Section 1.4.4](#)

4.1.2 How long should a woman wait before trying to conceive again after ectopic pregnancy or miscarriage?



Women 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.

One review⁵ that included three studies of miscarriage reported that women who conceived within 6 months of miscarriage had better outcomes (including less likelihood of preterm birth, low birthweight, subsequent miscarriage, abortion or ectopic pregnancy) when compared to women who had an interpregnancy interval (IPI) of 6 months or more.

Evidence level 2-

After use of methotrexate



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



Women should be advised that effective contraception can be started on the day of methotrexate administration or surgical management of ectopic pregnancy.

Methotrexate is widely used for treating ectopic pregnancy and is teratogenic.^{199,200} There are conflicting recommendations regarding the waiting period after methotrexate treatment before a woman should try to conceive again. Balancing the evidence and expert opinion, the GDG recommends that women who have had methotrexate should use effective contraception during and for at least 3 months after treatment in view of its teratogenic effects.

The Summary of Product Characteristics (SPC) for methotrexate²⁰¹ recommends that “appropriate measures should be taken (in both men and women) to avoid conception during and for at least 6 months after cessation of methotrexate therapy”. However, the RCOG¹⁵ recommends that “women should be advised to avoid sexual intercourse during treatment” and “to use reliable contraception for 3 months after methotrexate has been given because of the teratogenic risk”.

Evidence level 4

One retrospective observational study²⁰² evaluated the pregnancy outcomes of 125 women treated with methotrexate for ectopic pregnancy who subsequently conceived. Forty-five pregnancies occurred within 6 months of the last methotrexate treatment. The outcomes of those pregnancies were compared with the 80 pregnancies that occurred 6 months or more (mean 14.7, standard deviation 23.6) after the last methotrexate treatment. Fetal malformations and adverse outcomes including miscarriage rate for both groups were similar [odds ratio (OR) 1.00, 95% confidence interval (CI) 0.98–1.02]. Two narrative reviews^{5,203} which included the findings of an observational study²⁰² recommend that in light of limited evidence to confirm the exact safe timing of conception after methotrexate treatment, women who are planning to conceive should wait at least 3 months after stopping methotrexate treatment. However, conception within 3 months of methotrexate treatment for ectopic pregnancy should not be considered a definite indication for abortion, but would indicate the need for targeted assessment for fetal malformations.

Evidence level 2-

4.1.3 Who should provide contraception after ectopic pregnancy or miscarriage?

✓	Services involved in the care of women who have had an ectopic pregnancy or miscarriage should be able to offer all methods of contraception, including LARC, to women before they are discharged from the service.
✓	Services should ensure that there are sufficient numbers of staff able to provide intrauterine contraception (IUC) or progestogen-only implant (IMP) so that women who choose these methods and are medically eligible can initiate them immediately after treatment.
✓	Women 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.

[See Section 1.4.5](#)

- ✓ Services should have agreed pathways of care to local specialist contraceptive services [e.g. community sexual reproductive health (SRH) services] for women with complex medical conditions or needs which may require specialist contraceptive advice.
- ✓ Services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

[See Section 1.4.8](#)

4.1.4 Record keeping and obtaining valid consent

- D Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method of contraception.

[See Section 1.4.6](#)

4.2 Medical eligibility

4.2.1 Which contraceptive methods are safe to use after ectopic pregnancy or miscarriage?

- ✓ Clinicians should refer to the method-specific recommendations for abortion which may be extrapolated for use after ectopic pregnancy or miscarriage.
- D Women should be advised that any method of contraception can be safely initiated immediately after methotrexate administration or surgical treatment of ectopic pregnancy.
- D Women should be advised that any method of contraception can be safely initiated immediately after treatment for miscarriage.
- C IUC can be inserted after miscarriage as soon as expulsion has occurred at surgery or after medical or expectant management.
- C IUC should not be inserted in the presence of sepsis after ectopic pregnancy or miscarriage.

Although the term miscarriage is preferred to the outdated term 'spontaneous abortion', the WHOME¹⁰⁷, USME²⁰⁴ and UKME¹⁸ category for 'abortion' covers both spontaneous and therapeutic abortion. Many studies on abortion include ectopic pregnancies and spontaneous abortions (miscarriages). The GDG recommends that given the limited direct evidence on use of contraception after ectopic pregnancy or miscarriage, the method-specific considerations for this group of women may be extrapolated from the evidence relating to use of contraception by women after abortion. [See Section 3.3](#)

Evidence level 4

Table 8: Summary of UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) categories applicable to a woman after abortion (extrapolated to immediately after ectopic pregnancy and miscarriage)¹⁸

Post-abortion	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
a) First trimester	1	1	1	1	1	1
b) Second trimester	2	2	1	1	1	1
c) Postabortion sepsis	4	4	1	1	1	1

CHC, combined hormonal contraception; Cu-IUD, copper intrauterine device; DMPA, depot medroxyprogesterone acetate (progestogen-only injectable); IMP, progestogen-only implant; LNG-IUS, levonorgestrel-releasing intrauterine system; POP, progestogen-only pill.

Definition of the UKMEC categories can be found [here](#).

According to the 2016 UK Medical Eligibility Criteria (UKMEC),¹⁸ all methods of contraception are safe for use by women who have had an uncomplicated abortion. IUC should not be inserted in the presence of sepsis after ectopic pregnancy or miscarriage ([see Table 8](#)). The UKMEC also includes a category for 'past ectopic pregnancy' which applies to women with a history of ectopic pregnancy and does not specifically address contraceptive eligibility immediately after ectopic pregnancy.

Evidence level 4

When supporting a woman to choose an effective and acceptable method of contraception, consideration must be given to the woman's personal characteristics and other existing medical conditions.¹⁸

4.2.2 Is emergency contraception (EC) safe to use after ectopic pregnancy or miscarriage?



Emergency contraception (EC) is indicated if unprotected sexual intercourse (UPSI) takes place more than 5 days after methotrexate administration or surgical treatment of ectopic pregnancy.

B

Women should be advised that any method of EC can be safely used after ectopic pregnancy or miscarriage.

The GDG recommends that emergency contraception (EC) is indicated for a woman who has had unprotected sexual intercourse (UPSI) from 5 days after treatment for ectopic pregnancy or miscarriage. All methods of EC including oral EC levonorgestrel 1.5 mg (LNG-EC) and ulipristal acetate 30 mg (UPA-EC) and a copper intrauterine device (Cu-IUD) can be safely used by women after ectopic pregnancy or miscarriage.¹⁸ A Cu-IUD is the most effective form of EC. The pregnancy rate after Cu-IUD for EC is about 1 in 1000.⁵⁹ The use of Cu-IUD for EC carries the same contraindications and low risk of ectopic pregnancy as Cu-IUD used for routine contraception.⁸⁰

The European Active Surveillance Study for Intrauterine Devices (EURAS-IUD) study, which included 61 448 women from six countries in Europe, reported an ectopic pregnancy rate of 0.08 per 100 woman-years (95% CI 0.04–0.13) among women using a Cu-IUD as a regular method of contraception.²⁰⁵

Evidence level 2++

A Cochrane review²⁰⁶ of 100 trials and a systematic review²⁰⁷ of 136 studies reported that the use of oral EC has not been associated with an increased risk of ectopic pregnancy after contraceptive failure. UPA-EC has been available in the UK since 2009; recently published postmarketing surveillance data reported four ectopic pregnancies out of an estimated 1.4 million users.²⁰⁸

Evidence level 1++

4.2.3 Is additional contraception required after initiation of a method after ectopic pregnancy or miscarriage?

✓	Women should be advised that additional contraceptive precautions (e.g. 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.
✓	Women should be advised that additional contraceptive precautions (e.g. barrier methods/abstinence) are required if hormonal contraception is started 5 days or more after surgical treatment or administration of methotrexate for ectopic pregnancy. Additional contraceptive precaution is not required if contraception is initiated immediately or within 5 days of treatment of ectopic pregnancy.

The GDG recommends that provided the woman is medically eligible to use the method, no additional contraceptive measures are necessary if any method is initiated immediately or within 5 days of treatment for ectopic pregnancy or miscarriage. However, if hormonal contraception is started 5 days or more after treatment for ectopic pregnancy or miscarriage, a woman is at risk of another pregnancy and thus additional contraceptive precautions (e.g. barrier methods/abstinence) are required ([see Table 9](#)).

Table 9: Requirements for abstinence or additional contraceptive contraception when a contraceptive method is initiated after treatment for ectopic pregnancy or miscarriage

Methods of contraception the woman is medically eligible to use	Initiation <5 days after treatment for ectopic pregnancy or miscarriage	Initiation ≥5 days after treatment for ectopic pregnancy or miscarriage
	Number of days of additional contraceptive precautions required (days)	
Copper intrauterine device	None**	None
Levonorgestrel-releasing intrauterine system		7
Progestogen-only pill (traditional/desogestrel)		2
Progestogen-only implant or injectable		7
Combined hormonal contraception		7*

*Except Qlaira® which requires 9 days of additional contraceptive precautions.

**Except estradiol-containing combined oral contraceptives which require additional precautions if started after Day 1

4.3 Specific issues

4.3.1 Does hormonal contraception have an effect on bleeding after ectopic pregnancy or miscarriage?

There is a lack of evidence on the effect of hormonal methods of contraception on bleeding after ectopic pregnancy or miscarriage. Extrapolation of evidence on induced abortion would suggest no adverse effect of combined hormonal contraception (CHC) use on uterine bleeding (see [Section 3.3.3](#)).

4.3.2 What are the implications of recurrent miscarriage on contraceptive choice?

D

Women who have had recurrent early miscarriage (REM) should be investigated for any underlying causes. However, investigations should not lead to a delay in initiation of a contraceptive method if the woman does not wish to become pregnant.

D

Combined hormonal contraception (CHC) should be avoided by women with REM until antiphospholipid syndrome (APS) has been excluded.

If a woman has experienced recurrent miscarriage (the loss of three or more consecutive pregnancies), investigation into underlying causes is recommended, not least because of the psychological morbidity experienced by these women²⁰⁹ and the possibility of maternal or neonatal complications.²¹⁰ [See Resource 2](#) for a summary of the diagnostic criteria for antiphospholipid syndrome (APS) based on the international consensus statement on an update of the classification criteria for definite APS.²¹¹

Evidence level 4

If a woman does not wish to become pregnant again immediately then effective contraception should be commenced. Investigations should not delay contraceptive initiation.

Contraceptive eligibility may be influenced by the outcome of investigations as recurrent miscarriage has been attributed to a number of underlying risk factors, including known thrombogenic mutations^{209,212} and APS.^{209,213}

According to UKMEC,¹⁸ CHC is contraindicated (i.e. UKMEC 4) in women with positive antiphospholipid antibodies or known thrombogenic mutations (e.g. Factor V Leiden, Prothrombin mutation, Protein S, Protein C and antithrombin deficiencies). Therefore CHC should be avoided until APS can be excluded. Women with positive antiphospholipid antibodies or known thrombogenic mutations can safely use progestogen-only contraception (UKMEC 2) and IUC (UKMEC 1)¹⁸ ([see Table 10](#)).

Table 10: Summary of UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) categories applicable to a woman with positive antiphospholipid antibodies or known thrombogenic mutations¹⁸

Condition	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
Positive antiphospholipid antibodies	1	2	2	2	2	4
Known thrombogenic mutations (e.g. Factor V Leiden, prothrombin mutation, Protein S, Protein C and antithrombin deficiencies)	1	2	2	2	2	4

CHC, combined hormonal contraception; Cu-IUD, copper intrauterine device; DMPA, depot medroxyprogesterone acetate (progestogen-only injectable); IMP, progestogen-only implant; LNG-IUS, levonorgestrel-releasing intrauterine system; POP, progestogen-only pill.

Definition of the UKMEC categories can be found [here](#).

4.3.3 Is there any method associated with a risk of another ectopic pregnancy?

C

Women 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.

D

Women 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.

All contraceptive methods can effectively reduce the number of intrauterine and ectopic pregnancies. LARC is most effective in preventing any pregnancy. The absolute risk of ectopic pregnancies when contraception is used is extremely small.²¹⁴

Evidence level 2+

Women with a history of ectopic pregnancy are at a higher risk of another ectopic pregnancy. However, secondary prevention has been found to be problematic because of the paucity of risk factors that can be modified to diminish the odds of recurrence.²¹⁵ Nevertheless, it is important that women are informed of the small absolute risk of another ectopic pregnancy if pregnancy occurs when contraception is used.

When choosing a method of contraception, women with a history of ectopic pregnancy should be advised to consider the use of a LARC method since LARC methods are the most effective at preventing all pregnancies and thus an ectopic pregnancy. Women with a history of ectopic pregnancy should be advised to seek medical advice if they have symptoms suggestive of ectopic pregnancy while using any method of contraception.¹⁴ Even if a symptom is less common, it may still be significant. [See Resource 3](#) for a summary of the signs and symptoms of an ectopic pregnancy on clinical examination, based on the NICE clinical guideline¹⁴ *Ectopic Pregnancy and Miscarriage: Diagnosis and Initial Management*.

Evidence level 4

Combined hormonal contraception (CHC)

A review²¹⁶ of six case-control studies estimated that the absolute risk of ectopic pregnancy in women using combined oral contraceptive (COC) ranges from 0.7 to 19.9 ectopic pregnancies per 1000 woman-years. No study reporting on other types of CHC [e.g. the combined vaginal ring (CVR) or the patch] was identified.

Evidence
level 2+

Progestogen-only pill (POP)

Concerns have been raised that women using a low-dose progestogen-only pill (POP) might be at higher risk of ectopic pregnancy than women using other methods of contraception. This is believed to be due to the inconsistent inhibition of ovulation^{217,218} and the reduction in ciliary activity in the fallopian tubes that slows the passage of an ovum,²¹⁹ leading to an increased risk of tubal implantation.²²⁰

Evidence
level 4

The absolute risk of ectopic pregnancy in women using POP is significantly lower than women using condoms or no method. Ectopic pregnancy rates amongst POP users have been reported to range from about 3–20 ectopic pregnancies per 1000 woman-years.^{216,220}

Progestogen-only implant (IMP) and injectable (POI)

The absolute risk of ectopic pregnancy when using the progestogen-only implant (IMP) or progestogen-only injectable (POI) is very low. A systematic review²²¹ based on 53 studies of IMP and 28 studies of depot medroxyprogesterone acetate (DMPA) reported a very small number of ectopic pregnancies. Among 10 studies of DMPA, pregnancy rates ranged from 0.1–1.7 ectopic pregnancies per 1000 woman-years. One retrospective study²²² reported that of the 949 182 users of DMPA, there were 402 ectopic pregnancies (0.42 per 1000 women).

Evidence
level 2+

The systematic review²²¹ identified two studies^{223,224} that reported any pregnancies with use of IMP. Only one study²²⁴ reported any ectopic pregnancy. The study, a review of postmarketing surveillance data submitted to Australia's drug regulatory agency, reported five ectopic pregnancies out of 218 unintended pregnancies associated with IMP use. A review²²⁵ of clinical trials and marketing data on IMP reported that ectopic pregnancies represent 4.7% of all reported pregnancies, with an absolute rate of 0.2 ectopic pregnancies per 100 000 implants sold.

Intrauterine contraception (IUC)

C

Women who have had an ectopic pregnancy should be advised that IUC is one of the most effective methods of contraception and so the absolute risk of any pregnancy including ectopic pregnancy is extremely low.

C

Women 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.

The absolute risk of any pregnancy including ectopic pregnancy when using IUC is very low. The EURAS-IUD study, which included 61 448 women with newly inserted IUC (52 mg LNG-IUS or Cu-IUD) enrolled from six European countries between 2006 and 2012, reported validated 1-year follow-up information for 58 324 users. Both types of IUC were highly effective, with overall Pearl indices (PI) of only 0.06 pregnancies per 100 woman-years (95% CI 0.04–0.09) and 0.52 (95% CI 0.42–0.64) for the levonorgestrel-releasing intrauterine system (LNG-IUS) and Cu-IUD, respectively. The study²⁰⁵ reported an ectopic pregnancy rate for the LNG-IUS of 0.02 per 100 woman-years (95% CI 0.01–0.003) and for the Cu-IUD a rate of 0.08 per 100 woman-years (95% CI 0.04–0.13).

Evidence level 2+

Data from cohort studies^{226,227} reported ectopic pregnancy rates of 0–0.5 per 1000 woman-years among women using an IUC, compared with a rate of 3.25–5.25 per 1000 woman-years among women not using any contraception. A randomised controlled trial (RCT) reported a PI for the 13.5 mg LNG-IUS of 0.33 (95% CI 0.16–0.60) and a cumulative pregnancy rate of 0.9 per 100 women over a 3-year period.²²⁸

While the absolute risk of ectopic pregnancy is not increased by use of IUC, should a pregnancy occur with an IUC *in situ* then the likelihood of it being ectopic is greater than if a pregnancy were to occur without an IUC *in situ*. An early prospective study from the UK²²⁹ reported that among 90 pregnancies in women using IUC, 8.9% were ectopic. In a cross-sectional study²³⁰ of LNG-IUS users (17 360 users, totalling 58 600 woman-years) there were 64 pregnancies reported with a 52 mg LNG-IUS *in situ*. The risk of pregnancy was therefore low (5-year cumulative pregnancy rate of 0.5 per 100 users). However, of the 64 pregnancies, approximately half (53%) were ectopic. In the EURAS-IUD study,²⁰⁵ 52 mg LNG-IUS users appeared to experience fewer ectopic pregnancies than Cu-IUD users, but when pregnancy did occur, 5/13 (38.6%) were ectopic compared with 10/56 (17.9%) in Cu-IUD users.

Female sterilisation

C

Women should be informed that if pregnancy occurs after tubal occlusion, there is an increased risk of ectopic pregnancy and therefore the location of the pregnancy should be confirmed by ultrasound as soon as possible.

Pregnancies after female sterilisation are uncommon, but when they do occur there is an increased risk that the pregnancy will occur outside of the uterine cavity. The incidence of ectopic pregnancy after sterilisation varies depending on the method used to occlude the fallopian tubes.^{110,229–231}

Evidence level 2+

The US Collaborative Review of Sterilization (CREST) study,^{111,232} which followed 10 685 sterilised women for up to 14 years after their tubal ligation, estimated the 10-year cumulative probability of ectopic pregnancy as 7.3 per 1000 procedures (95% CI 5.0–9.6). The study also reported a 10-year cumulative probability of ectopic pregnancy of 17.1 per 1000 procedures (95% CI 9.8–24.4) and 7.3 per 1000 procedures (95% CI 1.6–12.9) for bipolar diathermy and spring-loaded clip, respectively. A more recent cohort study²³³ with a population of 44 829 women estimated the 10-year cumulative probability as 2.4 per 1000 procedures (95% CI 1.9–3.0).

4.4 Useful links and support group: Contraception after ectopic pregnancy or miscarriage

- ▶ [NHS Choices: Contraception guide](#)
- ▶ [NHS Choices: Ectopic pregnancy](#)
- ▶ [NHS Choices: Miscarriage](#)
- ▶ [The Family Planning Association \(FPA\)](#)
- ▶ [The Ectopic Pregnancy Trust](#)
- ▶ [Ectopic Pregnancy Foundation](#)
- ▶ [Miscarriage Association](#)

5. Contraception After Gestational Trophoblastic Disease (GTD)

5.1 Discussion and provision of contraception after GTD

For clinical guidance relating to the presentation, management, treatment and follow-up of gestational trophoblastic disease (GTD) including gestational trophoblastic neoplasia (GTN) please refer to the RCOG Green-top guideline *The Management of Gestational Trophoblastic Disease*.¹⁶

After surgical evacuation of complete hydatidiform mole, approximately 15–20% of women go on to develop GTN requiring chemotherapy.^{234–236} The risk after partial molar pregnancy is much lower, at around 0.5–1%.^{234,235} If human chorionic gonadotrophin (hCG) levels spontaneously revert to normal after uterine evacuation, the risk of post-molar GTN has been reported as only 0.4%.²³⁷

5.1.1 When should contraception be discussed/provided?



Services that provide care to women who have/had gestational trophoblastic disease (GTD) should give them opportunities to discuss their fertility intentions, contraception and preconception planning.



Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.

Clinicians involved in the care of women who have/had GTD should give these women the opportunity to discuss their fertility intentions, use of contraception and preconception planning as part of their ongoing care. Whenever contraceptive counselling is provided, care should be taken to ensure women do not feel under pressure to choose a method of contraception.



Women 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.

Women with GTD should be advised to avoid subsequent pregnancy until GTD monitoring is complete ([see Section 5.1.3](#)).

If a woman wishes to delay or prevent a further pregnancy, effective contraception should be initiated as soon as possible given that ovulation can resume rapidly after treatment for GTD. A case series²³⁸ of 52 women with complete hydatidiform mole and 15 women with partial hydatidiform mole reported that by 6 weeks after surgical evacuation, 18% of women had had their first ovulatory cycle and 40% of women ovulated when serum hCG was still above 10 IU/l. There has also been a case report²³⁹ of a pregnancy prior to hCG returning to baseline levels.

Evidence
level 3



Women should be informed about the effectiveness of the different contraceptive methods, including the superior effectiveness of long-acting reversible contraception (LARC), when choosing an appropriate method to use after GTD.

[See Section 1.4.3](#)

Click [here](#) to access a table which compares the percentage of women experiencing an unintended pregnancy during the first year of contraceptive use when the method is used 'typically' (which includes both incorrect and inconsistent use) or 'perfectly' (correct and consistent use).

D

Clinicians should adopt a person-centred approach when providing women with contraceptive counselling.



Clinicians who are giving advice to women about contraception after GTD should ensure that this information is timely, up-to-date and accurate.



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.

[See Section 1.4.4](#)

5.1.2 Are fertility and pregnancy outcomes affected after GTD?

C

Clinicians should reassure women with GTD that fertility and pregnancy outcomes are favourable after GTD, including after chemotherapy for gestational trophoblastic neoplasia (GTN). However, there is an increased risk of GTD in subsequent pregnancy.

Fertility rates after hydatidiform mole have been reported to be equivalent to those of the general population.^{240,241} Risk of GTD in subsequent pregnancy is about 1–2%.^{235,240–242} Fertility is preserved after chemotherapy for GTN in the vast majority.^{243,244} There has been concern that fertility levels may be reduced after chemotherapy for GTN, particularly multi-agent chemotherapy.²⁴⁵ However, evidence from case series^{243,246,247} suggests that pregnancy outcomes are favourable when compared to the general population, even in women who conceive within 12 months of treatment.

Evidence level 2+

5.1.3 How long should a woman wait after GTD before trying to conceive?

D

After complete molar pregnancy, women should be advised to avoid subsequent pregnancy for at least 6 months to allow human chorionic gonadotrophin (hCG) monitoring for ongoing GTD.

D After partial molar pregnancy, women should be advised to avoid pregnancy until two consecutive monthly hCG levels are normal.

D Women who have had chemotherapy for GTD should be advised to avoid pregnancy for 1 year after treatment is complete.

After molar pregnancy, hCG levels are monitored so that persistent GTD can be identified and treated. It is recommended that women avoid becoming pregnant during the period of hCG monitoring because it is not possible to distinguish between a hCG level that is rising because of a new pregnancy and that associated with persistent GTD. The first hCG measurement is made 4 weeks after uterine evacuation.

Evidence level 4

The period of hCG monitoring after evacuation of complete hydatidiform mole is 6 months from the first normal hCG level (or 6 months from evacuation of the uterus if the hCG level normalises by 8 weeks after evacuation). Because the risk of persistent GTD after partial molar pregnancy is much lower, follow-up continues only until two consecutive monthly hCG levels are normal; the monitoring period may therefore may be as short as 8 weeks.^{16,17,248}

After chemotherapy for GTN, women are advised to avoid pregnancy for at least 1 year.^{16,248} Low-risk GTN [based on its International Federation of Gynecology and Obstetrics (FIGO) score]^{234,249} is treated with single-agent chemotherapy; methotrexate is first line. Women with high-risk GTN receive multi-agent chemotherapy.

Evidence level 4

5.1.4 Who should provide contraception to women after GTD?

✓ Services involved in the care of women with GTD should be able to offer all methods of contraception, including LARC, to women before they are discharged from the service.

✓ Services should ensure that there are sufficient numbers of staff able to provide progestogen-only implant (IMP) so that women who choose this method and are medically eligible can initiate the method immediately after treatment.

✓ Women 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.

[See Section 1.4.5](#)



Services should have agreed pathways of care to local specialist contraceptive services [e.g. community sexual and reproductive health (SRH) services] for women with complex medical conditions or needs which may require specialist contraceptive advice.



Services should have agreed pathways of care to local services for women who may require additional non-medical care and support.

[See Section 1.4.8](#)

5.1.5 Record keeping and obtaining valid consent



Clinicians should clearly document the discussion and provision of contraception. Valid consent must be obtained before providing women with their chosen method of contraception.

[See Section 1.4.7](#)

5.2 Medical eligibility

5.2.1 Which contraceptive methods are safe to use after GTD?



Women should be advised that most methods of contraception can be safely used after treatment for GTD and can be started immediately after uterine evacuation, with the exception of intrauterine contraception (IUC).



IUC should not be inserted in women with persistently elevated hCG levels or malignant disease.



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 women with decreasing hCG levels following discussion with a GTD centre.

The current UK Medical Eligibility Criteria (UKMEC)¹⁸ which apply to women who have GTD is presented in [Table 11](#).

Evidence level 4

The UKMEC¹⁸ advises that women who have/had GTD can safely use progestogen-only contraception including progestogen-only implant (IMP), progestogen-only injectable (POI) and progestogen-only pill (POP). Combined hormonal contraception (CHC) [combined oral contraception (COC), combined transdermal patch (patch) and combined vaginal ring (CVR)] and diaphragms can also be safely used. These methods can be initiated on the same day as uterine evacuation for GTD.

Use of intrauterine contraception (IUC) by women who have/had GTD is dependent on the hCG level or the presence of malignant disease. [See Section 5.3.1](#).

Table 11: Summary of UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) categories for women who have/had gestational trophoblastic disease¹⁸

Gestational trophoblastic disease (GTD)	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
a) Undetectable hCG levels	1	1	1	1	1	1
b) Decreasing hCG levels	3	3	1	1	1	1
c) Persistently elevated hCG levels or malignant disease	4	4	1	1	1	1

CHC, combined hormonal contraception; Cu-IUD, copper intrauterine device; DMPA, depot medroxyprogesterone acetate (progestogen-only injectable); hCG, human chorionic gonadotropin; IMP, progestogen-only implant; LNG-IUS, levonorgestrel-releasing intrauterine system; POP, progestogen-only pill.

Definition of the UKMEC categories can be found [here](#).

5.2.2 Is emergency contraception (EC) safe to use after GTD?

✓	Emergency contraception (EC) is indicated if unprotected sexual intercourse (UPSI) takes place from 5 days after treatment for GTD.
D	Women should be advised that use of oral EC is safe after treatment for GTD. Insertion of copper intrauterine device (Cu-IUD) for EC may be considered in a specialist setting for women with decreasing hCG levels following discussion with a GTD centre.

The guideline development group (GDG) recommends that emergency contraception (EC) is indicated for a woman who has had unprotected sexual intercourse (UPSI) from 5 days after treatment for GTD as ovulation can resume very quickly.

Oral EC levonorgestrel 1.5 mg (LNG-EC) or ulipristal acetate 30 mg (UPA-EC) are safe to use after GTD.¹⁸ Use of copper intrauterine device (Cu-IUD) for EC may be considered in a specialist setting for women with decreasing hCG levels (UKMEC 3). Particular care should be taken when inserting a Cu-IUD given the concerns about the risk of perforation in the presence of GTD. A Cu-IUD is the most effective form of EC. The pregnancy rate after Cu-IUD for EC is about 1 in 1000.⁵⁹ Use of a Cu-IUD for EC carries the same contraindications as use for regular contraception.¹⁸

5.2.3 Is additional contraception required after initiation of a method after GTD?

✓	Women should be advised that additional contraceptive precautions (e.g. 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.
---	---

The GDG recommends that provided the woman is medically eligible to use the method, no additional contraception is necessary if any method is initiated immediately or within 5 days of treatment for GTD. However, if hormonal contraception is started 5 days or more after treatment for GTD, the woman is at risk of another pregnancy and thus additional contraceptive precautions (e.g. barrier methods/abstinence) are required ([see Table 12](#)).

Table 12: Requirements for abstinence or additional contraception when method of contraception (for which the woman is medically eligible to use) is initiated after treatment for gestational trophoblastic disease (GTD)

Methods of contraception the woman is medically eligible to use	Initiation <5 days after treatment for GTD	Initiation ≥5 days after treatment for GTD
	Number of days of additional contraceptive precautions required (days)	
Copper intrauterine device (Cu-IUD)	Cu-IUD should not be inserted in women with persistently elevated human chorionic gonadotrophin (hCG) levels or malignant disease. Insertion of Cu-IUD may be considered in a specialist setting for women with decreasing hCG levels following discussion with a GTD centre.	
	None	None
Levonorgestrel-releasing intrauterine system (LNG-IUS)	LNG-IUS should not be inserted in women with persistently elevated hCG levels or malignant disease. Insertion of LNG-IUS may be considered in a specialist setting for women with decreasing hCG levels following discussion with a GTD centre.	
	None	7
Progestogen-only pill (traditional/desogestrel)	None**	2
Progestogen-only implant or injectable		7
Combined hormonal contraception		7*

*Except Qlaira® which requires 9 days of additional contraceptive precautions.

**Except estradiol-containing combined oral contraceptives which require additional precautions if started after Day 1

5.3 Method-specific considerations

5.3.1 Intrauterine contraception (IUC)

D

IUC should not normally be inserted until hCG levels have normalised after GTD. Insertion of Cu-IUD as EC may be considered in a specialist setting for women with decreasing hCG levels following discussion with a GTD centre.

Current guidelines¹⁸ based on UK expert opinion recommend that IUC should not be inserted after GTD until hCG levels are normal because of a theoretical increased risk of uterine perforation and dissemination of the tumour by the insertion of the IUC. There are no reported data on the risk of uterine perforation with IUC insertion at the time of evacuation in women with GTD.

Evidence level 4

Studies that do exist include small numbers of Cu-IUD users, some inserted at the time of uterine evacuation^{250,251} and others after normalisation of hCG levels or at unknown times,^{252,253} but no mention is made of complications. The very limited evidence demonstrates no significant difference in the time to hCG regression or development of post-molar GTD among Cu-IUD users, users of other types of contraception and users of no contraceptive method.^{250–253} No studies consider use of

Evidence level 2-

the LNG-IUS.

Can women with suspected GTD use IUC?



IUC insertion at surgical evacuation where GTD is suspected but not confirmed should be made on an individual case basis based upon the individual woman's risk for GTD, clinical findings and her preference for IUC insertion at this time.

Neither UKMEC¹⁸ nor WHOME¹⁰⁷ makes recommendations as to whether a woman with suspected GTD can have IUC inserted at the time of surgical evacuation. Theoretical concerns are that IUC placement at surgical evacuation may be associated with a higher risk of uterine perforation and/or excessive bleeding if GTD is indeed present.

In the absence of evidence for safety, the GDG considers that IUC insertion at surgical evacuation where GTD is suspected but not confirmed should be made on an individual case basis based upon clinical findings and the woman's preference for IUC insertion at this time.

5.3.2 Hormonal contraception



Hormonal contraception can be started immediately after uterine evacuation for GTD.

In the 1970s, a retrospective cohort study²⁵⁴ reported that hCG levels reverted to normal more slowly and that there was a significantly increased risk of requiring chemotherapy for treatment of post-molar trophoblastic disease if COC was commenced while hCG levels remained elevated after evacuation of hydatidiform mole. On the basis of these data, it was recommended that hormonal contraception should be avoided until hCG levels returned to normal.¹⁶

Evidence level 2+

Two systematic reviews^{255,256} concluded that there was no clear evidence of an effect of oral contraceptives (OC) used during the follow-up of GTD on the development of post-molar trophoblastic disease (most studies included considered COC). The only randomised controlled trial (RCT)²³⁹ to address this issue commenced 108 women on COC and 108 on barrier contraception within 3 weeks of evacuation of complete hydatidiform mole. No significant difference in time to hCG regression or risk of post-molar trophoblastic disease was observed between the two groups. Prognostic factors for post-molar trophoblastic disease were not significantly different between the two groups; however, this study had significant loss to follow-up.

Evidence level 1-

Seven observational studies^{237,250,251,253,257-259} considered the effect of hormonal contraception started while hCG remained elevated on the time to hCG regression and risk of post-molar trophoblastic disease. Controls used non-hormonal contraception or no contraception. Five of the studies specifically considered COC,^{250,251,253,257,258} one 'oral contraception'²⁵⁹ and one 'hormonal contraception'.²³⁷ None of these studies demonstrated a statistically significant difference in the time to hCG regression or a statistically significant increase in risk of post-molar GTD. One cohort study²⁵⁰ of 299 women post-molar evacuation reported a significantly reduced risk of GTN with use of COC started within 2 weeks of evacuation.

Evidence level 2-

There are significant methodological limitations across all of these studies: samples were not randomised, numbers were small, different confounding factors were considered by different authors, and criteria for diagnosis of GTN were not consistent.

Evidence level 2-

Three studies^{237,251,258} included small numbers of women using depot medroxyprogesterone acetate (DMPA) and one included 43 users of the POP.²³⁷ Numbers were too small to detect differences in GTD outcomes between methods. The limited evidence found no effect of the use of DMPA on the course of GTD.

One RCT²⁵² comparing COC started once hCG levels had normalised after molar evacuation with the use of the Cu-IUD found no significant difference in risk of development of GTN.

Evidence level 1-

5.3.3 Female sterilisation

D Female sterilisation is a safe option for permanent contraception after GTD.



Women should be advised that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits. However, women should not feel pressured into choosing LARC over female sterilisation.

Few medical conditions would absolutely restrict an individual's eligibility for female sterilisation. Specific precautions may apply in certain circumstances. These precautions are highlighted in the FSRH clinical guideline on *Male and Female Sterilisation*¹¹⁰ and the WHOMECS.¹⁰⁷ All methods of contraception, including vasectomy (if appropriate), should be discussed with women requesting female sterilisation. Women should be made aware that some LARC methods are as, or more, effective than female sterilisation and may confer non-contraceptive benefits. However, it is important that women do not feel pressured into choosing LARC over female sterilisation.

Evidence level 4

D

Tubal occlusion should ideally be performed after some time has elapsed after surgical evacuation for GTD. Women 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.

There is no evidence on sterilisation at the time of surgical evacuation for GTD. Extrapolating evidence from sterilisation at the time of caesarean section, the GDG recommends that tubal occlusion at the time of treatment for GTD may not be appropriate given the possibility of regret associated with concomitance of both procedures. WHOMECS¹⁰⁷ recommends that women with persistently elevated hCG levels or malignant disease should delay being sterilised.

Evidence level 4

Removal of the fallopian tubes and ovarian cancer

There is epidemiological evidence suggesting bilateral salpingectomy may protect against developing high-grade serous ovarian cancer. It is postulated that this may be because some epithelial cancers may originate in tubal epithelium.¹²⁰ The RCOG advises that women should be carefully counselled for removal of fallopian tubes, if their family is complete and they are undergoing pelvic surgery.¹²¹ This may be also relevant to women being sterilised after GTD.

5.3.4 Barrier methods

D Condoms (male and female) can be used by women after treatment for GTD.

✓ Women who choose a diaphragm should be advised to wait at least 6 weeks after treatment for GTD because the required size of diaphragm may change as the uterus returns to normal size.

Condoms (male and female) can be used without restriction at any time by women who have/had GTD.¹⁰⁷ However, given their high failure rates (percentage of women experiencing an unintended pregnancy within the first year of use) with typical use, they are considered one of the least effective methods.²⁰

The GDG recommends that since the size of diaphragm may change as the uterus involutes, women choosing this method should be advised to wait until 6 weeks after treatment for GTD before diaphragm fitting. A different size diaphragm may be required for women who have used this method previously. Another method of contraception should be used until the woman is able to insert and remove a correctly fitted diaphragm.

5.3.5 Fertility awareness methods (FAM)

✓ Fertility awareness methods (FAM) can be used by women after treatment for GTD. However, women should be advised that because FAM relies on the detection of the signs and symptoms of fertility and ovulation, its use may be difficult after treatment for GTD.

Women should be advised that fertility awareness methods (FAM) should be used carefully in order to ensure maximum effectiveness. The effectiveness of FAM can be improved when a combination of indicators are used and are taught by trained FAM practitioners.¹²² High failure rates are associated with typical use.²⁰ Refer to FSRH guideline *Fertility Awareness Methods* for further guidance.¹²³

Shortly after treatment for GTD, signs of fertility may be disrupted and extreme caution is required. Any calendar-based method should not be relied upon until one menstrual period has occurred.

5.4 Specific issues

5.4.1 Is there any method associated with a risk of GTD in subsequent pregnancies?

D

Clinicians should inform women 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.

The population risk of molar pregnancy is 0.1–0.2%.²⁴² It is more common in women under the age of 18 years and over the age of 45 years and varies according to ethnic group.²³⁵ After one molar pregnancy, the risk of a repeat episode is about 1–2%.^{235,240,241}

Evidence level 3

Oral contraceptives (OC)

Studies have not assessed the effect of contraception used after GTD on the risk of GTD in subsequent pregnancies. The use of COC at some time prior to the index pregnancy, however, has been considered as an epidemiological risk factor for GTD in the general population.

Evidence level 4

All relevant studies^{260–269} were retrospective case-control, many involved small numbers of cases, and in most the numbers of cases exposed to OC were very small. Furthermore, the type of OC used was not specified in these studies. The evidence was also limited by women retrospectively reporting their prior contraceptive use and by potential confounding factors. Overall, there is no significant evidence that use of any contraceptive method increases the risk of GTD in a subsequent pregnancy.

Evidence level 2-

Copper intrauterine device (Cu-IUD)

A systematic review²⁶⁸ which included very limited evidence from three case-control studies^{260,262,269} suggested that GTD is not more common among previous users of Cu-IUD. The risk of GTD after use of contraceptive methods other than COC and a Cu-IUD is not reported in the literature.

Evidence level 3

5.5 Useful links and support group: Contraception after gestational trophoblastic disease

- ▶ [NHS Choices: Contraception guide](#)
- ▶ [The Family Planning Association \(FPA\)](#)
- ▶ [Cancer Research UK: About gestational trophoblastic tumours](#)
- ▶ [Hydatidiform Mole and Choriocarcinoma UK Information and Support Service](#)

Recommendations for Future Research

Overall, studies of higher quality are needed to inform clinical recommendations. Specific areas of research for each pregnancy outcome are suggested below.

Contraception after childbirth

- ▶ Acceptability and feasibility of antenatal contraceptive counselling delivered by community midwives in a UK National Health Service (NHS) maternity setting.
- ▶ Acceptability and feasibility of midwives and health advisors as providers of contraception after childbirth.
- ▶ Acceptability and feasibility of postplacental intrauterine contraception (IUC) in the UK NHS maternity setting.
- ▶ Effect of 30 mg ulipristal acetate for emergency contraception (UPA-EC) on breastfeeding.

Contraception after abortion

- ▶ Acceptability and feasibility of quick starting (same day) IUC after medical abortion (including mid-trimester).
- ▶ Effect of quick starting SC formulation of progestogen-only injectables (Sayana Press) at the time of giving mifepristone on outcome of early medical abortion (EMA).

Contraception after ectopic pregnancy or miscarriage

- ▶ Acceptability and feasibility and uptake of contraception delivered by early pregnancy units.
- ▶ Acceptability and feasibility of quick starting contraception at the time of medical management of ectopic pregnancy (using methotrexate).
- ▶ Acceptability and feasibility of quick starting contraception after medical or surgical management of miscarriage.

Contraception after gestational trophoblastic disease

- ▶ Safety, acceptability and feasibility of IUC at surgical evacuation.

References

Online references accessed on 16 December 2016.

- 1 Faculty of Sexual & Reproductive Healthcare (FSRH). *Postnatal Sexual and Reproductive Health*. 2009. <http://www.fsrh.org/documents/cec-ceu-guidance-postnatal-sep-2009/>.
- 2 Bexhell H, Guthrie K, Cleland K, *et al*. Unplanned pregnancy and contraceptive use in Hull and East Yorkshire. *Contraception* Published Online First: 28 October 2015.
- 3 Lakha F, Glasier A. Unintended pregnancy and use of emergency contraception among a large cohort of women attending for antenatal care or abortion in Scotland. *Lancet* 2006;**368**:1782–1787.
- 4 Heller R, Cameron S, Briggs R, *et al*. Postpartum contraception: a missed opportunity to prevent unintended pregnancy and short inter-pregnancy intervals. *J Fam Plann Reprod Health Care* 2016;**42**:93–98.
- 5 Bigelow CA, Bryant AS. Short interpregnancy intervals: an evidence-based guide for clinicians. *Obstet Gynecol Surv* 2015;**70**:458–464.
- 6 Smith GCS, Pell JP, Dobbie R. Interpregnancy interval and risk of preterm birth and neonatal death: retrospective cohort study. *Br Med J* 2003;**327**:313.
- 7 World Health Organization (WHO). *Report of a WHO Technical Consultation on Birth Spacing*. 2007. http://www.who.int/reproductivehealth/publications/family_planning/WHO_RHR_07_1/en/.
- 8 Department of Health. *A Framework for Sexual Health Improvement in England*. 2013. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/142592/9287-2900714-TSO-SexualHealthPolicyNW_ACCESSIBLE.pdf.
- 9 The Scottish Government. *Sexual Health and Blood Borne Virus Framework 2015–2020 Update*. 2015. <http://www.gov.scot/Resource/0048/00484414.pdf>.
- 10 Welsh Assembly Government. *Sexual Health and Wellbeing Action Plan for Wales, 2010–2015*. 2010. <http://gov.wales/docs/phhs/publications/101110sexualhealthen.pdf>.
- 11 The Scottish Government. *Pregnancy and Parenthood in Young People Strategy*. 2016. <http://www.gov.scot/Publications/2016/03/5858>.
- 12 Royal College of Obstetricians and Gynaecologists (RCOG). *Postpartum Family Planning* (Best Practice Paper No. 1). 2015.
- 13 Royal College of Obstetricians and Gynaecologists (RCOG). *The Care of Women Requesting Induced Abortion* (Evidence-based Guideline Number 7). 2011.
- 14 National Institute for Health and Care Excellence (NICE). *Ectopic Pregnancy and Miscarriage*. 2012. <http://www.nice.org.uk/guidance/cg154>.
- 15 Royal College of Obstetricians and Gynaecologists (RCOG). *Diagnosis and Management of Ectopic Pregnancy* (Green-top Guideline No. 21; joint with the Association of Early Pregnancy Units). 2016. <https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg21/>.
- 16 Royal College of Obstetricians and Gynaecologists (RCOG). *The Management of Gestational Trophoblastic Disease* (Green-top Guideline No. 38). 2010. <https://www.rcog.org.uk/globalassets/documents/guidelines/gt38managementgestational0210.pdf>.
- 17 Mangili G, Lorusso D, Brown J, *et al*. Trophoblastic disease review for diagnosis and management: a joint report from the International Society for the Study of Trophoblastic Disease, European Organisation for the Treatment of Trophoblastic Disease, and the Gynecologic Cancer InterGroup. *Int J Gynecol Cancer* 2014;**24**:S109–S116.
- 18 Faculty of Sexual & Reproductive Healthcare (FSRH). *UK Medical Eligibility Criteria for Contraceptive Use (UKMEC)*. 2016. <http://www.fsrh.org/standards-and-guidance/uk-medical-eligibility-criteria-for-contraceptive-use/>.
- 19 National Institute for Health and Care Excellence (NICE). *Long-acting Reversible Contraception (Update)*. 2014. <https://www.nice.org.uk/guidance/cg30/resources/guidance-longacting-reversible-contraception-update-pdf>.

- 20 Trussell J. Contraceptive efficacy. In: Hatcher R, Trussell J, Nelson A, *et al.* (eds), *Contraceptive Technology*. New York, NY: Ardent Media, 2011.
- 21 Garbers S, Meserve A, Kottke M, *et al.* Tailored health messaging improves contraceptive continuation and adherence: results from a randomized controlled trial. *Contraception* 2012;**86**:536–542.
- 22 George TP, DeCristofaro C, Dumas BP, *et al.* Shared decision aids: increasing patient acceptance of long-acting reversible contraception. *Healthcare*;3:205–218.
- 23 Ferreira ALCG, Lemos A, Figueiroa JN, *et al.* Effectiveness of contraceptive counselling of women following an abortion: a systematic review and meta-analysis. *Eur J Contracept Reprod Health Care* 2009;**14**:1–9.
- 24 Levy K, Minnis AM, Lahiff M, *et al.* Bringing patients' social context into the examination room: an investigation of the discussion of social influence during contraceptive counseling. *Womens Health Issues Off Publ Jacobs Inst Womens Health* 2015;**25**:13–21.
- 25 Dehlendorf C, Krajewski C, Borrero S. Contraceptive counseling: best practices to ensure quality communication and enable effective contraceptive use. *Clin Obstet Gynecol* 2014;**57**:659–673.
- 26 Parsons S, Bynner J. *New Light on Adult Literacy and Numeracy in Scotland: Evidence from the 2004 survey of the 1970 British Cohort Study (BCS70)*. 2008. <http://www.gov.scot/Resource/Doc/210035/0055503.pdf>.
- 27 *Adult Literacy, Numeracy and Problem Solving Skills in England* (BIS Research Paper Number 139). 2013. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/246534/bis-13-1221-international-survey-of-adult-skills-2012.pdf.
- 28 National Assembly for Wales. *Literacy and Numeracy in Wales*. 2013. <http://www.assembly.wales/Research%20Documents/Literacy%20and%20Numeracy%20in%20Wales%20-%20Research%20paper-03062013-246762/13-039-English.pdf>.
- 29 Wheeler R, Burge B, Sewell J, *et al.* *The International Survey of Adult Skills 2012: Adult Literacy, Numeracy and Problem Solving Skills in Northern Ireland*. Belfast: DELNI, 2013.
- 30 NHS Choices. Contraception guide. <http://www.nhs.uk/pages/home.aspx>.
- 31 Family Planning Association (fpa). <http://www.fpa.org.uk/>.
- 32 Faculty of Sexual & Reproductive Healthcare (FSRH). <http://www.fsrh.org>.
- 33 Faculty of Sexual & Reproductive Healthcare (FSRH). *Service Standards for Record Keeping*. 2014. <http://www.fsrh.org/standards-and-guidance/documents/clinical-standards-recordkeeping-july14/>.
- 34 Faculty of Sexual & Reproductive Healthcare (FSRH). *Service Standards on Obtaining Valid Consent in Sexual Health Services*. 2014. <http://www.fsrh.org/standards-and-guidance/documents/clinical-standards-consent-july2014/>.
- 35 National Institute for Health and Care Excellence (NICE). *Postnatal Care* (NICE Quality Standard QS37). 2013. <https://www.nice.org.uk/guidance/qs37>.
- 36 National Institute for Health and Care Excellence (NICE). *Postnatal Care up to 8 Weeks After Birth* (NICE Guideline CG37). 2006. <https://www.nice.org.uk/guidance/CG37>.
- 37 National Institute for Health and Care Excellence (NICE). *Domestic Violence and Abuse: Multi-agency Working* (NICE Guideline PH50). 2014. <http://www.nice.org.uk/guidance/ph50>.
- 38 Department of Health. *Domestic Violence and Abuse – Professional Guidance*. 2013. <https://www.gov.uk/government/publications/guidance-for-health-professionals-on-domestic-violence>.
- 39 NHS Scotland. *Domestic Abuse: What Health Workers Need to Know About Gender-based Violence*. 2009. http://www.gbv.scot.nhs.uk/wp-content/uploads/2009/12/GBV_Domestic-Abuse-A4-61.pdf.
- 40 National Institute for Health and Care Excellence (NICE). *Domestic Violence and Abuse* (NICE Quality Standard QS116). 2016. <https://www.nice.org.uk/guidance/qs116/chapter/introduction>.

- 41 Royal College of Obstetricians and Gynaecologists (RCOG). *Female Genital Mutilation and its Management* (Green-top Guideline No. 53). 2015.
<https://www.rcog.org.uk/globalassets/documents/guidelines/gtg-53-fgm.pdf>.
- 42 National Institute for Health and Care Excellence (NICE). *Antenatal and Postnatal Mental Health: Clinical Management and Service Guidance*. 2014. <http://www.nice.org.uk/guidance/CG192>.
- 43 Cameron S. Postabortal and postpartum contraception. *Best Pract Res Clin Obstet Gynaecol* 2014;**28**:871–880.
- 44 Aiken ARA, Aiken CEM, Trussell J, *et al*. Immediate postpartum provision of highly effective reversible contraception. *BJOG* 2015;**122**:1050–1051.
- 45 Glasier AF, Logan J, McGlew TJ. Who gives advice about postpartum contraception? *Contraception* 1996;**53**:217–220.
- 46 Lopez LM, Grey TW, Chen M, *et al*. Strategies for improving postpartum contraceptive use: evidence from non-randomized studies. *Cochrane Database Syst Rev* 2014;**11**:CD011298.
- 47 Lopez LM, Hiller JE, Grimes DA, *et al*. Education for contraceptive use by women after childbirth. *Cochrane Database Syst Rev* 2012;**8**:CD001863.
- 48 Smith KB, van der Spuy ZM, Cheng L, *et al*. Is postpartum contraceptive advice given antenatally of value? *Contraception* 2002;**65**:237–243.
- 49 Ogburn JAT, Espey E, Stonehocker J. Barriers to intrauterine device insertion in postpartum women. *Contraception* 2005;**72**:426–429.
- 50 Speroff L, Mishell DR. The postpartum visit: it's time for a change in order to optimally initiate contraception. *Contraception* 2008;**78**:90–98.
- 51 Goldthwaite LM, Shaw KA. Immediate postpartum provision of long-acting reversible contraception. *Curr Opin Obstet Gynecol* 2015;**27**:460–464.
- 52 Cohen R, Sheeder J, Arango N, *et al*. Twelve-month contraceptive continuation and repeat pregnancy among young mothers choosing postdelivery contraceptive implants or postplacental intrauterine devices. *Contraception* 2016;**93**:178–183.
- 53 Washington CI, Jamshidi R, Thung SF, *et al*. Timing of postpartum intrauterine device placement: a cost-effectiveness analysis. *Fertil Steril* 2015;**103**:131–137.
- 54 Gurtcheff SE, Turok DK, Stoddard G, *et al*. Lactogenesis after early postpartum use of the contraceptive implant: a randomized controlled trial. *Obstet Gynecol* 2011;**117**:1114–1121.
- 55 Lunniss H, Cameron S, Chen ZE. Views of general practitioners on providing contraceptive advice and long-acting reversible contraception at the 6-week postnatal visit: a qualitative study. *J Fam Plan Reprod Health Care* 2016;**42**:99–106.
- 56 World Health Organization (WHO). Cardiovascular disease and use of oral and injectable progestogen-only contraceptives and combined injectable contraceptives. *Contraception* 1998;**57**:315–324.
- 57 Mantha S, Karp R, Raghavan V, *et al*. Assessing the risk of venous thromboembolic events in women taking progestin-only contraception: a meta-analysis. *Br Med J* 2012;**345**:E4944.
- 58 Goldstein J, Cushman M, Badger GJ, *et al*. Effect of depomedroxyprogesterone acetate on coagulation parameter: a pilot study. *Fertil Steril* 2007;**87**:1267–1270.
- 59 Faculty of Sexual & Reproductive Healthcare (FSRH). *Emergency Contraception*. 2011.
<http://www.fsrh.org/documents/ceu-emergency-contraception-jan-2012/>.
- 60 Jatlaoui TC, Riley H, Curtis KM. Safety data for levonorgestrel, ulipristal acetate and Yuzpe regimens for emergency contraception. *Contraception* Published Online First: 3 November 2015.
- 61 electronic Medicines Compendium (eMC). HRA Pharma UK and Ireland Limited. Summary of Product Characteristics: ellaOne 30 mg. 2 March 2016.
<http://www.medicines.org.uk/emc/medicine/22280>.
- 62 Lopez LM, Grey TW, Stuebe AM, *et al*. Combined hormonal versus nonhormonal versus progestin-only contraception in lactation. *Cochrane Database Syst Rev* 2015;**3**:CD003988.
- 63 Phillips SJ, Tepper NK, Kapp N, *et al*. Progestogen-only contraceptive use among breastfeeding women: a systematic review. *Contraception* Published Online First: 26 September 2015.

- 64 Goldstuck ND, Steyn PS. Intrauterine contraception after cesarean section and during lactation: a systematic review. *Int J Womens Health* 2013;**5**:811–818.
- 65 Tepper NK, Phillips SJ, Kapp N, *et al.* Combined hormonal contraceptive use among breastfeeding women: an updated systematic review. *Contraception*; **94**:262–274.
- 66 Espey E, Ogburn T, Leeman L, *et al.* Effect of progestin compared with combined oral contraceptive pills on lactation: a randomized controlled trial. *Obstet Gynecol* 2012;**119**:5–13.
- 67 McNeilly AS. Effects of lactation on fertility. *Br Med Bull* 1979;**35**:151–154.
- 68 Kennedy KI, Rivera R, McNeilly AS. Consensus statement on the use of breastfeeding as a family planning method. *Contraception* 1989;**39**:477–496.
- 69 Díaz S, Rodríguez G, Marshall G, *et al.* Breastfeeding pattern and the duration of lactational amenorrhea in urban Chilean women. *Contraception* 1988;**38**:37–51.
- 70 Díaz S, Rodríguez G, Peralta O, *et al.* Lactational amenorrhea and the recovery of ovulation and fertility in fully nursing Chilean women. *Contraception* 1988;**38**:53–67.
- 71 Labbok MH, Hight-Laukaran V, Peterson AE, *et al.* Multicenter study of the Lactational Amenorrhea Method (LAM): I. Efficacy, duration, and implications for clinical application. *Contraception* 1997;**55**:327–336.
- 72 World Health Organization (WHO). The World Health Organization multinational study of breast-feeding and lactational amenorrhea. III. Pregnancy during breast-feeding. World Health Organization Task Force on Methods for the Natural Regulation of Fertility. *Fertil Steril* 1999;**72**:431–440.
- 73 Pérez A, Labbok MH, Queenan JT. Clinical study of the lactational amenorrhoea method for family planning. *Lancet* 1992;**339**:968–970.
- 74 Howie PW, McNeilly AS, Houston MJ, *et al.* Effect of supplementary food on suckling patterns and ovarian activity during lactation. *Br Med J Clin Res Ed* 1981;**283**:757–759.
- 75 Ingram J, Hunt L, Woolridge M, *et al.* The association of progesterone, infant formula use and pacifier use with the return of menstruation in breastfeeding women: a prospective cohort study. *Eur J Obstet Gynecol Reprod Biol* 2004;**114**:197–202.
- 76 Valdés V, Labbok MH, Pugin E, *et al.* The efficacy of the lactational amenorrhea method (LAM) among working women. *Contraception* 2000;**62**:217–219.
- 77 Information Services Division. *Breastfeeding Statistics Scotland (Financial year 2014/15)*. 2015. <https://isdscotland.scot.nhs.uk/Health-Topics/Child-Health/Publications/2015-10-27/2015-10-27-Breastfeeding-Report.pdf?4813784361>.
- 78 McAndrew F, Thompson J, Fellows L, *et al.* *Infant Feeding Survey 2010*. 2012. <http://www.hscic.gov.uk/catalogue/PUB08694/Infant-Feeding-Survey-2010-Consolidated-Report.pdf>.
- 79 Lopez LM, Bernholc A, Hubacher D, *et al.* Immediate postpartum insertion of intrauterine device for contraception. *Cochrane Database Syst Rev* 2015;**6**:CD003036.
- 80 Faculty of Sexual & Reproductive Healthcare (FSRH). *Intrauterine Contraception*. 2015. <http://www.fsrh.org/documents/ceuguidanceintrauterinecontraception/>.
- 81 Baldwin MK, Edelman AB, Lim JY, *et al.* Intrauterine device placement at 3 versus 6 weeks postpartum: a randomized trial. *Contraception* Published Online First: 11 December 2015.
- 82 Zerden ML, Stuart GS, Charm S, *et al.* Two-week postpartum intrauterine contraception insertion: a study of feasibility, patient acceptability and short-term outcomes. *Contraception* Published Online First: 20 August 2016.
- 83 Sonalkar S, Kapp N. Intrauterine device insertion in the postpartum period: a systematic review. *Eur J Contracept Reprod Health Care* 2015;**20**:4–18.
- 84 Dahlke JD, Terpstra ER, Ramseyer AM, *et al.* Postpartum insertion of levonorgestrel – intrauterine system at three time periods: a prospective randomized pilot study. *Contraception* 2011;**84**:244–248.

- 85 Chen BA, Reeves MF, Hayes JL, *et al.* Postplacental or delayed insertion of the levonorgestrel intrauterine device after vaginal delivery: a randomized controlled trial. *Obstet Gynecol* 2010;**116**:1079–1087.
- 86 Whitaker AK, Endres LK, Mistretta SQ, *et al.* Postplacental insertion of the levonorgestrel intrauterine device after cesarean delivery vs. delayed insertion: a randomized controlled trial. *Contraception* 2014;**89**:534–539.
- 87 Lester F, Kakaire O, Byamugisha J, *et al.* Intracesarean insertion of the Copper T380A versus 6 weeks postcesarean: a randomized clinical trial. *Contraception* 2015;**91**:198–203.
- 88 Levi EE, Stuart GS, Zerden ML, *et al.* Intrauterine device placement during cesarean delivery and continued use 6 months postpartum: a randomized controlled trial. *Obstet Gynecol* 2015;**126**:5–11.
- 89 Wilson S, Tennant C, Sammel MD, *et al.* Immediate postpartum etonogestrel implant: a contraception option with long-term continuation. *Contraception* 2014;**90**:259–264.
- 90 Woo I, Seifert S, Hendricks D, *et al.* Six-month and 1-year continuation rates following postpartum insertion of implants and intrauterine devices. *Contraception* Published Online First: 25 September 2015.
- 91 Ireland LD, Goyal V, Raker CA, *et al.* The effect of immediate postpartum compared to delayed postpartum and interval etonogestrel contraceptive implant insertion on removal rates for bleeding. *Contraception* 2014;**90**:253–258.
- 92 Tocce KM, Sheeder JL, Teal SB. Rapid repeat pregnancy in adolescents: do immediate postpartum contraceptive implants make a difference? *Am J Obstet Gynecol* 2012;**206**:481.e1–e7.
- 93 Lewis LN, Doherty DA, Hickey M, *et al.* Implanon as a contraceptive choice for teenage mothers: a comparison of contraceptive choices, acceptability and repeat pregnancy. *Contraception* 2010;**81**:421–426.
- 94 Brito MB, Ferriani RA, Quintana SM, *et al.* Safety of the etonogestrel-releasing implant during the immediate postpartum period: a pilot study. *Contraception* 2009;**80**:519–526.
- 95 Brito MB, Ferriani RA, Meijers JCM, *et al.* Effects of the etonogestrel-releasing contraceptive implant inserted immediately postpartum on maternal hemostasis: a randomized controlled trial. *Thromb Res* 2012;**130**:355–360.
- 96 electronic Medicines Compendium (eMC). Pfizer Limited. Summary of Product Characteristics: Depo-Provera 150 mg/ml Injection. 29 February 2016. <http://www.medicines.org.uk/emc/medicine/11121>.
- 97 electronic Medicines Compendium (eMC). Pfizer Limited. Summary of Product Characteristics: Sayana Press 104 mg/0.65 ml suspension for injection. <http://www.medicines.org.uk/emc/medicine/27798>.
- 98 Sapiro KE. A study of bleeding patterns with two injectable contraceptives given postpartum and the effect of two non-hormonal treatments. *Adv Contracept* 1991;**7**:379–387.
- 99 Murphy HM. Effect of depot medroxyprogesterone acetate on vaginal bleeding in the puerperium. *Br Med J* 1979;**2**:1400–1401.
- 100 electronic Medicines Compendium (eMC). <https://www.medicines.org.uk/emc/>.
- 101 Royal College of Obstetricians and Gynaecologists (RCOG). *Reducing the Risk of Venous Thromboembolism During Pregnancy and the Puerperium* (Green-top Guideline No. 37a). 2015. <https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg37a/>.
- 102 Kamel H, Navi BB, Sriram N, *et al.* Risk of a thrombotic event after the 6-week postpartum period. *N Engl J Med* 2014;**370**:1307–1315.
- 103 Sultan AA, West J, Tata LJ, *et al.* Risk of first venous thromboembolism in and around pregnancy: a population-based cohort study. *Br J Haematol* 2012;**156**:366–373.
- 104 Sultan AA, Tata LJ, West J, *et al.* Risk factors for first venous thromboembolism around pregnancy: a population-based cohort study from the United Kingdom. *Blood* 2013;**121**:3953–3961.
- 105 Tepper NK, Boulet SL, Whiteman MK, *et al.* Postpartum venous thromboembolism: incidence and risk factors. *Obstet Gynecol* 2014;**123**:987–996.

- 106 Jackson E, Curtis KM, Gaffield ME. Risk of venous thromboembolism during the postpartum period: a systematic review. *Obstet Gynecol* 2011;**117**:691–703.
- 107 World Health Organization (WHO). *WHO Medical Eligibility Criteria for Contraceptive Use* (5th edition). 2015. www.who.int/reproductivehealth/publications/family_planning/MEC-5/en/.
- 108 Petersen JF, Bergholt T, Nielsen AK, *et al*. Combined hormonal contraception and risk of venous thromboembolism within the first year following pregnancy. Danish nationwide historical cohort 1995–2009. *Thromb Haemost* 2014;**112**:73–78.
- 109 Lawrie TA, Kulier R, Nardin JM. Techniques for the interruption of tubal patency for female sterilisation. *Cochrane Database Syst Rev* 2015;**9**:CD003034.
- 110 Faculty of Sexual & Reproductive Healthcare (FSRH). *Male and Female Sterilisation*. 2014. <https://www.fsrh.org/standards-and-guidance/documents/cec-ceu-guidance-sterilisation-cpd-sep-2014/>.
- 111 Peterson HB, Xia Z, Hughes JM, *et al*. The risk of pregnancy after tubal sterilization: findings from the U.S. Collaborative Review of Sterilization. *Am J Obstet Gynecol* 1996;**174**:1161–1168; discussion 1168–1170.
- 112 Rodriguez MI, Seuc A, Sokal DC. Comparative efficacy of postpartum sterilisation with the titanium clip versus partial salpingectomy: a randomised controlled trial. *BJOG* 2013;**120**:108–112.
- 113 Hunt JL, Lynn AAA. Histologic features of surgically removed fallopian tubes. *Arch Pathol Lab Med* 2002;**126**:951–955.
- 114 Madari S, Varma R, Gupta J. A comparison of the modified Pomeroy tubal ligation and Filshie clips for immediate postpartum sterilisation: a systematic review. *Eur J Contracept Reprod Health Care* 2011;**16**:341–349.
- 115 Kohaut BA, Musselman BL, Sanchez-Ramos L, *et al*. Randomized trial to compare perioperative outcomes of Filshie clip vs. Pomeroy technique for postpartum and intraoperative cesarean tubal sterilization: a pilot study. *Contraception* 2004;**69**:267–270.
- 116 Chi IC, Petta CA, McPheeters M. A review of safety, efficacy, pros and cons, and issues of puerperal tubal sterilization – an update. *Adv Contracept* 1995;**11**:187–206.
- 117 Emens JM, Olive JE. Timing of female sterilisation. *Br Med J* 1978;**2**:1126.
- 118 Wilcox LS, Chu SY, Eaker ED, *et al*. Risk factors for regret after tubal sterilization: 5 years of follow-up in a prospective study. *Fertil Steril* 1991;**55**:927–933.
- 119 Grubb GS, Peterson HB, Layde PM, *et al*. Regret after decision to have a tubal sterilization. *Fertil Steril* 1985;**44**:248–253.
- 120 McAlpine JN, Hanley GE, Woo MMM, *et al*. Opportunistic salpingectomy: uptake, risks, and complications of a regional initiative for ovarian cancer prevention. *Am J Obstet Gynecol* 2014;**210**:471.e1–e11.
- 121 Royal College of Obstetricians and Gynaecologists (RCOG). *The Distal Fallopian Tube as the Origin of Non-Uterine Pelvic High-Grade Serous Carcinomas* (Scientific Impact Paper No. 44). 2014. <https://www.rcog.org.uk/globalassets/documents/guidelines/scientific-impact-papers/sip44hgscs.pdf>.
- 122 Knight, J. *The Complete Guide to Fertility Awareness*. Abingdon, UK: Routledge, 2016.
- 123 Faculty of Sexual & Reproductive Healthcare (FSRH). *Fertility Awareness Methods*. 2015. <http://www.fsrh.org/documents/ceuguidancefertilityawarenessmethods/>.
- 124 Stewart H, McCall SJ, McPherson C, *et al*. Effectiveness of peri-abortion counselling in preventing subsequent unplanned pregnancy: a systematic review of randomised controlled trials. *J Fam Plan Reprod Health Care* 2016;**42**:59–67.
- 125 Cameron ST, Glasier A, Johnstone A. Shifting abortion care from a hospital to a community sexual and reproductive health care setting. *J Fam Plan Reprod Health Care* 2017;**42**:127–132.
- 126 Purcell C, Cameron S, Lawton J, *et al*. Contraceptive care at the time of medical abortion: experiences of women and health professionals in a hospital or community sexual and reproductive health context. *Contraception* 2016;**93**:170–177.

- 127 Marrs RP, Kletzky OA, Howard WF, *et al.* Disappearance of human chorionic gonadotropin and resumption of ovulation following abortion. *Am J Obstet Gynecol* 1979;**135**:731–736.
- 128 Lähteenmäki P, Luukkainen T. Return of ovarian function after abortion. *Clin Endocrinol* 1978;**8**:123–132.
- 129 Cameron IT, Baird DT. The return to ovulation following early abortion: a comparison between vacuum aspiration and prostaglandin. *Acta Endocrinol (Copenh)* 1988;**118**:161–167.
- 130 Lähteenmäki P. The disappearance of HCG and return of pituitary function after abortion. *Clin Endocrinol* 1978;**9**:101–112.
- 131 Schreiber CA, Sober S, Ratcliffe S, *et al.* Ovulation resumption after medical abortion with mifepristone and misoprostol. *Contraception* 2011;**84**:230–233.
- 132 Boesen HC, Rørbye C, Nørgaard M, *et al.* Sexual behavior during the first eight weeks after legal termination of pregnancy. *Acta Obstet Gynecol Scand* 2004;**83**:1189–1192.
- 133 Powell-Jackson R, Glasier A, Cameron ST. Benefits of using a digital video disk for providing information about abortion to women requesting termination of pregnancy. *Contraception* 2010;**81**:537–541.
- 134 Michie L, Cameron ST, Glasier A, *et al.* Giving information about the contraceptive implant using a DVD: is it acceptable and informative? A pilot randomised study. *J Fam Plan Reprod Health Care* 2015;**42**:194–200.
- 135 Stanek AM, Bednarek PH, Nichols MD, *et al.* Barriers associated with the failure to return for intrauterine device insertion following first-trimester abortion. *Contraception* 2009;**79**:216–220.
- 136 Gillett PG, Lee NH, Yuzpe AA, *et al.* A comparison of the efficacy and acceptability of the Copper-7 intrauterine device following immediate or delayed insertion after first-trimester therapeutic abortion. *Fertil Steril* 1980;**34**:121–124.
- 137 Cameron ST, Berugoda N, Johnstone A, *et al.* Assessment of a 'fast-track' referral service for intrauterine contraception following early medical abortion. *J Fam Plan Reprod Health Care* 2012;**38**:175–178.
- 138 Cameron ST, Glasier A, Chen ZE, *et al.* Effect of contraception provided at termination of pregnancy and incidence of subsequent termination of pregnancy. *BJOG* 2012;**119**:1074–1080.
- 139 Okusanya BO, Oduwole O, Effa EE. Immediate postabortal insertion of intrauterine devices. *Cochrane Database Syst Rev* 2014;**7**:CD001777.
- 140 Hognert H, Kopp Kallner H, Cameron S, *et al.* Immediate versus delayed insertion of an etonogestrel releasing implant at medical abortion – a randomized controlled equivalence trial. *Hum Reprod* **31**:2484–2490. [Accepted for publication].
- 141 Pohjoranta E, Mentula M, Gissler M, *et al.* Provision of intrauterine contraception in association with first trimester induced abortion reduces the need of repeat abortion: first-year results of a randomized controlled trial. *Hum Reprod* 2015;**30**:2539–2546.
- 142 Roberts H, Silva M, Xu S. Post abortion contraception and its effect on repeat abortions in Auckland, New Zealand. *Contraception* 2010;**82**:260–265.
- 143 Ames CM, Norman WV. Preventing repeat abortion in Canada: is the immediate insertion of intrauterine devices postabortion a cost-effective option associated with fewer repeat abortions? *Contraception* 2012;**85**:51–55.
- 144 Langston AM, Joslin-Roher SL, Westhoff CL. Immediate postabortion access to IUDs, implants and DMPA reduces repeat pregnancy within 1 year in a New York City practice. *Contraception* 2014;**89**:103–108.
- 145 Heikinheimo O, Gissler M, Suhonen S. Age, parity, history of abortion and contraceptive choices affect the risk of repeat abortion. *Contraception* 2008;**78**:149–154.
- 146 Goodman S, Hendlish SK, Reeves MF, *et al.* Impact of immediate postabortal insertion of intrauterine contraception on repeat abortion. *Contraception* 2008;**78**:143–148.
- 147 Rose SB, Lawton BA. Impact of long-acting reversible contraception on return for repeat abortion. *Am J Obstet Gynecol* 2012;**206**:37.e1–e6.

- 148 Rose SB, Garrett SM, Stanley J. Immediate postabortion initiation of levonorgestrel implants reduces the incidence of births and abortions at 2 years and beyond. *Contraception* 2015;**92**:17–25.
- 149 World Health Organization (WHO). *Safe Abortion: Technical and Policy Guidance for Health Systems* (2nd edn). Geneva, Switzerland: WHO, 2012.
- 150 Saav I, Stephansson O, Gemzell-Danielsson K. Early versus delayed insertion of intrauterine contraception after medical abortion – a randomized controlled trial. *PLoS ONE* 2012;**7**:e48948.
- 151 Steenland MW, Tepper NK, Curtis KM, *et al.* Intrauterine contraceptive insertion postabortion: a systematic review. *Contraception* 2011;**84**:447–464.
- 152 Hu X, Li L, Zou Y, *et al.* A multicenter comparative study of UCu200, TCU380A, and medicated-IUD devices inserted immediately after vacuum aspiration. *Int J Gynaecol Obstet* 2013;**122**:65–69.
- 153 Bilgehan F, Dilbaz B, Karadag B, *et al.* Comparison of copper intrauterine device with levonorgestrel-bearing intrauterine system for post-abortion contraception. *J Obstet Gynaecol Res* 2015;**41**:1426–1432.
- 154 Oppegaard KS, Qvigstad E, Fiala C, *et al.* Clinical follow-up compared with self-assessment of outcome after medical abortion: a multicentre, non-inferiority, randomised, controlled trial. *Lancet* 2015;**385**:698–704.
- 155 Iyengar K, Paul M, Iyengar SD, *et al.* Self-assessment of the outcome of early medical abortion versus clinic follow-up in India: a randomised, controlled, non-inferiority trial. *Lancet Glob Health* 2015;**3**:e537–e545.
- 156 Cameron ST, Glasier A, Dewart H, *et al.* Telephone follow-up and self-performed urine pregnancy testing after early medical abortion: a service evaluation. *Contraception* 2012;**86**:67–73.
- 157 Michie L, Cameron ST. Simplified follow-up after early medical abortion: 12-month experience of a telephone call and self-performed low-sensitivity urine pregnancy test. *Contraception* 2014;**89**:440–455.
- 158 Perriera LK, Reeves MF, Chen BA, *et al.* Feasibility of telephone follow-up after medical abortion. *Contraception* 2010;**81**:143–149.
- 159 Blum J, Sheldon WR, Ngoc NT, *et al.* Randomized trial assessing home use of two pregnancy tests for determining early medical abortion outcomes at 3, 7 and 14 days after mifepristone. *Contraception* 2016;**94**:115–121.
- 160 Sonalkar S, Hou MY, Hou M, *et al.* Administration of the etonogestrel contraceptive implant on the day of mifepristone for medical abortion: a pilot study. *Contraception* 2013;**88**:671–673.
- 161 Church E, Sengupta S, Chia KV. The contraceptive implant for long acting reversible contraception in patients undergoing first trimester medical termination of pregnancy. *Sex Reprod Healthc* 2010;**1**:105–109.
- 162 Barros Pereira I, Carvalho RM, Graça LM. Intra-abortion contraception with etonogestrel subdermal implant. *Eur J Obstet Gynecol Reprod Biol* 2015;**185**:33–35.
- 163 Mark A, Sonalkar S, Borgatta L. One-year continuation of the etonogestrel contraceptive implant in women with postabortion or interval placement. *Contraception* 2013;**88**:619–623.
- 164 Madden T, Eisenberg DL, Zhao Q, *et al.* Continuation of the etonogestrel implant in women undergoing immediate postabortion placement. *Obstet Gynecol* 2012;**120**:1053–1059.
- 165 Raymond EG, Weaver MA, Tan Y-L, *et al.* Effect of immediate compared with delayed insertion of etonogestrel implants on medical abortion efficacy and repeat pregnancy: a randomized controlled trial. *Obstet Gynecol* 2016;**127**:306–312.
- 166 Raymond EG, Weaver MA, Louie KS, *et al.* Effects of depot medroxyprogesterone acetate injection timing on medical abortion efficacy and repeat pregnancy: a randomized controlled trial. *Obstet Gynecol* 2016;**128**:739–745.
- 167 Brache V, Cochon L, Duijkers IJM, *et al.* A prospective, randomized, pharmacodynamic study of quick-starting a desogestrel progestin-only pill following ulipristal acetate for emergency contraception. *Hum Reprod* 2015;**30**:2785–2793.

- 168 Cameron ST, Berger C, Michie L, *et al.* The effects on ovarian activity of ulipristal acetate when “quickstarting” a combined oral contraceptive pill: a prospective, randomized, double-blind parallel-arm, placebo-controlled study. *Hum Reprod* 2015;**30**:1566–1572.
- 169 Gaffield ME, Kapp N, Ravi A. Use of combined oral contraceptives post abortion. *Contraception* 2009;**80**:355–362.
- 170 Tang OS, Gao PP, Cheng L, *et al.* A randomized double-blind placebo-controlled study to assess the effect of oral contraceptive pills on the outcome of medical abortion with mifepristone and misoprostol. *Hum Reprod* 1999;**14**:722–725.
- 171 Tang OS, Xu J, Cheng L, *et al.* The effect of contraceptive pills on the measured blood loss in medical termination of pregnancy by mifepristone and misoprostol: a randomized placebo controlled trial. *Hum Reprod* 2002;**17**:99–102.
- 172 Fine PM, Tryggstad J, Meyers NJ, *et al.* Safety and acceptability with the use of a contraceptive vaginal ring after surgical or medical abortion. *Contraception* 2007;**75**:367–371.
- 173 Steinauer JE, Sokoloff A, Roberts EM, *et al.* Immediate versus delayed initiation of the contraceptive patch after abortion: a randomized trial. *Contraception* 2014;**89**:42–47.
- 174 Murthy AS, Creinin MD, Harwood B, *et al.* Same-day initiation of the transdermal hormonal delivery system (contraceptive patch) versus traditional initiation methods. *Contraception* 2005;**72**:333–336.
- 175 Martin CW, Brown AH, Baird DT. A pilot study of the effect of methotrexate or combined oral contraceptive on bleeding patterns after induction of abortion with mifepristone and a prostaglandin pessary. *Contraception* 1998;**58**:99–103.
- 176 Lähteenmäki P, Rasi V, Luukkainen T, *et al.* Coagulation factors in women using oral contraceptives or intrauterine contraceptive devices immediately after abortion. *Am J Obstet Gynecol* 1981;**141**:175–179.
- 177 Peterson WF. Contraceptive therapy following therapeutic abortion: an analysis. *Obstet Gynecol* 1974;**44**:853–857.
- 178 Niswonger JW, London GD, Anderson GV, *et al.* Oral contraceptives during immediate postabortal period. *Obstet Gynecol* 1968;**32**:325–327.
- 179 Fishburne JI, Edelman DA, Hulka JF, *et al.* Outpatient laparoscopic sterilization with therapeutic abortion versus abortion alone. *Obstet Gynecol* 1975;**45**:665–668.
- 180 Hernandez IM, Perry G, Katz AR, *et al.* Postabortal laparoscopic tubal sterilization. Results in comparison to interval procedures. *Obstet Gynecol* 1977;**50**:356–358.
- 181 Cheng MC, Chew SC, Cheong J, *et al.* Safety of postabortion sterilisation compared with interval sterilisation. A controlled study. *Lancet* 1979;**2**:682–685.
- 182 Akhter HH, Flock ML, Rubin GL. Safety of abortion and tubal sterilization performed separately versus concurrently. *Am J Obstet Gynecol* 1985;**152**:619–623.
- 183 Kwak HM, Moon YK, Song CH, *et al.* Timing of laparoscopic sterilization in abortion patients. *Obstet Gynecol* 1980;**56**:85–89.
- 184 Weil A. Laparoscopic sterilization with therapeutic abortion versus sterilization or abortion alone. *Obstet Gynecol* 1978;**52**:79–82.
- 185 Cheng MC, Roach RW. The safety of combined abortion-sterilization procedure. *Am J Obstet Gynecol* 1977;**129**:548–552.
- 186 Hughes GJ. Sterilisation failure. *Br Med J* 1977;**2**:1337–1339.
- 187 Chi IC, Lafe LE, Gardner SD, *et al.* An epidemiologic study of risk factors associated with pregnancy following female sterilization. *Am J Obstet Gynecol* 1980;**136**:768–773.
- 188 Cheng MC, Cheong J, Ratnam SS, *et al.* Psychosocial sequelae of abortion and sterilization: a controlled study of 200 women randomly allocated to either a concurrent or interval abortion and sterilization. *Asia-Ocean J Obstet Gynaecol AFOG* 1986;**12**:193–200.
- 189 Dueholm S, Zingenberg HJ, Sandgren G. Late sequelae after laparoscopic sterilization in the pregnant and non-pregnant woman. *Acta Obstet Gynecol Scand* 1987;**66**:227–231.

- 190 Leader A, Galan N, George R, *et al.* A comparison of definable traits in women requesting reversal of sterilization and women satisfied with sterilization. *Am J Obstet Gynecol* 1983;**145**:198–202.
- 191 Platz-Christensen JJ, Tronstad SE, Johansson O, *et al.* Evaluation of regret after tubal sterilization. *Int J Gynaecol Obstet* 1992;**38**:223–226.
- 192 Thranov I, Hertz J, Rytto N. Profile of Danish women undergoing reversal of sterilization, 1978–1983. *Acta Obstet Gynecol Scand* 1987;**66**:269–273.
- 193 Bartfai G, Kaali SG. Late sequelae following laparoscopic female sterilization. *Int J Fertil* 1989;**34**:67–70.
- 194 Conceptus Inc. Essure®. Instructions for use. ESS305 Purple handle. 2012.
http://www.essuremd.com/App_Themes/BaseTheme/PDFs/Link%20Essure%20IFU.pdf.
- 195 Micks E, Prager S. Plan A: postabortion contraception. *Clin Obstet Gynecol* 2014;**57**:751–762.
- 196 Ratten GJ. Resumption of ovulation after incomplete abortion. *Aust N Z J Obstet Gynaecol* 1972;**12**:217–219.
- 197 Job-Spira N, Bouyer J, Pouly JL, *et al.* Fertility after ectopic pregnancy: first results of a population-based cohort study in france. *Hum Reprod* 1996;**11**:99–104.
- 198 Fernandez H, Capmas P, Lucot JP, *et al.* Fertility after ectopic pregnancy: the DEMETER randomized trial. *Hum Reprod* 2013;**28**:1247–1253.
- 199 Feldkamp M, Carey JC. Clinical teratology counseling and consultation case report: low dose methotrexate exposure in the early weeks of pregnancy. *Teratology* 1993;**47**:533–539.
- 200 Lloyd ME, Carr M, McElhatton P, *et al.* The effects of methotrexate on pregnancy, fertility and lactation. *Q J Med Mon J Assoc Physicians* 1999;**92**:551–563.
- 201 electronic Medicines Compendium (eMC). www.medicines.org.uk/emc.
- 202 Svirsky R, Rozovski U, Vaknin Z, *et al.* The safety of conception occurring shortly after methotrexate treatment of an ectopic pregnancy. *Reprod Toxicol* 2009;**27**:85–87.
- 203 Hackmon R, Sakaguchi S, Koren G. Effect of methotrexate treatment of ectopic pregnancy on subsequent pregnancy. *Can Fam Physician Médecin Fam Can* 2011;**57**:37–39.
- 204 Centres for Disease Control and Prevention. *US Medical Eligibility Criteria for Contraceptive Use*. MMWR 2010;**59**:1–85.
- 205 Heinemann K, Reed S, Moehner S, *et al.* Comparative contraceptive effectiveness of levonorgestrel-releasing and copper intrauterine devices: the European Active Surveillance Study for Intrauterine Devices. *Contraception* 2015;**91**:280–283.
- 206 Cheng L, Che Y, Gülmezoglu AM. Interventions for emergency contraception. *Cochrane Database Syst Rev* 2012;**8**:CD001324.
- 207 Cleland K, Raymond E, Trussell J, *et al.* Ectopic pregnancy and emergency contraceptive pills: a systematic review. *Obstet Gynecol* 2010;**115**:1263–1266.
- 208 Levy DP, Jager M, Kapp N, *et al.* Ulipristal acetate for emergency contraception: postmarketing experience after use by more than 1 million women. *Contraception* 2014;**89**:431–433.
- 209 Rai R, Regan L. Recurrent miscarriage. *Lancet* 2006;**368**:601–611.
- 210 Kovalevsky G, Gracia CR, Berlin JA, *et al.* Evaluation of the association between hereditary thrombophilias and recurrent pregnancy loss: a meta-analysis. *Arch Intern Med* 2004;**164**:558–563.
- 211 Miyakis S, Lockshin MD, Atsumi T, *et al.* International consensus statement on an update of the classification criteria for definite antiphospholipid syndrome (APS). *J Thromb Haemost* 2006;**4**:295–306.
- 212 Rey E, Kahn SR, David M, *et al.* Thrombophilic disorders and fetal loss: a meta-analysis. *Lancet* 2003;**361**:901–908.
- 213 Wong LF, Porter TF, de Jesús GR. Recurrent early pregnancy loss and antiphospholipid antibodies: where do we stand? *Lupus* 2014;**23**:1226–1228.
- 214 Franks AL, Beral V, Cates W, *et al.* Contraception and ectopic pregnancy risk. *Am J Obstet Gynecol* 1990;**163**:1120–1123.
- 215 Butts S, Sammel M, Hummel A, *et al.* Risk factors and clinical features of recurrent ectopic pregnancy: a case control study. *Fertil Steril* 2003;**80**:1340–1344.

- 216 Larimore WL, Stanford JB. Ectopic pregnancy with oral contraceptive use has been overlooked. *Br Med J* 2000;**321**:450.
- 217 Rice C, Killick S, Hickling D, *et al.* Ovarian activity and vaginal bleeding patterns with a desogestrel-only preparation at three different doses. *Hum Reprod* 1996;**11**:737–740.
- 218 Rice CF, Killick SR, Dieben T, *et al.* A comparison of the inhibition of ovulation achieved by desogestrel 75 micrograms and levonorgestrel 30 micrograms daily. *Hum Reprod* 1999;**14**:982–985.
- 219 Pulkkinen MO, Jaakkola UM. Low serum progesterone levels and tubal dysfunction – a possible cause of ectopic pregnancy. *Am J Obstet Gynecol* 1989;**161**:934–937.
- 220 McCann MF, Potter LS. Progestin-only oral contraception: a comprehensive review. *Contraception* 1994;**50**:S1–S195.
- 221 Callahan R, Yacobson I, Halpern V, *et al.* Ectopic pregnancy with use of progestin-only injectables and contraceptive implants: a systematic review. *Contraception* 2015;**92**:514–522.
- 222 Borgatta L, Murthy A, Chuang C, *et al.* Pregnancies diagnosed during Depo-Provera use. *Contraception* 2002;**66**:169–172.
- 223 Xu H, Wade JA, Peipert JF, *et al.* Contraceptive failure rates of etonogestrel subdermal implants in overweight and obese women. *Obstet Gynecol* 2012;**120**:21–26.
- 224 Harrison-Woolrych M, Hill R. Unintended pregnancies with the etonogestrel implant (Implanon): a case series from postmarketing experience in Australia. *Contraception* 2005;**71**:306–308.
- 225 Graesslin O, Korver T. The contraceptive efficacy of Implanon: a review of clinical trials and marketing experience. *Eur J Contracept Reprod Health Care* 2008;**13 Suppl. 1**:4–12.
- 226 Sivin I. Dose- and age-dependent ectopic pregnancy risks with intrauterine contraception. *Obstet Gynecol* 1991;**78**:291–298.
- 227 Sivin I, Stern J. Health during prolonged use of levonorgestrel 20 mg/d and the Copper TCu 380Ag intrauterine contraceptive devices: a multicenter study. *Fertil Steril* 1994;**61**:70–77.
- 228 Nelson A, Apter D, Hauck B, *et al.* Two low-dose levonorgestrel intrauterine contraceptive systems: a randomized controlled trial. *Obstet Gynecol* 2013;**122**:1205–1213.
- 229 Vessey M, Meisler L, Flavel R, *et al.* Outcome of pregnancy in women using different methods of contraception. *Br J Obstet Gynaecol* 1979;**86**:548–556.
- 230 Backman T, Rauramo I, Huhtala S, *et al.* Pregnancy during the use of levonorgestrel intrauterine system. *Am J Obstet Gynecol* 2004;**190**:50–54.
- 231 Mol BW, Ankum WM, Bossuyt PM, *et al.* Contraception and the risk of ectopic pregnancy: a meta-analysis. *Contraception* 1995;**52**:337–341.
- 232 Peterson HB, Xia Z, Hughes JM, *et al.* The risk of ectopic pregnancy after tubal sterilization. U.S. Collaborative Review of Sterilization Working Group. *N Engl J Med* 1997;**336**:762–767.
- 233 Malacova E, Kemp A, Hart R, *et al.* Long-term risk of ectopic pregnancy varies by method of tubal sterilization: a whole-population study. *Fertil Steril* 2014;**101**:728–734.
- 234 Ngan HYS, Seckl MJ, Berkowitz RS, *et al.* Update on the diagnosis and management of gestational trophoblastic disease. *Int J Gynaecol Obstet* 2015;**131 Suppl. 2**:S123–S126.
- 235 Savage PM, Sita-Lumsden A, Dickson S, *et al.* The relationship of maternal age to molar pregnancy incidence, risks for chemotherapy and subsequent pregnancy outcome. *J Obstet Gynaecol* 2013;**33**:406–411.
- 236 Matsui H, Iitsuka Y, Suzuka K, *et al.* Subsequent pregnancy outcome in patients with spontaneous resolution of HCG after evacuation of hydatidiform mole: comparison between complete and partial mole. *Hum Reprod* 2001;**16**:1274–1277.
- 237 Braga A, Maestá I, Short D, *et al.* Hormonal contraceptive use before hCG remission does not increase the risk of gestational trophoblastic neoplasia following complete hydatidiform mole: a historical database review. *BJOG* 2016;**123**:1330–1335.
- 238 Ho PC, Wong LC, Ma HK. Return of ovulation after evacuation of hydatidiform moles. *Am J Obstet Gynecol* 1985;**153**:638–642.

- 239 Curry SL, Schlaerth JB, Kohorn EI, *et al.* Hormonal contraception and trophoblastic sequelae after hydatidiform mole (a Gynecologic Oncology Group Study). *Am J Obstet Gynecol* 1989;**160**:805–809; discussion 809–811.
- 240 Eagles N, Sebire NJ, Short D, *et al.* Risk of recurrent molar pregnancies following complete and partial hydatidiform moles. *Hum Reprod* 2015;**30**:2055–2063.
- 241 Vargas R, Barroilhet LM, Esselen K, *et al.* Subsequent pregnancy outcomes after complete and partial molar pregnancy, recurrent molar pregnancy, and gestational trophoblastic neoplasia: an update from the New England Trophoblastic Disease Center. *J Reprod Med* 2014;**59**:188–194.
- 242 Sebire NJ, Fisher RA, Foscett M, *et al.* Risk of recurrent hydatidiform mole and subsequent pregnancy outcome following complete or partial hydatidiform molar pregnancy. *BJOG* 2003;**110**:22–26.
- 243 Wong JMK, Liu D, Lurain JR. Reproductive outcomes after multiagent chemotherapy for high-risk gestational trophoblastic neoplasia. *J Reprod Med* 2014;**59**:204–208.
- 244 Even C, Pautier P, Duvillard P, *et al.* Actinomycin D, cisplatin, and etoposide regimen is associated with almost universal cure in patients with high-risk gestational trophoblastic neoplasia. *Eur J Cancer* 2014;**50**:2082–2089.
- 245 Iwase A, Sugita A, Hirokawa W, *et al.* Anti-Müllerian hormone as a marker of ovarian reserve following chemotherapy in patients with gestational trophoblastic neoplasia. *Eur J Obstet Gynecol Reprod Biol* 2013;**167**:194–198.
- 246 Blagden SP, Foscett MA, Fisher RA, *et al.* The effect of early pregnancy following chemotherapy on disease relapse and foetal outcome in women treated for gestational trophoblastic tumours. *Br J Cancer* 2002;**86**:26–30.
- 247 Williams J, Short D, Dayal L, *et al.* Effect of early pregnancy following chemotherapy on disease relapse and fetal outcome in women treated for gestational trophoblastic neoplasia. *J Reprod Med* 2014;**59**:248–254.
- 248 Bolze P-A, Attia J, Massardier J, *et al.* Formalised consensus of the European Organisation for Treatment of Trophoblastic Diseases on management of gestational trophoblastic diseases. *Eur J Cancer* 2015;**51**:1725–1731.
- 249 Ngan, HY, Bender H, Benedet JL, *et al.* Gestational trophoblastic neoplasia, FIGO 2000 staging and classification. *In J Gynaecol Obstet* 2003; **83 Suppl. 1**; 175–177.
- 250 Deicas RE, Miller DS, Rademaker AW, *et al.* The role of contraception in the development of postmolar gestational trophoblastic tumor. *Obstet Gynecol* 1991;**78**:221–226.
- 251 Goldberg GL, Cloete K, Bloch B, *et al.* Medroxyprogesterone acetate in non-metastatic gestational trophoblastic disease. *BJOG* 1987;**94**:22–25.
- 252 Adewole IF, Oladokun A, Fawole AO, *et al.* Fertility regulatory methods and development of complications after evacuation of complete hydatidiform mole. *J Obstet Gynaecol* 2000;**20**:68–69.
- 253 Ho Yuen B, Burch P. Relationship of oral contraceptives and the intrauterine contraceptive devices to the regression of concentrations of the beta subunit of human chorionic gonadotropin and invasive complications after molar pregnancy. *Am J Obstet Gynecol* 1983;**145**:214–217.
- 254 Stone M, Dent J, Kardana A, *et al.* Relationship of oral contraception to development of trophoblastic tumour after evacuation of a hydatidiform mole. *BJOG* 1976;**83**:913–916.
- 255 Gaffield ME, Kapp N, Curtis KM. Combined oral contraceptive and intrauterine device use among women with gestational trophoblastic disease. *Contraception* 2009;**80**:363–371.
- 256 Costa HLFF, Doyle P. Influence of oral contraceptives in the development of post-molar trophoblastic neoplasia – a systematic review. *Gynecol Oncol* 2006;**100**:579–585.
- 257 Morrow P, Nakamura R, Schlaerth J, *et al.* The influence of oral contraceptives on the postmolar human chorionic gonadotropin regression curve. *Am J Obstet Gynecol* 1985;**151**:906–914.
- 258 Eddy GL, Schlaerth JB, Nalick RH, *et al.* Postmolar trophoblastic disease in women using hormonal contraception with and without estrogen. *Obstet Gynecol* 1983;**62**:736–740.
- 259 Berkowitz RS, Goldstein DP, Marean AR, *et al.* Oral contraceptives and postmolar trophoblastic disease. *Obstet Gynecol* 1981;**58**:474–477.

- 260 Kashanian M, Baradaran HR, Teimoori N. Risk factors for complete molar pregnancy: a study in Iran. *J Reprod Med* 2009;**54**:621–624.
- 261 Parazzini F, Cipriani S, Mangili G, *et al*. Oral contraceptives and risk of gestational trophoblastic disease. *Contraception* 2002;**65**:425–457.
- 262 Brinton LA, Wu BZ, Wang W, *et al*. Gestational trophoblastic disease: a case-control study from the People's Republic of China. *Am J Obstet Gynecol* 1989;**161**:121–127.
- 263 Berkowitz RS, Bernstein MR, Harlow BL, *et al*. Case-control study of risk factors for partial molar pregnancy. *Am J Obstet Gynecol* 1995;**173**:788–794.
- 264 Messerli ML, Lilienfeld AM, Parmley T, *et al*. Risk factors for gestational trophoblastic neoplasia. *Am J Obstet Gynecol* 1985;**153**:294–300.
- 265 Palmer JR, Driscoll SG, Rosenberg L, *et al*. Oral contraceptive use and risk of gestational trophoblastic tumors. *J Natl Cancer Inst* 1999;**91**:635–640.
- 266 Baltazar JC. Epidemiological features of choriocarcinoma. *Bull World Health Organ* 1976;**54**:523–532.
- 267 Buckley JD, Henderson BE, Morrow CP, *et al*. Case-control study of gestational choriocarcinoma. *Cancer Res* 1988;**48**:1004–1010.
- 268 Curtis KM, Marchbanks PA, Peterson HB. Neoplasia with use of intrauterine devices. *Contraception* 2007;**75**:S60–S69.
- 269 Honoré LH. The intrauterine contraceptive device and hydatidiform mole: a negative association. *Contraception* 1986;**34**:213–219.

Appendices

Appendix 1: FSRH Clinical Guideline Development Process

Who has developed the guideline?

This guideline is produced by the Clinical Effectiveness Unit (CEU) with support from the Clinical Effectiveness Committee (CEC) of the Faculty of Sexual & Reproductive Healthcare (FSRH). The FSRH is a registered charitable organisation which funds the development of its own clinical guidelines. NHS Lothian is contracted to host the CEU in the Chalmers Centre and to provide the CEU's services using ring-fenced funding from the FSRH. No other external funding is received. Chalmers Centre supports the CEU in terms of accommodation, facilities, education, training and clinical advice for the members' enquiry service. As an organisation, NHS Lothian has no editorial influence over CEU guidelines, although staff members may be invited to join the CEU's multidisciplinary guideline development groups (GDG), in an individual professional capacity.

Development of the guideline was led by the secretariat (CEU staff) and involved the intended users of the guidelines (contraception providers) and patient/service user representatives as part of a multidisciplinary group. The scope of the guideline was informed by a scoping survey conducted amongst members of the FSRH and the Royal College of Obstetricians and Gynaecologists (RCOG) and amongst service users from three sexual and reproductive health services across the UK (Cardiff, Wales; London, England and Edinburgh, Scotland).

The first draft of the guideline was produced based on the final scope of the guideline agreed by the GDG. The first draft of the guideline (Version 0.1) was reviewed by the GDG and discussed at a face-to-face meeting held at the CEU (Edinburgh, Scotland) on 3 December 2015. A revised draft guideline (Version 0.2) was produced in response to comments received at the meeting. The draft guideline was revised again after further comments from the GDG, after which the draft guideline (Version 0.3) was sent to international and UK-based external independent reviewers suggested by the GDG at the face-to-face meeting. A further revision to the draft guideline was made to produce draft guideline (Version 0.4) which was put on the FSRH website for public consultation between 21 September and 19 October 2016. The revised draft guideline (Version 0.5) was sent to the GDG for final comments and to reach consensus on the recommendations (details of this process are given later). The final version of this guideline was approved by the CEC of the FSRH on 16 January 2017.

Below is the list of contributors involved in the development of this clinical guideline.

Guideline Development Group (GDG)

Secretariat

- ▶ Dr Sharon Cameron Director, Clinical Effectiveness Unit
Consultant Gynaecologist (Chalmers Centre, NHS Lothian)
- ▶ Dr Sarah Hardman Deputy Director, Clinical Effectiveness Unit
Specialty Doctor SRH (Chalmers Centre, NHS Lothian)
- ▶ Dr Zhong Eric Chen Researcher, Clinical Effectiveness Unit

Multidisciplinary Group

- ▶ Dr Patrick Chien Consultant Obstetrician and Gynaecologist (NHS Tayside);
Clinical Director Scottish Hydatidiform Mole Follow-up Service
- ▶ Dr Anne Connolly GPSI Gynaecology (Bevan Healthcare, Bradford);
Clinical Specialty Lead Maternity, women's and sexual health
(NHS Bradford and Airedale); VP FSRH (membership)
- ▶ Dr Elizabeth Sarah Cooper Consultant Obstetrician (Simpson Centre for Reproductive
Health, Royal Infirmary of Edinburgh, NHS Lothian)
- ▶ Professor Anna Glasier Honorary Professor (University of Edinburgh)
- ▶ Professor Ian Greer Dean, Faculty of Biology Medicine and Health (University of
Manchester)
- ▶ Dr Kate Guthrie Consultant Sexual and Reproductive Health (CHCP Hull)
- ▶ Ms Alison Hadley Director, Teenage Pregnancy Knowledge Exchange
(University of Bedfordshire)
- ▶ Dr Zara Haider Consultant in Sexual and Reproductive Healthcare (Kingston
Hospital, Surrey); Chair of the Meetings Committee FSRH
- ▶ Professor Phil Hannaford NHS Grampian Chair of Primary Care
- ▶ Dr Rebecca Heller Trainee in Community Sexual and Reproductive Health
(Chalmers Centre, NHS Lothian)
- ▶ Ms Emma Kirk Consultant Obstetrician and Gynaecologist (North Middlesex
University Hospital, London)
- ▶ Dr Patricia Lohr Medical Director (British Pregnancy Advisory Service)
- ▶ Dr Louise Massey Consultant in Sexual and Reproductive Health (Aneurin
Bevan Health Board)
- ▶ Dr Sam Rowlands Visiting Professor (Bournemouth University)
- ▶ Professor Jill Shawe Lead Maternal & Family Health Care; Specialist
Contraception & Sexual Health Nurse (Faculty of Health &
Medical Sciences, University of Surrey)
- ▶ Dr Andrew Thomson Consultant Obstetrician & Gynaecologist (NHS Greater
Glasgow & Clyde); Co-chair RCOG Guidelines Committee

None of the members of the GDG had competing interests that prevented their active participation in the development of this guideline.

Independent Reviewers

▶ Ms Jenny Carson (UK)	Lead Clinical Pharmacist (Women's Services, Royal Infirmary of Edinburgh, NHS Lothian)
▶ Mrs Joanne Fletcher (UK)	Consultant Nurse Gynaecology (Sheffield Teaching Hospitals Foundation Trust)
▶ Professor Kristina Gemzell-Danielsson (Sweden)	Professor and Chair (Division of Obstetrics & Gynecology, Department of Women's and Children's Health, Karolinska Institutet); Senior Consultant (Karolinska University Hospital)
▶ Dr Jemma Johns (UK)	Consultant Obstetrician & Gynaecologist (Early Pregnancy & Gynaecology Assessment Unit, King's College Hospital NHS Foundation Trust, London)
▶ Dr Helena Kopp Kallner (Sweden)	Senior Consultant, Obstetrics and Gynecology (Danderyd Hospital); Department of Women's and Children's Health (Karolinska Institutet)
▶ Dr Neha Pathak (UK)	Specialty Trainee in Community Sexual and Reproductive Health (Guy's & St Thomas's NHS Trust)
▶ Professor Hemantha Senanayake (Sri Lanka)	Professor of Obstetrics & Gynaecology (Faculty of Medicine, University of Colombo)
▶ Professor John Tidy (UK)	Professor of Gynaecological Oncology and Director (Sheffield Trophoblastic Disease Centre)
▶ Professor James Trussell (USA)	Professor of Economics and Public Affairs, Emeritus (Princeton University)

None of the independent reviewers had competing interests that prevented their active participation in the development of this guideline.

Acknowledgements

We would like to thank Dr Gillian Smith (RCM Director for Scotland) and Professor Michael Seckl (Imperial College London) for their expert advice. We would also like to thank the contributors who provided their valuable feedback during the public consultation. None of the individuals had indicated competing interests.

Guideline development methodology

This FSRH guideline was developed in accordance with the standard methodology for developing FSRH clinical guidelines (outlined in the FSRH's *Framework for Clinical Guideline Development* which can be accessed [here](#)). The methodology used in the development of this guideline has been accredited by the National Institute for Health and Care Excellence (NICE).

Systematic review of evidence

A systematic review of the literature was conducted to identify evidence to answer the clinical questions formulated and agreed by the GDG. Searches were performed using relevant medical subject headings and free-text terms using the following databases: PubMed, EMBASE, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and POPLINE®. Further, the National Guideline Clearinghouse (NGC) and Scottish Intercollegiate Guideline Network (SIGN) were also

used to identify relevant guidelines produced by other organisations; these guidelines were checked to identify missing evidence. No language restrictions were applied to the searches.

Search dates: The databases were initially searched up to 5 October 2015. The evidence identified up to this point was used to develop the first draft of the guideline. Searches were rerun at the end of the guideline development process to identify new evidence that were published between 5 October 2016 and 18 November 2016. Any evidence published after this date was not considered for inclusion.

Search strategy: The literature search was performed separately for each of the four pregnancy outcomes covered in this clinical guideline using the search strategy “Contraception” **AND** “Pregnancy outcome”; the search terms used are listed below.

Contraception	(contracept* OR contraception OR contraceptive) OR (intrauterine device OR intra-uterine device OR IUD OR IUCD OR intrauterine system OR intra-uterine system OR IUS) OR (nexplanon OR implanon OR norplant OR uniplant OR “sino implant” OR “sino-implant”) OR (depot medroxyprogesterone OR depo provera) OR (“combined pill” OR “combined hormonal” OR “combined contraceptive”) OR (“progestogen-only” OR “progestogen only” OR “progestin only”) OR (Mirena OR Jaydess OR Jadelle)
Childbirth	(Postpartum period [MeSH] OR “post parturition” OR “post partum” OR “post pregnancy”)
Abortion	(abortion OR “termination of pregnancy” OR “abortion” OR “post-abortion” OR “post abortion” OR “postabortion” OR “postabortion care”)
Ectopic pregnancy or miscarriage	(ectopic pregnancy [MeSH] OR “ectopic pregnancy”) OR (miscarriage OR miscarriage* OR “abortion, spontaneous”[MeSH terms])
Gestational trophoblastic Disease	(“Gestational Trophoblast*” OR “Gestational Trophoblastic Disease” OR GTD OR GTN) OR (“Molar Gestation” OR “Molar Pregnancy”) OR (“Hydatidiform Mole” OR “Invasive Mole” OR “Metastatic Mole”) OR (Trophoblastic OR “Trophoblastic Neoplasm” OR “Trophoblastic Neoplasia” OR “Trophoblastic pseudotumor”) OR (“Placental trophoblast*” OR “Placenta trophoblast*” OR Placental Tumor [tw] OR Placental Tumour [tw] OR Placenta Tumor [tw] OR Placenta Tumour [tw] OR PSTT OR Choriocarcinoma) OR (“Epithelioid trophoblastic tumor” OR “Epithelioid trophoblastic tumour” OR ETT) OR (“post-molar” OR “post molar”)

Articles identified from the search were screened by title and abstract and full-text copies were obtained if the articles addressed the clinical questions relevant to the guideline. A full critical appraisal of each article was conducted. Studies that did not report relevant outcomes or were not relevant to the clinical questions were excluded. Summary tables of evidence are available upon request.

Synthesis of evidence and making clinical recommendation

The recommendations are graded (A, B, C, D and Good Practice Point) according to the level of evidence upon which they are based. The highest level of evidence that may be available depends on the type of clinical question asked. The CEU adopts the comprehensive methodology developed by the [Grading of Recommendations, Assessment, Development and Evaluation \(GRADE\) working group](#) to assess the strength of the evidence collated and for generating recommendations from evidence.

The evidence used in this guideline was graded using the scheme below and the recommendations formulated in a similar fashion with a standardised grading scheme.

Classification of evidence levels	Grades of recommendations
<p>1++ High quality systematic reviews or meta-analysis of randomised controlled trials (RCTs) or RCTs with a very low risk of bias.</p> <p>1+ Well conducted systematic reviews or meta-analysis of RCTs or RCTs with a low risk of bias.</p> <p>1- Systematic reviews or meta-analysis of RCTs or RCTs with a high risk of bias.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>3 Non-analytical studies (e.g. case report, case series).</p> <p>4 Expert opinions.</p>	<p>A At least one systematic review, meta-analysis or RCT rated as 1++, and directly applicable to the target population; <i>or</i> 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.</p> <p>B A body of evidence including studies rated as 2++ directly applicable to the target population and demonstrating overall consistency of results; <i>or</i> Extrapolated evidence from studies rated as 1++ or 1+.</p> <p>C A body of evidence including studies rated as 2+ directly applicable to the target population and demonstrating overall consistency of results; <i>or</i> Extrapolated evidence from studies rated as 2++.</p> <p>D Evidence level 3 or 4; <i>or</i> Extrapolated evidence from studies rated as 2+.</p> <p>✓ Good Practice Points based on the clinical experience of the guideline development group.*</p>

*On the occasion when the guideline development group find there is an important practical point that they wish to emphasise but for which there is not, nor is there likely to be, any research evidence. This will typically be where some aspect of treatment is regarded as such sound clinical practice that nobody is likely to question it. It must be emphasised that these are NOT an alternative to evidence-based recommendations, and should only be used where there is no alternative means of highlighting the issue.

Considerations when making recommendations

FSRH clinical guidelines are produced primarily to recommend safe and appropriate clinical practice in relation to the provision of different contraceptive methods. Therefore, when formulating the recommendations, the GDG takes into consideration the health benefits, side effects and other risks associated with implementing the recommendations, based on the available evidence and expert opinion. Further, the GDG takes into consideration the different financial and organisational barriers that clinicians and services may face in the implementation of recommendations to ensure that the recommendations are realistic and achievable.

Reaching consensus on the recommendations

When further revisions based on public consultation feedback have been made, members of the GDG were asked to complete a form to indicate whether they agree or disagree with the recommendations proposed. The consensus process is as follows:

- ▶ Consensus will be reached when 80% of the GDG members agree with the recommendation.
- ▶ Recommendations where consensus is not reached will be redrafted in light of any feedback.
- ▶ The recommendation consensus form will be sent again for all recommendations. Consensus will be reached when 80% of the GDG members agree with the recommendation.
- ▶ If consensus is not reached on certain recommendations these will be redrafted once more.
- ▶ If after one more round of consultation, consensus is still not reached, the recommendation will be taken to the CEC for final decision.
- ▶ Any group member who is not content with the decision can choose to have their disagreement noted within the guideline.

Updating this guideline

Clinical guidelines are routinely due for update 5 years after publication. The decision as to whether update of a guideline is required will be based on the availability of new evidence published since its publication. Updates may also be triggered by the emergence of evidence expected to have an important impact on the recommendations. The final decision on whether to carry out a full or partial clinical guideline update is taken by the CEU in consultation with the CEC.

Appendix 2: Clinical Guidelines, Systematic Reviews and Meta-analyses Included in this Guideline

Clinical guideline

The following clinical guidelines were identified and used to inform the recommendations made in this guideline.

Title of publication	Year	Publisher
After childbirth (postpartum)		
Postpartum Family Planning (Best Practice Paper No. 1)	2015	Royal College of Obstetricians and Gynaecologists (RCOG)
Postnatal Care up to 8 Weeks After Birth	2015	National Institute for Health and Care Excellence (NICE)
Postnatal Sexual and Reproductive Health	2009	Faculty of Sexual & Reproductive Healthcare (FSRH)
After abortion		
Health Worker Roles in Providing Safe Abortion Care and Post-Abortion Contraception	2015	World Health Organization (WHO)
Safe Abortion: Technical and Policy Guidance for Health Systems (2nd edition)	2012	WHO
The Care of Women Requesting Induced Abortion (Evidence-based Guideline No. 7)	2011	RCOG
After ectopic pregnancy or miscarriage		
Ectopic Pregnancy and Miscarriage	2012	NICE
Diagnosis and Management of Ectopic Pregnancy (Green-top Guideline No. 21)	2016	RCOG (joint with the Association of Early Pregnancy Units)
After gestational trophoblastic disease (GTD)		
Formalised consensus of the European Organisation for Treatment of Trophoblastic Diseases on management of gestational trophoblastic diseases	2015	European Organisation for Treatment of Trophoblastic Disease (EOTTD) Published in <i>Eur J Cancer</i> 2015; 51 :1725–1731
Trophoblastic disease review for diagnosis and management: a joint report from the International Society for the Study of Trophoblastic Disease, European Organisation for the Treatment of Trophoblastic Disease, and the Gynecologic Cancer InterGroup	2014	International Society for the Study of Trophoblastic Disease (ISSTD); EOTTD; Gynecologic Cancer InterGroup (GCIG) Published in <i>Int J Gynecol Cancer</i> 2014; 24 :S109–S116
The Management of Gestational Trophoblastic Disease (Green-top Guideline No. 38)	2010	RCOG
Gestational trophoblastic neoplasia, FIGO 2000 staging and classification.	2003	International Federation of Gynecology and Obstetrics (FIGO) Oncology Committee Published in <i>Int J Gynaecol Obstet</i> 2003; 83 : Suppl. 1: 175–177

Contraceptive method-specific		
UK Medical Eligibility Criteria for Contraceptive Use 2016	2016	FSRH
WHO Medical Eligibility Criteria for Contraceptive Use (5th edition)	2015	WHO
US Medical Eligibility Criteria for Contraceptive Use (MMWR 2010)	2010	Centres for Disease Control and Prevention (CDC)
Intrauterine Contraception	2015	FSRH
Progestogen-only Implants	2014	FSRH
Progestogen-only Injectable Contraception	2014	FSRH
Progestogen-only Pills	2015	FSRH
Combined Hormonal Contraception	2011	FSRH
Emergency Contraception	2011	FSRH
Barrier Methods: Contraception and STI Prevention	2012	FSRH
Male and Female Sterilisation	2014	FSRH
Fertility Awareness Methods	2015	FSRH
Quick Starting Contraception	2010	FSRH
Long-acting Reversible Contraception (Update)	2014	NICE

Systematic review/ meta-analysis

The following systematic reviews and/or meta-analyses were identified and used to inform the recommendations made in this guideline. They are presented below based on the relevant pregnancy outcome sections to which they relate.

Contraception after childbirth (postpartum)

- ▶ Lopez LM, Grey TW, Chen M, *et al.* Strategies for improving postpartum contraceptive use: evidence from non-randomized studies. *Cochrane Database Syst Rev* 2014;**11**:CD011298.
- ▶ Lopez LM, Hiller JE, Grimes DA, *et al.* Education for contraceptive use by women after childbirth. *Cochrane Database Syst Rev* 2012;**8**:CD001863.
- ▶ Jackson E, Glasier A. Return of ovulation and menses in postpartum nonlactating women: a systematic review. *Obstet Gynecol* 2011;**117**:657–662.
- ▶ Mantha S, Karp R, Raghavan V, *et al.* Assessing the risk of venous thromboembolic events in women taking progestin-only contraception: a meta-analysis. *BMJ* 2012;**345**:E4944.
- ▶ Lopez LM, Bernholc A, Hubacher D, *et al.* Immediate postpartum insertion of intrauterine device for contraception. *Cochrane Database Syst Rev* 2015;**6**:CD003036.
- ▶ Sonalkar S, Kapp N. Intrauterine device insertion in the postpartum period: a systematic review. *Eur J Contracept Reprod Health Care* 2015;**20**:4–18.
- ▶ Rodriguez MI, Edelman AB, Kapp N. Postpartum sterilization with the titanium clip: a systematic review. *Obstet Gynecol* 2011;**118**:143–147.
- ▶ Madari S, Varma R, Gupta J. A comparison of the modified Pomeroy tubal ligation and Filshie clips for immediate postpartum sterilisation: a systematic review. *Eur J Contracept Reprod Health Care* 2011;**16**:341–349.
- ▶ Lawrie TA, Kulier R, Nardin JM. Techniques for the interruption of tubal patency for female sterilisation. *Cochrane Database Syst Rev* 2015;**9**:CD003034.

Breastfeeding

- ▶ Jatlaoui TC, Riley H, Curtis KM. Safety data for levonorgestrel, ulipristal acetate and Yuzpe regimens for emergency contraception. *Contraception* 2015;**93**:93–112.
- ▶ Lopez LM, Grey TW, Stuebe AM, *et al.* Combined hormonal versus nonhormonal versus progestin-only contraception in lactation. *Cochrane Database Syst Rev* 2015;**3**:CD003988.
- ▶ Phillips SJ, Tepper NK, Kapp N, *et al.* Progestogen-only contraceptive use among breastfeeding women: a systematic review. *Contraception* Published Online First: 26 September 2015.
- ▶ Goldstuck ND, Steyn PS. Intrauterine contraception after cesarean section and during lactation: a systematic review. *Int J Womens Health* 2013;**5**:811–818.
- ▶ Tepper NK, Phillips SJ, Kapp N, *et al.* Combined hormonal contraceptive use among breastfeeding women: an updated systematic review. *Contraception* 2016;**3**:262–274.

Contraception after abortion

- ▶ Ferreira ALCG, Lemos A, Figueiroa JN, *et al.* Effectiveness of contraceptive counselling of women after an abortion: a systematic review and meta-analysis. *Eur J Contracept Reprod Health Care* 2009;**14**:1–9.
- ▶ Stewart H, McCall SJ, McPherson C, *et al.* Effectiveness of peri-abortion counselling in preventing subsequent unplanned pregnancy: a systematic review of randomised controlled trials. *J Fam Plan Reprod Health Care* 2016;**42**:59–67.
- ▶ Okusanya BO, Oduwole O, Effa EE. Immediate postabortal insertion of intrauterine devices. *Cochrane Database Syst Rev* 2014;**7**:CD001777.
- ▶ Steenland MW, Tepper NK, Curtis KM, *et al.* Intrauterine contraceptive insertion postabortion: a systematic review. *Contraception* 2011;**84**:447–464.
- ▶ Gaffield ME, Kapp N, Ravi A. Use of combined oral contraceptives post abortion. *Contraception* 2009;**80**:355–362.

Contraception after ectopic pregnancy or miscarriage

- ▶ Cheng L, Che Y, Gülmezoglu AM. Interventions for emergency contraception. *Cochrane Database Syst Rev* 2012;**8**:CD001324.
- ▶ Cleland K, Raymond E, Trussell J, *et al.* Ectopic pregnancy and emergency contraceptive pills: a systematic review. *Obstet Gynecol* 2010;**115**:1263–1266.
- ▶ Mol BW, Ankum WM, Bossuyt PM, *et al.* Contraception and the risk of ectopic pregnancy: a meta-analysis. *Contraception* 1995;**52**:3337–3341.
- ▶ Callahan R, Yacobson I, Halpern V, *et al.* Ectopic pregnancy with use of progestin-only injectables and contraceptive implants: a systematic review. *Contraception* 2015;**92**:514–522.
- ▶ Kovalevsky G, Gracia CR, Berlin JA, *et al.* Evaluation of the association between hereditary thrombophilias and recurrent pregnancy loss: a meta-analysis. *Arch Intern Med* 2004;**164**:558–563.
- ▶ Rey E, Kahn SR, David M, *et al.* Thrombophilic disorders and fetal loss: a meta-analysis. *Lancet* 2003;**361**:901–908.

Contraception after gestational trophoblastic disease

- ▶ Gaffield ME, Kapp N, Curtis KM. Combined oral contraceptive and intrauterine device use among women with gestational trophoblastic disease. *Contraception* 2009;**80**:3363–3671.
- ▶ Costa HLFF, Doyle P. Influence of oral contraceptives in the development of post-molar trophoblastic neoplasia – a systematic review. *Gynecol Oncol* 2006;**100**:579–585.

Resources

Resource 1: Risk factors for venous thromboembolism in pregnancy and the puerperium

Table reproduced from Royal College of Obstetricians and Gynaecologists (RCOG) *Reducing the Risk of Venous Thromboembolism during Pregnancy and the Puerperium*.¹⁰¹

Pre-existing	Previous VTE	
	Thrombophilia	Heritable Antithrombin deficiency Protein C deficiency Protein S deficiency Factor V Leiden Prothrombin gene mutation
		Acquired Antiphospholipid antibodies Persistent lupus anticoagulant and/or persistent moderate/high titre anticardiolipin antibodies and/or β 2-glycoprotein I antibodies.
	Medical comorbidities (e.g. cancer; heart failure; active systemic lupus erythematosus (SLE); inflammatory polyarthropathy or inflammatory bowel disease (IBD); nephritic syndrome; type 1 diabetes mellitus with nephropathy; sickle cell disease; current intravenous drug user)	
	Age >35 years	
	Obesity (BMI ≥ 30 kg/m ²) either prepregnancy or in early pregnancy	
	Parity ≥ 3 (a woman becomes para 3 after her third delivery)	
	Smoking	
	Gross varicose veins (symptomatic or above knee or with associated phlebitis, oedema/skin changes)	
	Paraplegia	
Obstetric risk factors	Multiple pregnancy	
	Current pre-eclampsia	
	Caesarean section	
	Prolonged labour (>24 hours)	
	Mid-cavity or rotational operative delivery	
	Stillbirth	
New onset/transient <i>These risk factors are potentially reversible and may develop at later stages in gestation than the initial risk assessment or may resolve and therefore what is important is an ongoing individual risk assessment.</i>	Any surgical procedure in pregnancy or puerperium except immediate repair of the perineum (e.g. appendicetomy, postpartum sterilisation)	
	Bone fracture	
	Hyperemesis, dehydration	
	Ovarian hyperstimulation syndrome (first trimester only)	Assisted reproductive technology (ART), <i>in vitro</i> fertilisation (IVF)
	Admission or immobility (≥ 3 days' bed rest)	e.g. pelvic girdle pain restricting mobility
	Current systematic infection (requiring intravenous antibiotics or admission to hospital)	e.g. pneumonia, pyelonephritis, postpartum wound infection
	Long distance travel (>4 hours)	

Resource 2: Criteria for diagnosis of antiphospholipid syndrome (APS)

A woman is diagnosed with antiphospholipid antibody syndrome (APS) if she fulfils at least one of the clinical criteria and one of the laboratory criteria listed below.

Clinical criteria	Laboratory criteria
Vascular thrombotic event (venous, arterial or small vessel) At least one clinical episode in any tissue or organ confirmed by objective validated criteria.	Plasma lupus anticoagulant present on at least two occasions, at least 12 weeks apart.
Pregnancy morbidity: This may be: <ul style="list-style-type: none"> ▶ ≥1 unexplained death of a normal-appearance fetus at or beyond 10 weeks of gestation; or ▶ ≥1 preterm birth of a neonate of normal appearance before 34 weeks of gestation resulting from either eclampsia or severe pre-eclampsia or with signs of placental insufficiency; or ▶ ≥3 unexplained consecutive miscarriages before 10 weeks of gestation where anatomical, hormonal and chromosomal causes have been excluded. 	Plasma or serum anticardiolipin antibody of IgG and/or IgM isotype present in medium or high titre [>40 IgG phospholipid (GPL) units or IgM phospholipid (MPL) units, or >99 th percentile] on at least two occasions, at least 12 weeks apart. Plasma or serum anti-$\beta 2$-glycoprotein I antibody of IgG and/or IgM isotype present (in titre >99 th percentile) on at least two occasions, at least 12 weeks apart.

For further information, please refer to the international consensus statement on an update of the classification criteria for definite APS.²⁰⁹

Resource 3: Symptoms of an ectopic pregnancy

Common symptoms	Other reported symptoms
<ul style="list-style-type: none"> ▶ Amenorrhoea or missed period ▶ Vaginal bleeding with or without clots ▶ Abdominal or pelvic pain ▶ Vomiting and diarrhoea associated with pain 	<ul style="list-style-type: none"> ▶ Breast tenderness ▶ Gastrointestinal symptoms ▶ Dizziness, fainting or syncope ▶ Shoulder tip pain ▶ Urinary symptoms ▶ Passage of tissue ▶ Rectal pressure or pain on defecation

Questions for Continuing Professional Development

The following multiple choice questions (MCQ) have only one correct answer and have been developed for continuing professional development (CPD). The answers to the questions and information on claiming CPD points can be found in the 'CPD Questions and Answers' section of the FSRH website (www.fsrh.org), which is accessible to all Diplomates, Members, Associate Members and Fellows of the FSRH.

- 1. In the UK, an estimate of the number of pregnancies ending in abortion is:**
 - a. 1 in 3
 - b. 1 in 4
 - c. 1 in 5
 - d. 1 in 6

- 2. In a UK survey, the number of women presenting for abortion within 1 year of a previous birth is:**
 - a. 1 in 10
 - b. 1 in 13
 - c. 1 in 15
 - d. 1 in 18

- 3. To reduce the risk of preterm birth, low birthweight and small for gestational age, how long should a woman be advised to wait after delivery before conceiving again?**
 - a. 6 months
 - b. 9 months
 - c. 12 months
 - d. 18 months

- 4. Which of the following contraceptive methods is not suitable for use immediately after childbirth?**
 - a. Subdermal implant
 - b. Intrauterine system
 - c. Combined oral contraceptive pill
 - d. Progestogen-only pill

- 5. A woman is 8 weeks postpartum and exclusively breastfeeding. She is keen to restart her combined hormonal vaginal ring. Which is correct?**
 - a. She can only restart using the ring after 6 months postpartum
 - b. She can start using her ring now
 - c. The vaginal ring is unsuitable at 8 weeks postpartum due to the risk of infection
 - d. She should not use the ring until after 4 months postpartum due to increased risk of venous thromboembolism

- 6. Emergency contraception is indicated for a woman who has had unprotected sexual intercourse after childbirth from:**
- 7 days
 - 14 days
 - 21 days
 - 28 days
- 7. Which statement is false?**
- Intrauterine contraception can be inserted within 10 minutes of placental delivery
 - Intrauterine contraception can be inserted within 48 hours of an uncomplicated caesarean section
 - Intrauterine contraception cannot be inserted at the time of a caesarean section
 - Intrauterine contraception should not be inserted between 48 hours and 4 weeks post-delivery
- 8. A woman has unprotected sexual intercourse 7 days after an abortion. Which of the following statements is false?**
- All methods of emergency contraception are suitable
 - An emergency intrauterine device cannot be considered
 - If a subdermal implant is quick started with levonorgestrel emergency contraception, 7 days of additional contraception is needed
 - If ulipristal acetate is given, a woman should wait 5 days before quick starting a hormonal method of contraception
- 9. Post-ectopic pregnancy, which statement is true?**
- Women should be advised that intrauterine contraception is unsuitable
 - Only anovulatory methods of contraception should be recommended
 - If methotrexate is used, pregnancy should be avoided for at least 6 months post-treatment
 - Contraception can be commenced on the day of methotrexate administration
- 10. With gestational trophoblastic disease (GTD), which statement is false?**
- After complete hydatidiform mole, 15–20% women develop GTD needing chemotherapy
 - After partial hydatidiform mole, 30–35% women develop GTD needing chemotherapy
 - Intrauterine contraception is unsuitable while human chorionic gonadotropin is still detectable
 - Combined hormonal contraception can be used if gestational trophoblastic neoplasia develops

Auditable Outcomes

The following auditable outcomes have been suggested by the FSRH Clinical Standards Committee.

Auditable outcome	Target
Postnatal contraception	
Percentage of postnatal women who are given information about, and offered a choice of, all appropriate contraceptive methods within 7 days of delivery.*	97%
Percentage of postnatal women who have chosen a LARC method who are offered a bridging method when immediate access to their chosen method is not possible.	97%
Percentage of postnatal women choosing LARC who are provided with their chosen method before discharge from hospital.	50%
Abortion	
Percentage of women who request an abortion who discuss contraception with a healthcare practitioner and are offered a choice of all appropriate contraceptive methods before discharge.*	97%
Percentage of women having an abortion who receive their chosen method at the time of abortion.	97%
Ectopic pregnancy or miscarriage	
Percentage of women with ectopic pregnancy or miscarriage who are given an opportunity to discuss their fertility intentions, contraception and preconceptual counselling by their provider.	97%
Percentage of women with ectopic pregnancy or miscarriage who wish to defer subsequent pregnancy who are given information about, and offered a choice of, all appropriate contraceptive methods within 7 days of treatment.	97%
Gestational trophoblastic disease (GTD)	
Percentage of women having GTD who are advised to avoid subsequent pregnancy until GTD monitoring is complete.	97%
Percentage of women having GTD who are given information about, and offered a choice of, all appropriate contraceptive methods within 7 days of uterine evacuation.	97%
*Adapted from NICE Contraception Quality Standards .	

Comments and Feedback on Published Guideline

All comments on this published guideline can be sent directly to the Clinical Effectiveness Unit (CEU) of the Faculty of Sexual & Reproductive Healthcare (FSRH) via the FSRH website www.fsrh.org.

The CEU may not respond individually to all feedback. However, the CEU will review all comments and provide an anonymised summary of comments and responses, which are reviewed by the Clinical Effectiveness Committee and any necessary amendments made subsequently.

www.fsrh.org

Published by the Faculty of Sexual and Reproductive Healthcare
Registered in England No. 2804213 Registered Charity No. 1019969
FSRH, 27 Sussex Place, London, NW1 4RG