



Curriculum 2024 Guide for Subspecialty Training (SST): Reproductive Medicine

June 2024 V1.0



Version Control		
Version	Modifications	Date
1.0	Final version for publishing	June 2024



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1. Reproductive Medicine SST

Doctors who undertake Reproductive Medicine SST will become gynaecologists specialising in the medical and surgical management of reproductive endocrinology and infertility, including a range of assisted reproductive techniques. Learners will develop the skills needed to provide the highest level of care for couples and individuals with fertility, endocrine and reproductive surgical problems, including those wishing to undertake fertility preservation. They will become leaders for these services at a local, regional and potentially even national level, with key roles in education, training, innovation, quality management and improvement, research and governance, pertinent to fertility services.

Through this SST, trainees will learn how to be excellent communicators who can co-operatively reach complex and often difficult decisions with individuals, couples and their families, and other healthcare providers. To achieve this, they will develop an extensive knowledge base, a logical mind, objectivity, empathy and advanced listening skills. Trainees are expected to be non-judgemental, free from bias, and able to negotiate and compromise. They should be kind, decisive when called upon, reflective and supportive. They will have the opportunity to develop a high level of technical expertise, to safely and effectively perform the procedures required in their subspecialty consultant post.

There are three main components to Reproductive Medicine SST. The first element is the clinical knowledge and skills required to become a Reproductive Medicine subspecialist, described by the Management of Subfertility (MoS) SITM and Reproductive Medicine Capabilities in Practice (CiPs). The clinical CiPs show the practical procedures a learner will become proficient in by the end of training. The second element is the generic skills required for all consultants, namely those of clinical governance, teaching, research, leadership and management. However, these must be acquired and developed within a working environment that cares for women, girls and couples experiencing reproductive health issues. These skills run through both the subspecialty CiPs and stage 3 of the Core Curriculum. The third element is the subspecialty research CiP, which builds on the research CiP in the Core Curriculum 2024 and will provide the learner with research skills specific to the reproductive medicine field.

As a learner progresses through the subspecialty training, they will learn how to handle a variety of scenarios. Learners will also participate in educational events to further develop their training. Throughout training, learners will need to reflect on whether a project has gone well, learn from positive and negative experiences, and use this to improve their own skills.

Before signing off on this SST, the Subspecialty Training Programme Supervisor (STPS) will decide the level of supervision required for each Reproductive Medicine CiP. If this and the final subspecialty assessment is satisfactory, subspecialty training accreditation will be



awarded. More detail is provided in Section 6 of the [Definitive Document for Reproductive Medicine SST 2024](#).

2. Design of the SST Programme

The 2024 Reproductive Medicine SST is made up of the four CiPs from the Special Interest Training Module (SITM) in Management of Subfertility (MoS CiPs 1–4), and five corresponding subspecialty-specific CiPs that develop the knowledge and skills from the SITM curriculum to a subspecialty level (SST Reproductive Medicine CiPs 1–5).

In addition to the clinical CiPs, a new CiP addressing skills in research and innovation has been developed as a generic CiP for all subspecialty trainees (SSTR).

Management of Subfertility (MoS) (the MoS SITM)	MoS CiPs 1–4
SST-specific CiPs	SST Reproductive Medicine CiPs 1–5
SST Research CiP	SSTR CiP

Trainees need to complete all ten CiPs to achieve subspecialty accreditation. The SST Reproductive Medicine CiPs can only be completed as part of an accredited subspecialty training programme in Reproductive Medicine. If a trainee has completed part or all of the MoS SITM (MoS CiPs 1–4) before starting Reproductive Medicine SST, they will not need to repeat it.

Learners with previous research experience, such as the Special Interest Professional Module (SIPM) in Clinical Research, can use this as evidence toward the SSTR CiP.

The ‘indicative’ duration of Reproductive Medicine SST is 24 months. If a learner undertakes the programme as a full-time trainee from the beginning of ST5, entering with minimal relevant skills or experience, it is expected to take longer than 24 months. They will still have 36 months left in their training programme. However, this timeframe is a guide only, as training is entirely competency based. Evidence of skills and competencies acquired before starting RM SST can be used, where appropriate, as evidence supporting sign-off within the subspecialty curriculum.

The majority of trainees will be still working toward their ‘Certificate of Completion of Training’ (CCT), although some will have already obtained this. Trainees who are pre-CCT will also need to continue accumulating skills and evidence as described for the Core Curriculum CiPs. Further detail can be found in the [Definitive Document for Core Curriculum 2024](#) and the [Essential Curriculum Guide](#).

Here is the GMC-approved Reproductive Medicine SST:



3. Capabilities in Practice (CiPs)

3.1 MoS CiPs 1–4

MoS CiP 1: The doctor recognises, assesses and investigates women experiencing infertility.	
Key skills	Descriptors
The doctor can safely perform a transvaginal scan of the female genital tract	<ul style="list-style-type: none"> • Able to identify all key pelvic structures, recognises and describes normality and deviations from normality. • Able to construct a differential diagnosis using information obtained from ultrasound examination and understands how the findings may indicate contributions to subfertility. • Able to optimise image quality. • Can store images securely and constructs a clinically useful ultrasound examination report. • Recognises and adheres to infection control and chaperoning policies.
Assesses women with infertility	<ul style="list-style-type: none"> • Takes a detailed history, including: recording menarche, cycle regularity, past medical and obstetric history. • If cycle is irregular, asks additional questions about hirsutism, acne, alopecia, galactorrhoea, secondary sex characteristics, previous chemotherapy and pelvic radiotherapy. • Screens for associated conditions e.g. autoimmune factors, genetic causes, diabetes mellitus and late onset congenital adrenal hyperplasia. • Takes social and sexual history. • Screens for previous infections e.g. chlamydia and gonorrhoea. • Performs appropriate physical examination, including checking body mass index, secondary sex characteristics and rectovaginoassessment for endometriosis, if appropriate. • Understands how visual fields can affect fertility and carries out assessments, if appropriate.
Arranges appropriate endocrine, and other investigations, to make a diagnosis	<ul style="list-style-type: none"> • Arranges baseline investigations including luteal phase progesterone, follicle stimulating hormone (FSH) on day 2, luteinizing hormone (LH) and oestradiol, and rubella. • Arranges endocrine investigations, if appropriate, including a baseline hormone profile of FSH, LH, oestradiol, prolactin (PRL), thyroid function tests (TFTs), androgens (testosterone, sex hormone binding globulin (SHBG), free androgen index (FAI), dehydroepiandrosterone sulphate



	<p>(DHEAS), androstenedione and 17α-hydroxyprogesterone) and is able to interpret results appropriately.</p> <ul style="list-style-type: none"> Organises and interprets appropriate investigations of impaired glucose tolerance and hypercholesterolaemia. Takes vulvo-vaginal swabs. Discusses different techniques to diagnose tubal disease and uterine disease, and any associated risks and complications. Is able to carry out ultrasound scans of the pelvis to assess the shape and size of the uterus, ovarian size and morphology. Is able to diagnose an endometrioma on a pelvic ultrasound scan. Arranges and interprets hysterosalpingogram (HSG), Hysterosalpingo Contrast Sonography (HyCoSy) and saline infusion sonohysterography (SIS). Organises and reviews the results of computerised tomography (CT) scan and magnetic resonance imaging (MRI) scan, including MRI of the pituitary gland, if appropriate. Establishes the likely cause(s) of infertility. Records results appropriately, including the need for referral and/or additional imaging.
<p>Makes a diagnosis of unexplained infertility</p>	<ul style="list-style-type: none"> Understands that it is a diagnosis of exclusion. Explains diagnosis of unexplained fertility to patients.
<p>Demonstrates understanding of association of other medical conditions and practises a multidisciplinary approach</p>	<ul style="list-style-type: none"> Liaises with appropriate specialists for further management of associated medical conditions, such as diabetes with polycystic ovary syndrome (PCOS) and pituitary tumours with hypogonadotropic hypogonadism. Advises the patient on lifestyle factors and is sympathetic to the difficulties of overcoming issues such as obesity. Is able to discuss long-term effects and management of conditions such as PCOS and premature ovarian failure with patients. Arranges appropriate referral, when needed.
<p>Evidence to inform decision – examples of evidence (not mandatory requirements)</p>	
<ul style="list-style-type: none"> CbD Mini-CEX Local and deanery teaching RCOG Learning NOTSS Reflective practice TO2 (including SO) 	<ul style="list-style-type: none"> Confirmed attendance at specialist clinics, such as menopause, endocrinology, reproductive endocrinology, assisted reproductive technology (ART) and weight loss clinics Attendance at RCOG and British Fertility Society (BFS) special interest training module course, and advanced hysteroscopy course



Mandatory requirements

- OSATS:
 - ultrasound examination in gynaecology (non-pregnant patient), including variety of different pathologies

Knowledge criteria

- Physiology of ovulation and pathophysiology
- Female anatomy – abdomen and pelvis
- Scoring system for hirsutism
- Normal ultrasound appearance of uterus, ovaries and adnexae
- Standardised terms and definitions to describe sonographic features of normal pelvis and pelvic pathology
- Anatomical classification of ovulation disorders
- The association of other medical conditions with anovulation, such as diabetes with polycystic ovaries and pituitary tumours with hypogonadotropic hypogonadism
- The influence of lifestyle, including diet and weight, on anovulation
- The impact of psychiatric and psychological issues on anovulation
- The usefulness of initial screening investigations such as FSH, LH, anti-Müllerian hormone (AMH), prolactin, androgens (testosterone, SHBG and FAI), thyroid function tests, pelvic ultrasound (ovarian volume and antral follicle count). Also follow-up investigations such as MRI and karyotype
- Aetiology of tubal factor infertility: infection, surgery, endometriosis and congenital abnormalities
- Classification of tubal disease relevant to natural and therapeutic prognosis
- Classification of uterine disease
- Aetiology of uterine factor infertility: infection, surgery, tumours, congenital abnormalities, intrauterine adhesions, fibroids and polyps
- Diagnostic techniques available for assessing uterine and tubal disease, any associated risks and complications
- Pathological features of acute and chronic inflammation associated with infertility
- Indications, pre-requisites and possible complications of HyCoSy, sonohysterography and HSG
- The hypotheses on the pathogenesis of endometriosis and mechanism by which endometriosis may have an impact on fertility
- Endometriosis classification systems, their usefulness and limitations
- The relationship between stages of endometriosis and infertility (defective folliculogenesis, ovulatory dysfunction, distorted pelvic anatomy, altered peritoneal function, autoimmune disorders and impaired implantation)
- The usefulness and limitations of MRI of the pelvis and abdomen
- The contribution of preoperative investigations, particularly a CA125 blood test and transvaginal ultrasound scan findings
- The epidemiology and natural history, including prognosis for unexplained infertility
- An understanding of other investigations that could be carried out to arrive at a diagnosis of unexplained infertility and the scientific basis for them



- Other suggested causes of infertility:
 - subtle ovulation defects
 - cervical mucus hostility
 - subclinical pregnancy loss
 - endometriosis
 - occult infection
 - sperm dysfunction
 - immunological causes
- Immunological screening
- Screening of high-risk groups

MoS CiP 2: The doctor recognises, assesses and investigates men experiencing infertility.

Key skills	Descriptors
Takes relevant history and arranges initial investigations to diagnose infertility in men	<ul style="list-style-type: none"> ● Arranges semen analysis and interprets results. ● Understands the reasons for and timing of a repeat semen analysis and arranges appropriately. ● Takes and interprets urethral swabs, and arranges for appropriate management of any abnormality, including referral to genitourinary medicine (GUM) clinics.
Performs physical examination to assess the male reproductive system	<ul style="list-style-type: none"> ● Uses an orchidometer to assess testicular volume. ● Assesses the epididymis to detect any abnormalities. ● Recognises varicocele, testicular tumours, undescended testicles, hypospadias, absence of vas deferens and inguinal hernia.
Arranges further investigations to identify the cause of severe infertility in men (azoospermia or severe oligospermia with a sperm density of < 5 million/ml)	<ul style="list-style-type: none"> ● Arranges relevant further investigations: repeat semen analysis, urine for retrograde ejaculation, endocrine, microbiological, genetic (karyotype, cystic fibrosis (CF) screening, y chromosome microdeletions), scrotal and testicular ultrasound and testicular biopsy. ● Reviews investigations and is able to differentiate between pre-testicular, testicular and post-testicular causes of severe sperm abnormality.
Evidence to inform decision – examples of evidence (not mandatory requirements)	
<ul style="list-style-type: none"> ● CbD ● Mini-CEX ● Reflective practice ● TO2 (including SO) ● Attendance at RCOG/BFS SITM course ● Local and deanery teaching 	<ul style="list-style-type: none"> ● RCOG Learning ● Confirmed attendance at Assisted Reproductive Technology (ART) clinics and appropriate urology and andrology clinic ● Exposure to specialist clinics: urology, GUM, endocrinology, clinical genetics and oncology



	<ul style="list-style-type: none"> ● Observes surgical sperm retrieval (SSR) procedures ● Observes vasectomy reversal
Mandatory requirements	
No mandatory evidence	
Knowledge criteria	
<ul style="list-style-type: none"> ● The male reproductive system – anatomy, physiology and the process of spermatogenesis ● The impact of male factors in the genesis of infertility ● The environmental factors influencing male reproductive function ● The endocrine disorders affecting male fertility ● The effect of reproductive pathologies such as varicocele, undescended testicles, sexually transmitted infections such as chlamydia and gonorrhoea, previous orchitis and chemoradiotherapy ● The impact of previous surgery such as vasectomy, reversal of vasectomy, inguinal herniorrhaphy and orchidopexy ● Coital dysfunction associated infertility ● Y chromosome microdeletion and when to discuss sperm DNA damage and aneuploidy ● Idiopathic male infertility ● The availability of various advanced sperm function tests and their role in managing infertility in men ● When to carry out a vasectomy reversal ● The related aspects of male factor infertility, including the sequelae of long-term low testosterone levels and the association with testicular cancer ● Appropriate investigations for ejaculatory failure, impotence, retrograde ejaculation, genital infection, immunological causes, undescended testicles, chromosomal abnormality, chemotherapy, radiotherapy and toxins (including drug effects) ● The causes of severe oligozoospermia (<5 million per ml) and azoospermia (pretesticular, testicular and post testicular) 	

MoS CiP 3: The doctor manages infertility.	
Key skills	Descriptors
Communicates and formulates an appropriate plan to manage infertility	<ul style="list-style-type: none"> ● Explains the possible causes of infertility to patients. ● Formulates a management plan based on pathological findings, taking into account relevant moral and ethical considerations. ● Counsels people about the different treatment options available, taking into account their preferences and expectations. ● Discusses treatment-related complications and adverse effects.



	<ul style="list-style-type: none">● Implements management plan and modifies treatment, if necessary.● Manages coital dysfunction related infertility.● Arranges appropriate referrals to: urologist, endocrinologist, andrologist, clinical geneticist, psychosexual counsellor and IVF centre team.
Manages women with anovulatory dysfunction, including PCOS	<ul style="list-style-type: none">● Discusses potential consequences of expectant management.● Able to diagnose and manage thyroid disorders and refer appropriately.● Explains treatment regimens of ovulation induction (anti-oestrogens and aromatase inhibitors); success rates (pregnancy rate and live birth rate); and potential side effects of drugs and complications of procedures, including the risk of multiple pregnancy and ovarian hyperstimulation syndrome (OHSS) and the link with ovarian cancer.● Prescribes ovulation induction agents and progestogens for withdrawal bleed appropriately.● Provides appropriate treatment for and monitoring of anovulatory dysfunction to assess effectiveness and minimise the risk of multiple pregnancy.● Provides appropriate advice for the management of a condition, including the risk of developing gestational diabetes in patients with polycystic ovary syndrome, and advises on the effects of medications in pregnancy.● Recognises the influence of lifestyle, including diet and weight, on anovulation and is able to advise the patient on lifestyle factors, being sympathetic to the difficulties of overcoming issues such as obesity and has an understanding of the long-term health risks of lifestyle issues, metabolic effects and cancer risks.
Manages women with tubal or uterine factor infertility	<ul style="list-style-type: none">● Discusses the impact of hydrosalpinx on natural fertility and assisted conception, including the role of salpingectomy.● Discusses the impact of proximal tubal disease on natural fertility and the role of selective salpingography.● Discusses with the patient where they can have their sterilisation reversed.● Performs effective and safe surgery, where appropriate and refers as necessary.● Is able to decide when to operate for diagnosis or surgical management.● Keeps accurate notes of operative procedures.



	<ul style="list-style-type: none"> Recognises the limitations of their operative laparoscopic, open and hysteroscopic surgery skills and, when appropriate, refers on to colleagues who have advanced laparoscopic skills.
Manages people with endometriosis and infertility	<ul style="list-style-type: none"> Understands and is able to communicate which treatments for endometriosis will improve fertility, and refers when appropriate. Able to decide when to operate for diagnosis or surgical management of endometriosis and infertility. Keeps accurate notes of operative procedures. Refers on to colleagues who have advanced laparoscopic skills, when appropriate. Arranges referral to other specialists when appropriate (e.g. pain clinic or surgeons).
Manages male infertility	<ul style="list-style-type: none"> Explains the possible causes, treatment options, risks and benefits and the need for onward referral. Arranges appropriate referrals to: urologist, endocrinologist, clinical geneticist, psychosexual counsellor and assisted conception. Able to discuss the role of ART. Discusses role of donor sperm in ART.
Manages unexplained infertility	<ul style="list-style-type: none"> Explains the diagnosis to the patient or patients. Discusses options with the patient or patients – to continue to try to conceive naturally, or to move to ART and the timing of this. Advises on suitable therapeutic option, taking a patient's or patients' wishes into consideration. Devises a care plan with the different treatment options, explaining the risks, benefits and alternatives.
Evidence to inform decision – examples of evidence (not mandatory requirements)	
<ul style="list-style-type: none"> CbD Mini-CEX NOTSS TO2 (including SO) 	<ul style="list-style-type: none"> Reflective practice Local and deanery teaching RCOG Learning Attendance at RCOG/BFS SITM course
Mandatory requirements	
<ul style="list-style-type: none"> OSATS: <ul style="list-style-type: none"> ultrasound examination in gynaecology (non-pregnant), including variety of different pathologies ultrasound examination in gynaecology (non-pregnant) for follicular assessment hysteroscopic surgery – resection of polyp laparoscopic surgery – salpingostomy laparoscopic ovarian diathermy for anovulatory polycystic ovary syndrome 	



Knowledge criteria

- Treatment strategies, including:
 - anti-oestrogens
 - aromatase inhibitors
 - antiandrogens
 - gonadotrophins
 - laparoscopic ovarian diathermy (LOD)
 - dopamine agonists
 - steroids
 - insulin sensitisers
 - glitazones
 - artificial insemination
 - in vitro fertilisation
 - intracytoplasmic sperm injection
- The range of treatments for anovulation, including risks of multiple pregnancy and OHSS
- The risks and sequelae of hypoestrogenism, and the risk and benefits of anti-oestrogens, steroids, gonadotrophin analogues, dopamine inhibitors and LOD
- Follicle tracking
- Hysteroscopic techniques, risks and the principles of safe use of energy sources
- The surgical options and alternatives for tubal and uterine factor infertility
- The place of adhesiolysis in the treatment of intrauterine adhesions
- The role of laparoscopy
- Treatment options for uterine fibroids
- When a myomectomy is appropriate and the most appropriate way to do this
- Excision or occlusion of hydrosalpinges prior to starting IVF
- The success rates, limitations and risks of salpingostomy, proximal tubal blockage, adhesiolysis and metroplasty
- Management of intra- and postoperative complications of salpingostomy, surgery for proximal tubal blockage, adhesiolysis and metroplasty
- Knowledge of reversal of sterilisation: patients at risk, pregnancy rates and the place of reversal of sterilisation
- The benefits, risks and alternatives of empirical, non-pharmacological, medical and surgical methods of treating endometriosis
- The limits of hormonal treatment and surgery for endometriosis on fertility outcomes
- The place of assisted conception in unexplained, uterine and tubal factor infertility
- Intrauterine insemination and in vitro fertilisation
- The indications for SSR and vasectomy reversal
- The prerequisites and arrangements for SSR
- The principles of various SSR techniques (Percutaneous epididymal *sperm* aspiration (PESA), Testicular *sperm* extraction (TESE), Microsurgical epididymal *sperm* aspiration (MESA) and Microscopic testicular sperm extraction (micro-TESE))
- Psychological factors in female infertility (e.g. amenorrhoea) and male infertility (e.g. erectile dysfunction)



- Effects of infertility on the family
- The importance of counselling for people experiencing infertility
- Local facilities for counselling, self-help groups and community networks
- Local facilities for adoption

MoS CiP 4: The doctor understands the principles of assisted reproduction techniques (ART) and their possible complications, and can counsel patients effectively.

Key skills	Descriptors
Demonstrates understanding of psychological aspects of male and female factor subfertility and ART	<ul style="list-style-type: none"> ● Recognises psychological factors in female (e.g. amenorrhoea) and male infertility (e.g. erectile dysfunction). ● Demonstrates understanding of stress related to infertility, marital disharmony, and difficulties in having intercourse. ● Discusses the effects of infertility on the family. ● Explains about the stress associated with ART. ● Arranges appropriate referral to counsellors and psychosexual medicine. ● Discusses the role and value of counselling for people experiencing infertility. ● Have spoken to a fertility counsellor about their role; understand the different types of counselling (support, implications and welfare of the child). Preferably have attended a fertility ethics committee meeting.
Discusses pros and cons of different therapeutic options	<ul style="list-style-type: none"> ● Clearly explains results of investigations. ● Informs people experiencing infertility of the chances of natural conception and with the different treatment options.
Decides when to proceed with therapeutic options	<ul style="list-style-type: none"> ● Provides support for people experiencing infertility if expectant treatment is the appropriate way forward. ● Is aware of local fertility funding policies and variation in them nationally.
Preparation of patients for ART	<ul style="list-style-type: none"> ● Ensures appropriate assessments are undertaken to confirm suitability for ART. ● Selects patients appropriately. ● Where necessary, arranges relevant further investigations in preparation for ART and interprets the results: <ul style="list-style-type: none"> ○ endocrine including ovarian reserve tests ○ virology screening to include HIV, hepatitis B and hepatitis C. Be aware of current guidance on timing (within three months of gamete donation)



	<ul style="list-style-type: none">○ microbiological screening: chlamydia and gonorrhoea○ genetic screening (karyotype, CF)● Assesses welfare issues of the child.
Decides and communicates the timing of assisted conception and recommends an appropriate ART procedure	<ul style="list-style-type: none">● Discusses suitable ART options.● Explains the role of ART and what an ART programme entails.● Discusses and recommends the most appropriate ART treatment according to the cause of infertility, the results of the investigations and prognostic factors.● Explains the need for onward referral to an ART centre.● Discusses the benefits, risks, success and limitations of ART.● Able to discuss the potential complications of ART, including OHSS, poor response, failed fertilisation, low fertilisation, multiple pregnancy, ectopic pregnancy, risk of infection and bleeding with oocyte retrieval procedure and the risk of genetic disorders after IVF/intracytoplasmic sperm injection (ICSI).● Explains the benefits of treating hydrosalpinx, fibroid and ovarian cysts (if any) prior to assisted conception and associated risks.● Liaises with tertiary centres to arrange appropriate referrals for ART.● Undertakes transvaginal ultrasound scan for monitoring ovarian stimulation.● Discusses the role of pre-implantation testing.● Is able to discuss fertility preservation for people undergoing medical/surgical treatment that affects fertility and arranges appropriate referrals.● Is aware of local arrangements for fertility preservation categories (e.g. oncology and transitioning).
Diagnoses and manages OHSS	<ul style="list-style-type: none">● Discusses the risk factors for developing OHSS and strategies to minimise the risk of OHSS in an ART cycle.● Assesses someone who is presenting with symptoms of OHSS, classifying according to severity.● Formulates a management plan for OHSS (outpatient and inpatient).● Understands the complications of severe OHSS and the importance of multidisciplinary team management.● Advises how to manage pregnancy for women who have had severe OHSS.● Able to discuss subsequent treatment for women who have previously had severe OHSS.



Directs patients to information sites and patient support groups	<ul style="list-style-type: none"> ● Discusses the role and value of self-help groups and community networks of support and arranges appropriate referrals. ● Arranges appropriate referral to social services for adoption/fostering and local independent adoption societies.
Human Fertilisation & Embryology Authority (HFEA) Code of Practice	<ul style="list-style-type: none"> ● Has read and understood the HFEA Code of Practice.
Evidence to inform decision – examples of evidence (not mandatory requirements)	
<ul style="list-style-type: none"> ● CbD to assess application of knowledge ● Mini-CEX ● Attend ART clinics ● TO2 (including SO) ● Reflective practice ● Local and deanery teaching 	<ul style="list-style-type: none"> ● Observe psychosexual medicine clinics or equivalent ● RCOG Learning ● Attendance at RCOG/BFS SITM course
Mandatory requirements	
<ul style="list-style-type: none"> ● OSATS: <ul style="list-style-type: none"> ○ ultrasound examination in gynaecology (non-pregnant) for follicular assessment 	
Knowledge criteria	
<ul style="list-style-type: none"> ● The UK legal and regulatory aspects of fertility treatment ● Clinical prognostic factors that should be considered when selecting appropriate patients for ART i.e. gender, age, duration of infertility, ovarian reserve, past reproductive history and pelvic organ abnormalities ● Stress associated with assisted conception treatment ● Preparation of patients for assisted reproduction: treating or managing hydrosalpinx and fibroids; screening for HIV, hepatitis B and hepatitis C, and the place of counselling ● How to assess the welfare of the child, including communication and consent ● The HFEA and its role 	

3.2 SST Reproductive Medicine CiPs 1–5

SST Reproductive Medicine CiP 1: The doctor is competent in recognising, assessing and managing endocrinological disorders.

Key skills	Descriptors
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Is able to evaluate various endocrine systems that affect reproductive health	<ul style="list-style-type: none">• Is able to interpret dynamic endocrinological testing.
Can counsel patients with endocrine disorders appropriately	<ul style="list-style-type: none">• Communicates the results clearly to patients and discusses the possible cause and its impact on fertility.• Puts together an appropriate personalised management plan, taking into account people's preferences.• Works effectively with colleagues in other disciplines, including clinical and non-clinical staff.• Offers appropriate support to people with endocrine disorders and provides information on local and national support groups.
Is able to diagnose and manage polycystic ovary syndrome (PCOS)	<ul style="list-style-type: none">• Understands the criteria for diagnosis in adolescents and adults and the need to exclude other disorders.• Uses ultrasound as a diagnostic tool to diagnose PCOS.• Recognises the influence of lifestyle, including diet and weight, on anovulation and is able to advise the patient on lifestyle factors. They are sympathetic to the difficulties of overcoming lifestyle issues such as obesity.• Is able to discuss and manage obesity, including advising on the efficacy of pharmacological and non-pharmacological treatments.
Is able to manage hyperandrogenism (hirsutism/acne/alopecia)	<ul style="list-style-type: none">• Puts together an appropriate individualised management plan for hyperandrogenism (hirsutism, acne and alopecia), taking into account patient preferences.• Demonstrates understanding of the psychological impact of hirsutism.• Is able to initiate the medical management of hyperandrogenism.• Discusses and manages hyperandrogenism, including advising on the efficacy of pharmacological and non-pharmacological treatments.• Liaises effectively with colleagues in other disciplines, both clinical and non-clinical, including endocrinology, dermatology and plastic surgery.
Is able to diagnose and manage hypothalamic-pituitary disorders: <ul style="list-style-type: none">• Hypogonadotropic hypogonadism	<ul style="list-style-type: none">• Takes a focused history, recording menarche, cycle regularity, hirsutism, acne, alopecia, BMI, galactorrhoea, secondary sex characteristics and previous chemotherapy/pelvic radiotherapy.• Performs an appropriate examination of the secondary sex characteristics.



<ul style="list-style-type: none">• Is able to manage anorexia nervosa/exercise and lifestyle-related disorders which can cause hypogonadotropic hypogonadism	<ul style="list-style-type: none">• Arranges and interprets appropriate investigations: baseline hormone profile to include follicle-stimulating hormone (FSH), luteinizing hormone (LH), oestradiol, prolactin (PRL), thyroid function tests (TFTs) and androgens (testosterone, sex hormone binding globuli (SHBG) and free androgen index (FAI)).• Formulates a differential diagnosis.• Is able to organise and review the results of CT/MRI scans and pelvic/abdominal ultrasound.• Is able to screen for associated conditions, e.g. autoimmune factors, genetic causes, diabetes mellitus, visual fields and late onset adrenal hyperplasia.• Discusses diagnosis in a sensitive manner, including the impact it will have on future fertility, fertility options and treatment strategies.• Escalates care to senior colleagues and other specialities when appropriate.• Appreciates the association of other medical conditions with anovulation and liaises with appropriate specialists to further manage someone's care.• Is able to openly explain the complications and adverse effects of treatment.
<p>Is able to diagnose and manage primary and secondary amenorrhoea</p>	<ul style="list-style-type: none">• Takes a focused history, recording menarche, cycle regularity, hirsutism, acne, alopecia, BMI, galactorrhoea, secondary sex characteristics, and previous chemotherapy/pelvic radiotherapy.• Performs an appropriate examination of secondary sex characteristics.• Arranges and interprets appropriate investigations, including a baseline hormone profile to include FSH, LH, oestradiol, PRL, TFTs and androgens (testosterone, SHBG, FAI, dehydroepiandrosterone sulfate (DHEAS), androstenedione and 17α-hydroxyprogesterone).• Is able to differentiate between primary and secondary amenorrhoea.• Interprets test results used to evaluate amenorrhoea.• For children and adolescents, is able to ascertain the patient's and parent's/carer's/guardian's understanding of the condition.• Sensitively addresses adolescent's concerns about sexuality and/or sexual functioning• Discusses treatment options.



	<ul style="list-style-type: none">• Can counsel someone on the impact of the diagnosis on long-term fertility.• Informs patients about support networks for primary and secondary amenorrhoea.
<ul style="list-style-type: none">• Is able to diagnose and manage adrenal dysfunction:• Cushing's syndrome, Addison's disease and Congenital adrenal hyperplasia	<ul style="list-style-type: none">• Takes a focused history, recording menarche, cycle regularity, hirsutism, BMI, galactorrhoea, secondary sex characteristics and previous chemotherapy/pelvic radiotherapy.• Performs an appropriate examination of secondary sex characteristics.• Arranges and interprets appropriate investigations, including a baseline hormone profile, PRL, TFTs, androgens (testosterone, SHBG, FAI, DHEAS, androstenedione and 17αHPA).• Arranges dexamethasone suppression test, if appropriate, to exclude Cushing's syndrome.• Formulates a differential diagnosis.• Is able to organise and review the results of CT/MRI scans and pelvic/abdominal ultrasound.• Formulates management plan for endocrinological findings.• Is able to implement a management plan and modify, if necessary.• Liaises effectively with colleagues in other disciplines, both clinical and non-clinical.• Discusses the impact on future fertility and fertility options and can counsel patients accordingly.• Is able to openly explain about treatments, complications and adverse effects of treatment.
Is able to diagnose and manage ambiguous genitalia/genital anomalies	<ul style="list-style-type: none">• Organises appropriate investigations, including baseline hormone profile, radiological investigations and genetic testing as appropriate, and interprets the results.• Formulates a differential diagnosis.• Is able to ascertain patient's and parent's/carer's/guardian's understanding of the condition by listening and requesting them to articulate their understanding.• Liaises effectively with colleagues in other disciplines, such as paediatric endocrinology or adolescent gynaecology.• Can counsel patients and parent(s)/carer/guardian sensitively about options available and invites patient and parents' opinion.



	<ul style="list-style-type: none">• Informs patients about support networks for ambiguous genitalia/genital anomalies.
Is able to diagnose and manage disorders of sexual development/difference, including Turner syndrome	<ul style="list-style-type: none">• Organises appropriate investigations to include baseline hormone profile, ultrasound scan and genetic testing, as appropriate, and interprets the results.• Formulates a differential diagnosis.• Is able to ascertain patient's and parent's/carer's/guardian's understanding of the condition.• Is aware of the importance of disclosure and liaising with clinical psychology to support the patient.• Formulates and implements a management plan to address various aspects of the condition.• Liaises effectively with colleagues in other disciplines, such as endocrinology, psychology, cardiology, obstetrics, audiology and renal physicians.• Discusses the impact on future fertility and fertility options.• Can counsel patient and parent(s)/carer/guardian sensitively about options available and invites patient and parents' opinion.• Informs patients about support networks for disorders of sexual development.
Promotes non-discriminatory practice	<ul style="list-style-type: none">• Understands the specific needs of transgender and non-binary people and is able to perform consultations and refer them appropriately to specialist services. This includes discussing and undertaking egg or sperm storage fertility preservation, including surrogacy screening, where indicated.
Is able to diagnose and manage precocious puberty	<ul style="list-style-type: none">• Organises appropriate investigations to include baseline hormone profile.• Liaises effectively with colleagues in other disciplines to formulate and implement a management plan.• Can counsel patients and parent(s)/carer/guardian sensitively about options available and invites patient and parents' opinion.• Offers appropriate support for people with precocious puberty.
Is able to diagnose and manage delayed puberty	<ul style="list-style-type: none">• Organises appropriate investigations, including baseline hormone profile and ultrasound assessment.• Liaises effectively with colleagues in other disciplines to formulate and implement a management plan.



	<ul style="list-style-type: none">• Can counsel patients and parent(s)/carer/guardians sensitively about options available and invites patient and parents' opinion.• Offers appropriate support.
Is able to diagnose and manage premature ovarian insufficiency	<ul style="list-style-type: none">• Organises and interpret tests, including endocrine assessment, dual-energy X-ray absorptiometry (DEXA) bone scans, immunological investigations and genetic testing.• Can counsel someone on the treatment options for young women, including the advantages and disadvantages, risks and benefits of hormone replacement therapy (HRT).• Discusses the impact of premature ovarian insufficiency on future fertility and fertility options, including IVF using donor eggs.• Liaises effectively with colleagues in other disciplines, both clinical and non-clinical, and refers a patient for formal psychological or psychosexual counselling.• Liaises with reproductive endocrinologists, haematologists and other specialists for complex cases with medical comorbidities.• Arranges appropriate follow up care.• Offers appropriate support and provides information on local and national support groups.
Is able to diagnose and manage the perimenopause and menopause	<ul style="list-style-type: none">• Discusses various forms of HRT, including the benefits, risks and adverse effects, the available preparations and their routes of administration.• Discusses alternatives to HRT and supports non-hormonal methods, including lifestyle and dietary advice.• Is able to report and interpret DEXA scan results.• Liaises effectively with colleagues in other disciplines, both clinical and non-clinical.• Liaises with reproductive endocrinologists, haematologists and other specialists for complex cases with medical comorbidities.• Arranges appropriate follow up for someone going through perimenopause or the menopause.• Offers appropriate counselling and provides information on local and national support groups.
Managing survivors of childhood cancer	<ul style="list-style-type: none">• Understands the impact of the patient's diagnosis on their long-term health, including on their ability to reproduce.



	<ul style="list-style-type: none"> • Works with a MDT team and liaises with the oncologist, paediatric oncologist and medical genetics for long-term management. • Discusses impact on future fertility and fertility options, including fertility preservation techniques.
Evidence to inform decision – examples of evidence (not mandatory requirements)	
<ul style="list-style-type: none"> • CbD • Mini-CEX • Reflective practice • TO2 (including SO) • Local and deanery teaching • RCOG Learning • Preceptor assessment of knowledge • Personal study 	<ul style="list-style-type: none"> • Attendance at specialist clinics – menopause clinic including DEXA bone scanning; endocrinology, Paediatric and Adolescent Gynaecology, combined fertility and oncology, and ate effects. • Appropriate postgraduate education courses: Paediatric and Adolescent Gynaecology Annual Update and Training Day and Subfertility and Reproductive Endocrinology course
Mandatory requirements	
No mandatory evidence	
Knowledge criteria	
<ul style="list-style-type: none"> • The standardised terms and definitions to describe sonographic features of normal pelvis and pelvic pathology • Endocrinological measurement of hormones in biological fluids to evaluate the various endocrine systems: <ul style="list-style-type: none"> ○ neuroendocrine anatomy and physiology ○ hypothalamic-pituitary dysfunction ○ hypogonadotropic hypogonadism ○ Kallmann syndrome ○ pituitary adenoma ○ hypoprolactinaemia • Disorders of growth hormone <ul style="list-style-type: none"> • Adrenal dysfunction: <ul style="list-style-type: none"> ○ Cushing’s syndrome ○ Addison’s disease ○ adrenal hyperplasia • Thyroid disorders • PCOS and disorders of androgen secretion <p><i>Neuroendocrine function:</i></p> <ul style="list-style-type: none"> • The anatomical and functional aspects of the hypothalamus, neurovascular relationships, hypothalamo-hypophyseal portal circulation and target cells of the pituitary 	



- Suprahypothalamic structures and neuronal systems relevant to regulation of reproductive processes
- The site of production, biological action and control of secretion of oxytocin, vasopressin and neurophysins
- The biochemical basis of neuroendocrine action of neuropharmacology of agonists and antagonists
- Pineal gland
- Blood-brain barrier
- Sex steroid-concentrating neurones
- The distribution and cellular characteristics of pituitary hormone-producing cells with special reference to gonadotroph and lactotroph
- Anatomical and functional aspects of the peptidergic and catecholaminergic system and their control of the pituitary hormone secretion
- Structure and function of pituitary reproductive hormones and neuropeptides
- Control of secretory activities of the pituitary hormones, including long- and short-term rhythms and their target organs and feedback systems
- Neuroendocrine regulation of the menstrual cycle
- Neuroendocrine function of the fetus and placenta
- Hypothalamic and pituitary hypopituitarism and disorders of over secretion of pituitary hormones
- Organic lesions and/or functional disorders of the hypothalamic-pituitary system
- Ectopic hormone syndromes

Thyroid function and disease states:

- Thyrotrophin-releasing hormone, thyroid-stimulating hormone and thyroid physiology
- Diagnostic value of thyroid-stimulating hormone, thyroid hormones total and free, thyroid-stimulating immunoglobulins and related diagnostic tests
- Biosynthesis, control and metabolism of thyroid hormones
- Clinical and pathophysiological correlates of hypo- and hyperthyroidism, particularly in relation to menstrual disorders and fertility
- Pregnancy- and hormone-induced changes of thyroid function in the mother and the effect of abnormal maternal thyroid function on the fetus
- Thyroid physiology in the newborn and identification of cases at high risk of neonatal thyrotoxicosis
- Effects of thyroid replacement and anti-thyroid drug therapy on the fetus
- Pathophysiology of thyroiditis
- Thyroid function in struma ovarii, molar pregnancy and choriocarcinoma
- Medical and surgical management of non-toxic goitre, and hypo- and hyperthyroidism

Adrenal function and disease states:

- Regulation and secretion of adrenocortical hormones



- Clinical and laboratory assessment of adrenocortical function
- Pharmacology of naturally occurring and synthetic glucocorticoids and mineralocorticoids
- Adrenocortical hypo- and hyperactivity (e.g. Cushing's syndrome, adenoma and carcinoma)
- Congenital adrenal hyperplasia
- Effects of aberrations of adrenocortical function on hypothalamic-pituitary-ovarian function
- Aldosterone and disorders of the rennin–angiotensin system
- Catecholamine disorders

Androgen disorders:

- Production, physiology and metabolism of androgens in normal women
 - Mechanisms of action of androgens
 - Symptoms and signs of androgen excess, together with any causes based on pathophysiology of androgen excess
 - Physiology of normal and abnormal hair growth
 - The scoring system for hirsutism
 - Ovarian tumours, benign and malignant, which secrete androgens
 - Benign stromal changes in the ovary which may result in increased androgen production
 - Relation between PCOS and abnormal hormone production
 - Androgen-resistant states
 - Congenital and acquired adrenal hyperplasia, in terms of aetiology, genital morphology, general metabolic effects and differentiate action and treatment
 - Management of androgen excess and hirsutism
 - Pharmacology of anti-androgens
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- Endocrinology of pregnancy:
 - Fetoplacental unit: physiology and pathophysiology of steroid hormones (e.g. oestrogen, progesterone and corticosteroids)
 - Physiology of decidua-chorionic-placental peptide hormones (e.g. gonadotrophins, somatomammotrophin, thyrotrophin, adrenocorticotrophic hormone/opioid peptides and prolactin)
 - Initiation of parturition, including physiology, pathophysiology and pharmacology of prostaglandins
 - Physiology of fetal adrenal gland
 - Endocrine and cytokine pathophysiology of preeclampsia and eclampsia
 - Pathophysiology of altered maternal thyroid, adrenal and pancreatic status during pregnancy

The ovary and PCOS:



- Ovarian anatomy, physiology, pathophysiology and endocrinology
- Normal physiology of ovulation and classification of ovulation disorders anatomically
- The causes of anovulation, such as syndromes of inappropriate prolactin secretion and central nervous system-hypothalamic-pituitary
- The various treatment strategies to address fertility issues for those with hypothalamic-pituitary and hypothalamic disorders, including ovulation induction with gonadotropins and IVF
- Diagnosis of PCOS:
 - imaging of PCOS
 - management of anovulation
 - management of hyperandrogenism (hirsutism, acne and alopecia)
 - management of obesity, including an understanding of long-term health risks, metabolic effects and cancer risks
- Management of ovulation induction in PCOS:
 - dietary advice
 - anti-oestrogens
 - gonadotrophin therapy
 - aromatase inhibitors
 - ovarian diathermy

Ovarian function and diseased states:

- Cyclic changes in endocrine activities within the ovary
- Synthesis and secretion of hormone substances by the various compartments and cell types of the ovary, including intra- and extraovarian control mechanisms
- The mechanism of protein/steroid hormone action in the ovary
- The regulation of hormone receptors
- Atresia and selection of the dominant follicle
- Luteolysis
- Hormone-producing tumours of the ovary
- Ovarian activity during gestation
- Age-related changes in ovarian structure and function
- The clinical and pathophysiological correlation of disorders of the human ovary (structure and function)

Ovarian pathology:

- Gross and microscopic findings and natural history of ovarian tumours in relation to reproductive function (e.g. follicular cysts, luteoma, corpus luteum, PCOS, endometrioma, granulosa-theca cell tumour, Sertoli-Leydig cell tumour, gynandroblastoma, cystic teratoma, dysgerminoma, gonadoblastoma and mixed germ cell or gonadal tumours)
- Different compartments of the Graafian follicle (e.g. granulosa cells, theca and adjacent stroma) and the primordial, preantral, antral and Graafian follicles, including the dynamic changes which occur in the ovary from embryo to menopause



- Specific staining techniques and cellular ultrastructure in relation to function

Paediatric and adolescent gynaecology:

- Embryology: the development of embryo and abnormalities which will have an influence on reproduction, in particular the development of the genital tract
- Factors controlling male and female development of the gonadal primordia, internal duct system and external genitalia
- Developmental abnormalities of the genital tract, including ambiguous genitalia, imperforate hymen and vaginal septa, uterine anomalies, Müllerian and Wolffian dysgenesis, Rokitansky syndrome and gonadal dysgenesis
- Embryology of hypothalamic-pituitary and other pertinent endocrine systems
- Developmental disorders:
 - ambiguous genitalia
 - disorders of sexual development
 - complete androgen insensitivity syndrome
 - endocrine disturbance
 - precocious puberty
 - delayed puberty
 - congenital Adrenal hyperplasia
- Surgical management:
 - developmental disorders
 - ambiguous genitalia
 - disorders of sexual development
- Awareness of patient support networks
- Normal sequence of pubertal changes in the female and male, and their chronology
- Effects of hormones on bone growth and epiphyseal closure
- How hormonal changes and gametogenesis relate to the reproductive cycle, from intrauterine life to the development of normal reproductive cycles (e.g. gonadotropin secretion in the fetus and the neonate, sensitivity of the feedback system during fetal and neonatal life and childhood; and the role of adrenal androgens)
- Delayed puberty, indicating the differential diagnosis, evaluation and appropriate therapy
- Sexual precocity, indicating the differential diagnosis, evaluation and appropriate therapy
- Developmental disorders, including those of the:
 - vagina: vaginal reconstruction by dilatation or surgery
 - uterus: knowledge of Müllerian anomalies with obstruction of drainage
- Ambiguous genitalia, including:
 - assigning of sex of rearing for an infant with ambiguous genitalia
 - techniques for surgically constructing of unambiguous functioning female external genitalia and vagina (e.g. vaginoplasty, clitoridectomy and clitoral resection),
 - laparoscopic techniques for gonadectomy



- Embryonic development of the genital tract, including the factors controlling male and female development of the gonadal primordia, internal duct system and external genitalia
- Gross and microscopic findings and the development of gonadal structures found in various forms of gonadal dysgenesis and disorders of sexual development
- Diagnosing and managing patients with developmental abnormalities of the genital tract, including ambiguous genitalia, imperforate hymen and vaginal septa, uterine anomalies, Müllerian agenesis and gonadal dysgenesis
- Embryology of the hypothalamic-pituitary and other pertinent endocrine systems
- Embryology of the urological system

Menopause and premature menopause:

- Management of someone who is going through the menopause:
 - the indications for and choice of HRT
 - non-hormonal methods, including lifestyle and dietary advice
 - adverse effects and risks of HRT
- The sequelae of long-term low oestrogen levels for primary ovarian insufficiency (POI)
- The indications and principles of performing DEXA scanning
- The potential causes of amenorrhoea including POI, congenital endocrine disorders (e.g. Turner syndrome, complete androgen insensitivity syndrome, ovarian agenesis, polyglandular endocrinopathy and fragile X syndrome) and iatrogenic (e.g. post-surgery, chemo/radiotherapy)
- Interpretation of tests used to evaluate amenorrhoea
- A rational diagnostic and therapeutic approach to patients with amenorrhoea
- Premature menopause:
 - causes of premature ovarian failure, congenital endocrine disorders (e.g. Turner syndrome, complete androgen insensitivity syndrome, ovarian agenesis, polyglandular endocrinopathy and fragile X syndrome) and atrogenic (e.g. post-surgery and chemo/radiotherapy)
 - Treatment options for young women with ovarian failure, with a focus on future fertility
 - Advantages, disadvantages, risks and benefits of HRT

SST Reproductive Medicine CiP 2: The doctor is competent in providing specialist care for women with endometriosis.

Key skills	Descriptors
Takes a thorough history from the individual, or couple, to identify the causes	<ul style="list-style-type: none"> • Demonstrates understanding of symptoms related to endometriosis such as: dysmenorrhoea, dyspareunia, dyschezia, dysuria, pelvic pain and lower backache.



of infertility and diagnoses endometriosis	<ul style="list-style-type: none">• Ascertains fertility history and if the woman is trying for pregnancy.• Uses appropriate quality of life questionnaires and analyses to assess severity and monitor response to treatment.• Formulates a differential diagnosis, such as urological or gastrointestinal disease.• Demonstrates understanding that other associated gastrointestinal and urological symptoms should also be assessed.• Performs a physical examination focusing on endometriosis, including:<ul style="list-style-type: none">○ examines findings relevant to benign gynaecological conditions, including assessment of the posterior cul de sac○ carries out an appropriate general, pelvic and rectal examination○ maps areas of pain or abnormal masses in relation to underlying anatomical structures.
Organises appropriate investigations	<ul style="list-style-type: none">• Organises appropriate radiological investigation (ultrasound/computed tomography (CT)/magnetic resonance imaging (MRI)) of the abdomen and pelvis to assess the extent of the disease.• Interprets the results of the radiological investigation.
Provides accurate and non-judgmental information on the effects of endometriosis and its treatment on fertility and ART	<ul style="list-style-type: none">• Discusses expectant management, non-pharmacological, medical and surgical treatment.• Discusses impact of endometriosis on future fertility.• Works effectively with colleagues in other disciplines, both clinical and non-clinical, e.g. colorectal surgeons, urologists, Chronic Pain team and radiologists.
Is able to decide on appropriate medical intervention to manage endometriosis	<ul style="list-style-type: none">• Puts together an appropriate individualised management plan, taking into account patient preferences.• Can counsel patients appropriately.• Follows safe prescribing.• Arranges appropriate follow up with patients.
Provides medical management of endometriosis using either combined oral contraceptive pills, progestogens (oral, depot injections or intra-uterine system) or gonadotropin-releasing	<ul style="list-style-type: none">• Chooses appropriate treatment, including carrying out a pre-prescription assessment for someone's suitability for combined oral contraceptive pills.• Can counsel patients appropriately.• Discusses possible benefits and potential adverse effects of different treatments.• Follows safe prescribing.• Arranges appropriate follow up with the patient.



hormone (GnRH) analogues with or without (\pm) add-back therapy	
Explains the role of endoscopic and open surgery for endometriosis associated symptoms or infertility	<ul style="list-style-type: none"> Clearly explains treatments, complications and side effects of endoscopic and open surgery. Decides when to operate and when to not operate.
Advises on the role of assisted conception in endometriosis associated infertility	<ul style="list-style-type: none"> Formulates an appropriate individualised assisted conception management plan, taking into account patient preferences. Can counsel patient appropriately. Able to discuss issues such as poor ovarian response, and effect of ovarian endometrioma on ovarian stimulation and for oocyte retrieval.
Advises on multidisciplinary pain management	<ul style="list-style-type: none"> Accurately documents patient's descriptions of pain. Prescribes effective and safe analgesia. Recognises when to refer to Pain Management teams.
Provides general advice, including dietary, lifestyle and psychological	<ul style="list-style-type: none"> Provides general dietary, lifestyle and psychological advice. Refers to dietician, pain specialist and psychologist to assist in management of patient, where appropriate.
Evidence to inform decision – examples of evidence (not mandatory requirements)	
<ul style="list-style-type: none"> CbD Mini-CEX Reflective practice TO2 (including SO) Local and deanery teaching Preceptor assessment of knowledge 	<ul style="list-style-type: none"> Personal study RCOG Learning Confirmed participation in endometriosis MDT-based meeting Confirmed attendance at specialist endometriosis clinics and pain clinic Appropriate postgraduate education courses
Mandatory requirements	
<ul style="list-style-type: none"> OSATS <ul style="list-style-type: none"> Laparoscopic destruction of superficial endometriosis 	
Knowledge criteria	
<ul style="list-style-type: none"> The anatomy of the abdomen, female genital tract, bladder, ureters and lower bowel Pathogenesis and aetiology of endometriosis 	



- The mechanisms by which minimal and mild endometriosis may impair fertility, e.g. defective folliculogenesis, ovulatory dysfunction, hyperprolactinaemia, autoimmune disorders, and disturbances in the peritoneal fluid environment
- Diagnosis, staging and grading of disease and prognosis
- The role of physical examination in the diagnosis of endometriosis
- The indications for investigations, including:
 - ultrasound/CT/MRI
 - pelvic MRI/CT
 - serum CA125 measurement
- The limitations of serum CA125 measurement
- The limitations of hormonal treatment for suppression of ovarian function, surgery and intrauterine insemination (IUI) on fertility and assisted conception outcomes.
- The pharmacology of chemical substances that act upon benign gynaecological conditions
- The pharmacology and side-effects of analgesic drugs
- The role of hormonal agents, e.g. oral contraceptives, progestogens, danazol, gestrinone and gonadotropin-releasing hormone (GnRH) analogues, and their possible benefits and adverse effects
- The pharmacology of combined oral contraceptive pills
- The pharmacology of GnRH analogues and add-back therapy
- The pharmacology of Danazol, its role in the management of endometriosis and the potential androgenic adverse effects
- Appreciates that Danazol is not recommended as a first-line drug for managing endometriosis
- The effects of assisted conception on fertility
- The role of ART in the management of endometriosis and subfertility
- The role and limitations of surgical and medical management of endometriosis prior to assisted conception
- Knowledge of multidisciplinary pain management teams
- The contribution of complementary therapies for analgesia

SST Reproductive Medicine CiP 3: The doctor has the surgical skills appropriate for a subspecialist in reproductive medicine.

Key skills	Descriptors
Explains the role of endoscopic and open surgery in the treatment of fertility-related conditions, e.g. fibroids, endometriosis, hydrosalpinges and tubal	<ul style="list-style-type: none"> • Clearly explains treatments for, complications and side effects of surgery. • Decides when to operate and when not to. • Is aware of different surgical approaches, including their advantages and disadvantages: open, straight stick laparoscopy or robotic.



disease and sterilisation reversal	
Performs appropriate surgery safely and efficiently	<ul style="list-style-type: none"> • Selects patients for reproductive surgery appropriately. • Decides optimal method of entry. • Demonstrates competence in setting up the equipment and theatre environment, patient positioning, optimisation and recording of images. • Refers to colleagues with advanced skills, when appropriate. • Involves appropriate MDT specialists. • Manages intra- and postoperative complications. • Is capable of carrying out intermediate endometriosis surgery. • Works towards advanced (deep infiltrating) endometriosis surgery. • Is able to remove uterine fibroids by different routes and techniques.
Assesses, manages and refers appropriately for infertility in males	<ul style="list-style-type: none"> • Obtains focused and relevant history. • Interprets the results of endocrinological assessment. • Examines epididymis and appreciates any abnormalities. • Assesses testes using orchidometer. • Selects patients appropriately for Percutaneous Epididymal Sperm Aspiration (PESA), Testicular Sperm Aspiration (TESA) or Extraction (TESE). Performs procedures under direct supervision and manages intra- and postoperative complications such as pain, bleeding, infection and testicular atrophy. • Organises appropriate use of surgically retrieved sperm. • Refers to a urologist with a special interest in infertility in males for: <ul style="list-style-type: none"> ○ microscopic epididymal sperm extraction ○ microscopic testicular sperm extraction.
Evidence to inform decision – examples of evidence (not mandatory requirements)	
<ul style="list-style-type: none"> • CbD • Mini-CEX • NOTSS • TO2 (including SO) • Local and deanery teaching 	<ul style="list-style-type: none"> • RCOG Learning • Confirmed attendance at specialist clinics • Attendance at specialist courses • Reflective practice • Surgical logbook
Mandatory requirements	
<ul style="list-style-type: none"> • OSATS <ul style="list-style-type: none"> ○ Laparoscopic destruction of superficial endometriosis ○ Laparoscopic surgery – division of adhesions 	



- Laparoscopic surgery – salpingectomy for hydrosalpinx
- Hysteroscopic surgery – resection of fibroid
- Hysteroscopic surgery – resection of polyp
- Open myomectomy

Knowledge criteria

- Female pelvic and abdominal anatomy
- Possible anatomical changes in someone with endometriosis
- Sterilisation reversal
- Uterine anatomy and histology:
 - normal anatomy
 - different types of congenital anomalies, such as uterine septum, their impact on fertility and how to manage them
 - impact and management of intrauterine adhesions
 - impact and management of fibroids, including medical, surgical and embolisation
- Tubal anatomy and histology:
 - normal anatomy
 - different types of congenital abnormalities
 - management of proximal, mid-tubal and distal tubal disease
 - sterilisation and reversal of sterilisation
 - gross and microscopic findings of diseases of the oviduct related to reproductive endocrinology (e.g. acute and chronic salpingitis, granulomatous salpingitis and endometriosis)
 - natural history and clinical course of acute and chronic salpingitis and relate these to subsequent fertility
- Vaginal and cervical anatomy and histology:
 - gross and microscopic findings of endometriosis and adenosis
 - possible consequences of antenatal hormone exposure
 - effects of various hormones on the vagina and cervix
- Endometrial histology:
 - histological appearance of normal and abnormal endometrium
 - current data relating estrogens with endometrial hyperplasia and adenocarcinoma
 - acute and chronic endometritis
 - developmental stages of the endometrium (dating)
 - endometrial factors that affect implantation in early pregnancy
- Myometrial histology:
 - gross and microscopic findings of adenomyosis, leiomyoma and other myometrial lesions related to reproduction
 - relationship of leiomyoma to infertility, including each of the different types (e.g. subserosal, intramural and submucosal)
- Ovarian anatomy and histology:
 - gross and microscopic findings and natural history of ovarian tumours related to reproductive function (e.g. follicular cysts, luteoma, corpus luteum, PCOS,



- endometrioma, granulosa-theca cell tumour, Sertoli-Leydig cell tumour, gynandroblastoma, cystic teratoma, dysgerminoma, gonadoblastoma, and mixed germ cell or gonadal tumours)
- different compartments of the Graafian follicle (e.g. granulosa cells, theca and adjacent stroma) and the primordial, preantral, antral and Graafian follicles, including the dynamic changes which occur in the ovary from embryo to menopause
- specific staining techniques and cellular ultrastructure relating to function
- gross and microscopic findings and the development of gonadal structures found in various forms of gonadal dysgenesis and intersex conditions
- Testicular anatomy and histology:
 - normal anatomy and development of the testes
 - various stages of normal and abnormal spermatogenesis
 - gross and microscopic findings in testicular disease (e.g. teratoma, seminoma, and Leydig and Sertoli cell tumours)
- The role of endoscopic and open surgery in the treatment of fertility-related conditions, e.g. fibroids, endometriosis, hydrosalpinges and tubal disease, and sterilisation reversal
- The alternative therapies, such as pharmacological, medical and non-medical treatments
- The environment, staffing and equipment needed to safely and effectively perform surgery
- Principles of the safe use of energy sources
- The techniques to minimise the risk of chemical peritonitis
- The available anti-adhesion agents and their limitations for adhesiolysis
- The importance of excision or occlusion of hydrosalpinges prior to IVF
- Reduced ovarian reserve associated with salpingectomy, and strategies to minimise this risk
- When to request a 3D ultrasound scan or MRI, prior to myomectomy
- When and how to treat fibroids and when appropriate to refer to other specialists
- The principles and practical steps involved in the performance of laparoscopic myomectomy
- The various techniques available to minimise the risks of excessive bleeding during myomectomy, and their safety and effectiveness
- The principles, benefits and risks of ovarian diathermy for anovulatory PCOS
- Good understanding of available hysteroscopic tissue removal systems for resection of submucous fibroids and endometrial polyps
- How to use distension media and the importance of maintaining fluid balance
- The principles of, and the surgical steps involved in, septal resection
- The various techniques available for myomectomy, their safety and effectiveness in minimising the risks of excessive bleeding
- The indications and prerequisites for PESA and TESA
- The environmental, staffing and supplies needed to safely perform PESA and TESA



- The indications and principles of performing an open testicular biopsy
- The indications and principles of performing MESA and micro-TESE

SST Reproductive Medicine CiP 4: The doctor is competent in recognising, assessing and managing complex fertility problems and assisted conception.

Key skills	Descriptors
Arranges further investigations to identify the cause of severe infertility in men infertility (azoospermia or severe oligospermia with a sperm density of < 5 million/ml)	<ul style="list-style-type: none"> • Is able to arrange relevant further investigations: <ul style="list-style-type: none"> ○ repeat semen analyses ○ urine for retrograde ejaculation ○ endocrine evaluation ○ microbiological ○ genetic (karyotype and cystic fibrosis screening) ○ scrotal and testicular ultrasound scan ○ testicular biopsy. • Reviews investigations and is able to differentiate pre-testicular, testicular and post-testicular causes of severe abnormality. • Organises sperm freeze, if appropriate.
Co-ordinates medical therapy for infertility in men	<ul style="list-style-type: none"> • Liaises with reproductive endocrinologists and andrologists and co-ordinates suitable medical therapy. • Discusses available drugs for severe infertility in men, their effects, limitations and side-effects. • Discusses alternatives to medical therapy for severe infertility in men. • Arranges appropriate follow up to assess how to improve fertility. • Refers men with low testosterone to reproductive endocrinologists for testosterone replacement therapy.
Discusses the role of IUI: natural cycle and stimulated	<ul style="list-style-type: none"> • Discusses IUI with couples experiencing infertility, including: natural and simulated cycles. • Clearly explains treatment regimens for ovarian stimulation, success rates (pregnancy rate and live birth rate), potential side effects of drugs and complications of procedures, including the risk of multiple pregnancy and ovarian hyperstimulation syndrome (OHSS) and link with ovarian cancer. • Provides appropriate monitoring during treatment to assess effectiveness and minimise the risk of multiple pregnancy.



<p>Can counsel patients on in vitro fertilisation (IVF) and intracytoplasmic sperm injection (ICSI)</p>	<ul style="list-style-type: none">• Discusses IVF and ICSI as a treatment option in those with subfertility.• Clearly explains treatment regimens for pituitary downregulation, controlled ovarian stimulation, final follicular maturation trigger, luteal phase support and is able to perform oocyte retrieval and embryo transfer.• Explains success rates (pregnancy rate and live birth rate) taking into consideration various factors.• Discusses potential side effects of drugs and complications of procedures, including the risk of poor ovarian response, failed fertilisation, multiple pregnancy, OHSS, ectopic pregnancy, the risks with oocyte retrieval procedure, the link with ovarian cancer and the risk of genetic disorders after IVF/ICSI.• Provides appropriate monitoring to assess the effectiveness of treatment and minimise the risk of multiple pregnancy.• Completes appropriate HFEA consent forms.• Offers appropriate counselling support for those embarking on treatment.
<p>Can counsel patients on various pituitary down-regulation protocols</p>	<ul style="list-style-type: none">• Clearly explains treatment regimens for pituitary down-regulation to suit particular clinical context.• Discusses long GnRH agonist protocol.• Discusses short (flare or micro-flare) GnRH agonist protocols.• Discusses GnRH antagonist protocol.
<p>Manages drugs dosage and strategies for controlled ovarian stimulation (COS)</p>	<ul style="list-style-type: none">• Determines a gonadotropin dosage, taking various factors into consideration to provide safe and effective COS.• Provides appropriate monitoring to assess the safety and effectiveness of COS.• Uses appropriate strategies to minimise the risk of, and manage over or under response to, COS.• Discusses strategies such as cycle cancellation, coasting, freeze all for hyper response COS.• Discusses, as appropriate, conversion to IUI or cycle cancellation for poor ovarian response.
<p>Is able to diagnose and manage ovarian hyperstimulation syndrome (OHSS)</p>	<ul style="list-style-type: none">• Is familiar with drainage of peritoneal fluid (ascites) technique.



Manages frozen embryo replacement cycle (FERC)	<ul style="list-style-type: none">• Clearly explains treatment regimens for FERC to suit particular clinical context.• Is able to initiate and manage a stimulated cycle.• Is able to discuss local and national success rates for FERC.• Offers appropriate support and counselling for people going through the treatment.
Can counsel patients on using donor gametes (eggs and sperm) and embryo	<ul style="list-style-type: none">• Can counsel patients sensitively on the options of using donor gametes or embryos, relevant to their particular situation.• Can counsel patients on available alternative options.• Completes relevant HFEA consent forms for use of donor gametes and embryos.• Offers appropriate counselling for people using donor gametes and embryos.
Co-ordinates a donor-recipient cycle	<ul style="list-style-type: none">• Clearly explains treatment regimens for patients (donor and recipient).• Initiates and undertakes appropriate co-ordination of a donor-recipient cycle.• Discusses local and national success rates of using treatment with donor gametes and embryos.• Offers appropriate support and implications counselling for someone using donor gametes and embryos.
Advises on gamete (sperm or eggs) and embryo freezing	<ul style="list-style-type: none">• Offers appropriate advice for people wanting to store gametes or embryos.• Discusses local and national success rates for gamete and embryo freezing.• Offers appropriate advice for posthumous use of gametes.• Completes relevant HFEA consent forms for gamete or embryo storage.
Discusses gametes (sperm or eggs) and embryo storage prior to oncology treatment	<ul style="list-style-type: none">• Arranges appropriate investigations and interprets the results.• Arranges relevant further investigations: endocrinological and virology screening (HIV, Hepatitis B and C and syphilis).• Discusses local and national success rates.• Can counsel patients on alternative options that are available.• Offers appropriate counselling for posthumous use of gametes.



	<ul style="list-style-type: none">• Completes relevant HFEA consent forms for gamete or embryo storage.• Organises an appropriate follow-up schedule to assess someone's fertility following oncology treatment.
Manages fertility preservation for female cancer patients or social egg or embryo freezing	<ul style="list-style-type: none">• Arranges appropriate investigations to assess the suitability and interprets the results.• Formulates an appropriate individualised management plan, taking into account the patient's preferences.• Can counsel patients on available alternative options.• Liaises with other specialists (oncologists, haematologists, surgeons and radiologists) to provide the best care to the patient.• Offers appropriate counselling to those wishing to preserve fertility.
Discusses sperm banking with men who want to have a vasectomy for contraception	<ul style="list-style-type: none">• Arranges semen analysis and interprets the results.• Arranges relevant further investigations: pre-sperm banking screening (HIV, Hepatitis B and C, syphilis).• Completes relevant HFEA consent forms for gamete storage.• Can counsel patients on available alternative options.• Offers appropriate counselling for posthumous use of gametes.
Discusses and coordinates gamete or embryo donation for clinical use or research	<ul style="list-style-type: none">• Arranges appropriate investigation of the potential donor and interprets the results.• Assesses the suitability for gamete or embryo donation.• Arranges relevant further screening investigations: HIV, Human T Cell Lymphotropic Virus (HTLV), Cytomegalovirus (CMV), toxoplasmosis, Hepatitis B and C, syphilis, chlamydia and gonorrhoea, blood group, karyotyping and cystic fibrosis screening.• Completes relevant HFEA consent forms for gamete and embryo donation.• Offers appropriate implications and support counselling for those donating gametes or embryos for clinical use or research.
Discusses the role of surrogacy	<ul style="list-style-type: none">• Explores the indications for and different types of surrogacy treatment.• Be familiar with the surrogacy process: tests, consents, counselling and legal aspects.



<p>Discusses managing viral discordant couples</p>	<ul style="list-style-type: none"> • Be aware of viral screening requirements for all patients having ART. • Is able to interpret viral results and act on them. • Coordinate with infectious diseases colleagues, when required. • Is familiar with European Society of Human Reproduction and Embryology (ESHRE) guidelines on treating couples with transmissible viral diseases. • Knows about laboratory requirements for treating viral positive patients.
<p>Can counsel on infertility and fertility treatment</p>	<ul style="list-style-type: none"> • Offers supportive counselling to patients before, during and after treatment. • Liaises with counsellors. • Offers therapeutic and psychosexual counselling, alongside a counsellor. • Can counsel on the legal aspects of using donated gametes and adoption, alongside a fertility counsellor.
<p>HFEA Code of Practice</p>	<ul style="list-style-type: none"> • Has read and understood the HFEA Code of Practice. • Considers enrolling on the HFEA Person Responsible (PR) entry programme.
<p>Can apply knowledge of clinical and molecular genetics to manage people at risk of, or affected by, a genetic problem</p>	<ul style="list-style-type: none"> • Takes an appropriate history, can construct a family tree and arranges appropriate investigations. • Communicates effectively with patients about genetic inheritance and transmission of genetic disease. • Manages the care of a people with a personal or family history of a chromosomal anomaly, single gene disorder or syndromic anomaly, including assessment of risk, prenatal diagnostic options, and further management options after testing. • Discusses the role of pre-implantation genetic testing (PGT-M and PGT-SR). • Provides information to a patient at risk of, or affected by, a genetic problem. • Recognises when advice from, and referral to, clinical genetics services is needed.
<p>Evidence to inform decision – examples of evidence (not mandatory requirements)</p>	
<ul style="list-style-type: none"> • CbD • Mini-CEX • Reflective practice • TO2 (including SO) 	<ul style="list-style-type: none"> • Confirmed attendance at IVF and genetics laboratory sessions Regular participation in IVF theatres



- NOTSS
- RCOG Learning
- Preceptor assessment of knowledge
- Attendance at RCOG/British Fertility Society course
- Local, deanery or national teaching or training sessions

- Exposure to relevant specialist clinics: endocrinology, clinical genetics, oncology and urology/andrology clinics
- Participation in HFEA inspection
- Attendance at United Kingdom Accreditation Service (UKAS) inspection
- Attendance at assisted reproduction ethics committee meeting

Mandatory requirements

- OSATS
 - Ultrasound examination in gynaecology (non-pregnant patient) including variety of different pathologies and ovarian follicular assessment
 - Transvaginal ultrasound egg collection

Knowledge criteria

General subfertility:

- Female reproductive anatomy and physiology
- The normal physiology of ovulation, endometrial changes and tubal function
- The male reproductive anatomy and physiology
- The process of spermatogenesis and its control
- Awareness of possible feelings of guilt in patients with previous infection
- The environmental factors influencing male reproductive function
- The endocrine disorders affecting male fertility
- The effect of reproductive pathologies, such as varicocele, undescended testicles, sexually transmitted infections including, chlamydia and gonorrhoea, previous orchitis and chemo-radiotherapy
- The impact of previous surgery, such as vasectomy, reversal of vasectomy, inguinal herniorrhaphy and orchidopexy
- Coital dysfunction associated infertility
- Other putative causes of infertility: subtle ovulation defects, cervical mucus hostility, subclinical pregnancy loss, occult infection, sperm dysfunction, immunological causes and psychological factors
- The availability of various advanced sperm function tests and their role in managing infertility in males
- Normal ultrasound appearances of the uterus, ovaries and adnexa
- The standardised terms and definitions to describe sonographic features of a normal pelvis and pelvic pathology



- Appearance of a normal and abnormal uterus, including fibroids
- Endometrial assessment, including normal cyclical changes, changes associated with hormone replacement, hyperplasia and malignancy
- Ovarian, para-ovarian and tubal masses
- The indications, pre-requisites and possible complications of HyCoSy, sonohysterography, HSG and laparoscopy
- The role of CT and MRI
- The indications for medical therapy for azoospermia
- The sequelae of long-term low testosterone levels and the association with testicular cancer

IVF and assisted contraception:

- The various treatment strategies for anovulation:
 - anti-estrogens
 - anti-androgens
 - aromatase inhibitors
 - gonadotrophins
 - laparoscopic ovarian diathermy
 - dopamine agonists
 - steroids
 - insulin sensitisers
 - glitazones
- The impact of psychiatric and psychological issues on anovulation
- IVF and intracytoplasmic sperm injection
- Management options:
 - long GnRH agonist protocol
 - short GnRH agonist protocol
 - GnRH antagonist cycles
 - frozen embryo replacement (natural cycle and HRT cycle)
 - donor–recipient cycle
 - sperm freezing
 - embryo freezing
 - in vitro oocyte maturation
 - oocyte freezing
- Fertility preservation for cancer patients
- The indications for IUI
- Clinical trial design
- Ultrasound/imaging:
 - Follicular tracking: natural/simulated cycles
 - Tracking IVF endometrial development
- Uterine abnormalities



- Ovarian pathology
- Early pregnancy assessment
- Oocyte retrieval
- Embryo replacement
- Microsurgical epididymal sperm aspiration
- Percutaneous epididymal sperm aspiration
- Open testicular biopsy
- The pharmacokinetics of drugs used in reproductive medicine:
 - anti-estrogens
 - anti-androgens
 - aromatase inhibitors
 - gonadotrophins (FSH, LH, hCG)
 - GnRH-agonists
 - GnRH antagonists
 - dopamine agonists
 - estradiol
 - progesterone
- The various down-regulation protocols
- Drugs and dosage for controlled ovarian stimulation
- The strategies to minimise the risk of OHSS
- Ultrasound guided paracentesis
- Clinical presentation and classification of OHSS
- The potential complications of OHSS and the importance of MDT management
- The process and limitations of natural cycle FERC
- The embryo survival rate, following freeze-thaw
- The law relating to gamete and embryo donation and storage
- The various methods of gamete and embryo freezing
- The role and limitations of medical therapy, such as GnRH agonists/aromatase inhibitors for breast cancer
- The various treatment protocols for preserving fertility for female cancer patients, including random start and double stimulation (DuoStim)
- The role of counselling (supportive, implications, therapeutic, adoption, legal aspects and psychosexual)

Genetics:

- Normal chromosome structure and function
- Gene structure and function, including gene control, mechanisms, and effects of mutation and genetic heterogeneity
- Cell division (meiosis and mitosis), and abnormalities arising from these processes



- Patterns of genetic inheritance and susceptibility, expression and penetrance, multifactorial and mitochondrial inheritance
- Types of aneuploidy, including structural rearrangements, deletions and common microdeletions, trisomies, sex chromosome anomalies (including Monosomy X (Turner syndrome), Klinefelter syndrome and Triple X syndrome), extra markers, mosaicism (fetal and placental), uniparental disomy and triploidy
- The underlying genetic aetiology of single gene disorders, including myotonic dystrophy, Huntington's disease, haemoglobinopathies, haemophilia, other common bleeding disorders and inborn errors of metabolism
- The role of pre-implantation genetic testing (PGT-M, PGT-SR) and diagnosis
- Chromosome analysis
- International System for Human Cytogenetic Nomenclature
- Normal variation within genetics
- Banding techniques for assessment of chromosomes
- Prenatal diagnosis
- Cell culture and processing
- The statistical terms relevant to screening, including sensitivity, specificity, false positive rates, positive predictive rates, and how these are inter-dependent
- The meaning of likelihood ratios in risk calculations
- How recurrence risks for chromosomal and single gene disorders are derived
- Laboratory techniques for analysing parental and fetal samples, including quantitative polymerase chain reaction (qPCR), fluorescent in situ hybridization (FISH), karyotyping, microarray, mutational analysis, sequencing, enzymatic analysis, analyte genetic inheritance and transmission of genetic disease

Laboratory techniques:

- Has observed the following techniques in an IVF laboratory:
 - sperm preparation
 - oocyte culture
 - oocyte insemination
 - oocyte sperm injection
 - embryo culture
 - embryo freezing and thawing
 - assisted hatching
 - polymerase chain reaction
 - preimplantation genetic diagnosis
 - DNA, RNA and protein amplification techniques
 - culture systems
 - blastocyst culture



- time-lapse imaging of embryo
- flow cytometry
- HFEA laboratory inspection
- Clinical Pathology Accreditation (CPA / UKAS) laboratory inspection
- International Organisation for Standardisation and quality management systems

The role of HFEA:

- The HFEA Code of Practice
- The role of the Person Responsible
- HFEA regulations about storing and using gametes, including posthumous use
- What constitutes an adverse event and how to report it

Andrology:

- Appropriate history and investigations:
 - Semen analysis
 - Endocrine profile: male
 - Anatomy and physiology of the testes
 - Investigation of azoospermia
 - Hypothalamo-pituitary-thyroid axis function and assessment
- Assessment and management of impotence

Treatment:

- Endocrine therapy
- Gonadotrophin therapy

SST Reproductive Medicine CiP 5: The doctor is competent in recognising, assessing and managing complex early pregnancy problems.

Key skills	Descriptors
Assesses women with recurrent miscarriage and performs a physical examination	<ul style="list-style-type: none"> ● Records pregnancy and medical history. ● Performs appropriate physical examination with particular emphasis on anatomical assessment of reproductive tract by abdomino-pelvic examination, calculation of body mass index and extent of hirsutism.



Arranges appropriate investigations to establish the conditions associated with recurrent miscarriage

- Arranges appropriate investigations, including endocrine, immunological and anatomical assessment (antiphospholipid antibodies, cytogenetic analysis of products of conception, parental peripheral blood karyotyping, thrombophilias, glycated haemoglobin test (HbA1C), thyroid function tests, trans-vaginal ultrasound scan (2D +/-3D), saline infusion sonography, hysterosalpingogram and CT/MRI scan).
- Interprets results of recurrent miscarriage investigations appropriately.
- Discusses the results of these tests and their impact on recurrent miscarriage in detail with the patient.
- Demonstrates an understanding of the psychological impact of recurrent miscarriage.

Communicates and formulates an appropriate management plan for people with recurrent miscarriage

- Can counsel patients on available treatment options and formulate an appropriate individualised management plan, taking into account results of investigations and patient preferences.
- Implements management plan and modifies it, if necessary.
- Refers to clinical geneticist on findings of an abnormal karyotype.
- Liaises with obstetricians to assess and manage cervical factor to improve pregnancy outcome in women with a history suggestive of cervical weakness.
- Is able to offer and/or perform appropriate surgical management for people with recurrent miscarriage (e.g. fibroid / polyp surgery, metroplasty, division of intrauterine adhesions).
- Advises on, and offers support to make, lifestyle changes to improve someone's pregnancy outcome.
- Offers supportive care in a dedicated early pregnancy assessment unit for women with unexplained recurrent miscarriage.
- Liaises with colleagues in other disciplines, both clinical and non-clinical, for advice and support.
- Refers people with recurrent miscarriage to support groups, as appropriate.

Evidence to inform decision – examples of evidence (not mandatory requirements)



<ul style="list-style-type: none"> • CbD • Mini-CEX • Local and deanery teaching • RCOG Learning • TO2 (including SO) • NOTSS 	<ul style="list-style-type: none"> • Confirmed attendance at specialist recurrent miscarriage clinics and early pregnancy assessment unit • Reflective practice
Mandatory requirements	
<ul style="list-style-type: none"> • OSATS: <ul style="list-style-type: none"> ○ Ultrasound examination in gynaecology (non-pregnant patient) including variety of different pathologies ○ Ultrasound examination of early pregnancy complications 	
Knowledge criteria	
<ul style="list-style-type: none"> • The various professional societies' definitions of recurrent miscarriage • The causes of, and risk factors, investigations and management options for recurrent miscarriage • Normal ultrasound appearances of the uterus, ovaries and adnexa • The standardised terms and definitions to describe sonographic features of normal pelvis and pelvic pathology • The role of antiphospholipid syndrome (APS) in recurrent miscarriage • The benefits of treatment with low-dose aspirin, plus heparin, in women with APS • The potential risks of low-dose aspirin, plus heparin, in pregnancy • The evidence base for treatments such as corticosteroids or intravenous immunoglobulin for women with recurrent miscarriage • The role of pre-implantation genetic testing for aneuploidy (PGT-A) in relation to miscarriage • The available options on surgical correction of uterine abnormalities and impact on pregnancy outcome • The evidence for routine use of hormonal therapy or immunotherapy for recurrent miscarriage • The efficacy of thromboprophylaxis during pregnancy in women who have thrombophilias (inherited or acquired) with recurrent first-trimester miscarriage or second trimester miscarriage assessment • The role of cervical cerclage (transvaginal and transabdominal) to prevent second trimester miscarriage. • The role of infection, and microbiome, in pregnancy loss and subfertility 	

3.3 The SSTR CiP

The previous requirement for 'research accreditation' (evidenced by a higher degree, the Research Advanced Professional Module or two relevant first author papers) has been removed from the 2024 SST curriculum. In recognition of the important contribution made by, and expected of, most subspecialists, this requirement has been replaced with a



subspecialty-specific research CiP. Trainees who have already been involved in research are likely to be able to use evidence of these research skills to support sign-off of this CiP.

SSTR CiP: The doctor is able to engage with research and promote innovation within their subspecialty.	
Key skills	Descriptors
Demonstrates research skills	<ul style="list-style-type: none">• Is able to demonstrate practice in healthcare research and the different methodologies within their subspecialty.• Shows continued engagement in Good Clinical Practice (GCP) and Research and Development (R&D) processes.• Engages in ethics and governance processes within research, demonstrating they are able to follow guidelines on ethical conduct and consent for research.• Demonstrates involvement in informatics, statistical analysis and emerging research areas within their subspecialty.• Shows engagement with national trials within their subspecialty, including patient recruitment, trial monitoring and adverse event reporting.• Shows understanding of the role of public and patient involvement within clinical trials.• Is able to discuss clinical trials with, and facilitate recruitment of, patients within their subspecialty.• Has the ability to translate research into clinical practice within their subspecialty.
Demonstrates critical thinking	<ul style="list-style-type: none">• Is able to develop and critically appraise a research protocol.• Is able to critically evaluate clinical trial data to establish the clinically significant outcomes and relevance for clinical practice within their subspecialty.• Is able to interpret research findings, reflect on the potential impact on their clinical practice and share this with colleagues and patients.• Can develop and critically appraise a patient information leaflet.• Is able to interpret research findings within their subspecialty and discuss these when taking informed consent for treatment.



Innovates	<ul style="list-style-type: none"> • Demonstrates how their clinical practice has developed from innovative research within their subspecialty. • Is able to demonstrate engagement with the introduction of any innovations within their subspecialty, including governance and costs.
Evidence to inform decision – examples of evidence (not mandatory requirements)	
<ul style="list-style-type: none"> • National teaching and courses • Critical appraisal of protocols/papers • Subspecialty journal club presentations • GCP re-certification • Participation, including recruitment for national multicentre trials • Preparation of research protocol/grant applications • Oral, and/or poster presentations at national/international subspecialty meetings 	<ul style="list-style-type: none"> • SIPM in Clinical Research • Peer reviewed original research publications relevant to their subspecialty • A higher degree such as a PhD or research MD
Mandatory requirements	
No mandatory evidence	

4. GMC Generic Professional Capabilities (GMCs)

The key skills in all ten CiPs also map to a variety of [generic professional capabilities](#) (GPCs). When providing evidence of their progress in this programme, learners should make sure that it also displays progress/capability in the GMC GPCs, such as dealing with complexity, teamwork and leadership, and knowledge of patient safety issues.

Mapping to the GPCs
Domain 1: Professional values and behaviours
Domain 2: Professional skills
Domain 3: Professional knowledge
Domain 4: Capabilities in health promotion and illness prevention
Domain 5: Capabilities in leadership and team-working
Domain 6: Capabilities in patient safety and quality improvement
Domain 7: Capabilities in safeguarding vulnerable groups



Domain 8: Capabilities in education and training

Domain 9: Capabilities in research and scholarship

Learners can expect to be assessed on their wider skills as a medical professional, their skills in leadership and teamwork, and their level of clinical competence. Evidence showing progress in these areas will result in the learner progressing through the programme.

To help learners and Educational Supervisors determine what acceptable progress looks like, there is a Statement of Expectations for each of the ten CiPs.

Statement of Expectations for the Reproductive Medicine SST	
Meeting expectations for the MoS CiP1	Learners can independently perform an assessment of women with female factor infertility. They are able to formulate a differential diagnosis and use the information acquired to plan further investigations. Learners can perform a trans-vaginal ultrasound scan of the pelvis. They are able to assess and discuss the diagnosis of unexplained infertility with the patient. Learners understand the association of other medical conditions with infertility, and practise a multidisciplinary approach.
Meeting expectations for the MoS CiP2	Learners can independently perform an assessment of men with male factor infertility. They are able to formulate a differential diagnosis, and use the information acquired to plan further investigations and identify the cause of severe infertility in men.
Meeting expectations for the MoS CiP3	Learners are able to communicate and formulate an appropriate plan to manage infertility. They can create appropriate individualised management plans to manage ovulatory dysfunction and uterine or tubal factor infertility. They will use drug therapy appropriately. Learners can appropriately select patients for surgery and undertake the surgery in a safe manner. They are also able to recognise the need for referral to colleagues with advanced surgical skills. They will begin to create appropriate individualised management plans for male infertility and unexplained infertility. They will arrange appropriate referrals to other specialists, including referrals to a tertiary unit for assisted conception.
Meeting expectations for the MoS CiP4	Learners can address the psychological aspects of male and female subfertility and fertility treatment. They are able to appropriately select patients for assisted conception treatment, and ensure appropriate assessments are undertaken to confirm their suitability. They can discuss and recommend the most appropriate ART treatment, and the



	benefits, risks, success and limitations of ART for individual circumstances. They can assess and manage women with ovarian hyperstimulation syndrome.
Meeting expectations for the SST Reproductive Medicine CiP1	Learners can diagnose and manage assorted endocrinological conditions. They are able to work with a multidisciplinary and multiprofessional team to provide optimal management for patients.
Meeting expectations for the SST Reproductive Medicine CiP2	Learners can diagnose and stage endometriosis, arrange appropriate investigation and advise on medical and surgical management.
Meeting expectations for the SST Reproductive Medicine CiP3	Learners can advise patients on surgical management of reproductive issues, including risks and benefits and impact on their fertility.
Meeting expectations for the SST Reproductive Medicine CiP4	Learners are able to manage complex infertility problems and counsel patients appropriately. Learners have experience in all aspects of fertility treatment, including ART.
Meeting expectations for the SST Reproductive Medicine CiP5	Learners are able to investigate and advise patients with recurrent miscarriage. Learners are aware of the need to signpost to appropriate support in some patients.
Meeting expectations for the SSTR CiP	Learners have knowledge, understanding and practical experience of research skills pertinent to their subspecialty. Learners can demonstrate ongoing engagement with research in their subspecialty field, are able to critically appraise their own research findings and those of others, and can translate innovation into everyday subspecialty practice.

The CiP knowledge criteria show the processes/frameworks a learner should understand and the clinical knowledge they must have if they want to become a subspecialist in reproductive medicine. This is more in-depth than the knowledge base expected for the MRCOG. The key skills and descriptors outline the expected learning outcomes for Reproductive Medicine SST. However, learners will not experience the entire range of possible scenarios during their training; therefore, after completing the programme they

should continue their learning and skill development through their independent practice as a reproductive medicine subspecialist and at MDT meetings.

5. Procedures associated with the clinical Reproductive Medicine CiPs

The procedures required to complete this SST are listed below. A learner can show progress in these procedures through OSATS, procedure logs, attendance at courses and other forms of evidence.

Each procedure is assigned a supervision, or entrustability, level (defined in Section 6.4 of the [Definitive Document for Reproductive Medicine SST 2024](#)) recognising that acquisition of safe independent practice in some of the more complex and uncommon procedures may only be achieved as a consultant, working with more experienced colleagues. Level 5 indicates that a learner should be able to perform the procedure independently.

Procedures marked with * must be evidenced with three competent summative OSATS. The others can be evidenced using summative OSATS and other means (e.g. CbD, Mini-CEX, formative OSATS, reflections). For procedures that can be performed open, laparoscopic or via robotics, candidates need three summative OSATS with the procedure done via the same approach.

Some of these procedures also feature in a similar table in the MoS SITM curriculum guide, but the same supervision level is not necessarily required for completion of the SITM.

Procedures	Level by end of training	MoS CiP1	MoS CiP3	MoS CiP4	SST CiP1	SST CiP2	SST CiP3	SST CiP4	SST CiP5
Ultrasound examination in gynaecology (non-pregnant patient), including variety of different pathologies*	5	X	X						
Ultrasound examination in gynaecology (non-pregnant) for follicular assessment*	5		X	X					
Hysterosalpingography (HSG)	2	X							



Procedures	Level by end of training	MoS CiP1	MoS CiP3	MoS CiP4	SST CiP1	SST CiP2	SST CiP3	SST CiP4	SST CiP5
HyCoSy or saline infusion sonohysterography (SIS)	5	X							
Hysteroscopic surgery – resection of polyp*	5		X						
Hysteroscopic proximal tubal catheterisation	3	X							
Hysteroscopic surgery – resection of fibroid	3		X						
Hysteroscopic surgery – division of adhesions	3		X						
Laparoscopic surgery – salpingostomy*	5		X						
Laparoscopic ovarian diathermy for anovulatory polycystic ovary syndrome*	5		X						
Laparoscopic destruction of superficial endometriosis*	5					X	X		
Laparoscopic excision of deep endometriosis	3					X	X		
Laparoscopic excision/ablation of ovarian endometriomas	4					X	X		
Laparoscopic surgery – treatment of ovarian cysts (e.g. dermoid)	5						X		
Laparoscopic surgery – division of adhesions*	5						X		
Laparoscopic surgery – salpingectomy for hydrosalpinx*	5						X		
Laparoscopic surgery – salpingostomy	5						X		
Hysteroscopic surgery – resection of fibroid*	5						X		



Procedures	Level by end of training	MoS CiP1	MoS CiP3	MoS CiP4	SST CiP1	SST CiP2	SST CiP3	SST CiP4	SST CiP5
Hysteroscopic surgery – resection of polyp*	5						X		
Hysteroscopic surgery – division of septum	2						X		
Hysteroscopic surgery – division of adhesions	5						X		
Hysteroscopic proximal tubal catheterisation	3						X		
Excision of vaginal septum	3						X		
Imperforate hymen	3						X		
Male surgery – PESA	2						X		
Male surgery – testicular sperm aspiration	2						X		
Male surgery – open testicular biopsy	2						X		
Male surgery – MESA	1						X		
Male surgery – Micro-TESE	1						X		
Hysterosalpingography (HSG)	2							X	
HyCoSy or saline sonohysterography	5							X	
Blue dye test at laparoscopy	5						X	X	
Intrauterine insemination	5							X	
Embryo transfer	5							X	
Transvaginal ultrasound egg collection*	5							X	
Trans-abdominal ultrasound egg collection	3							X	
Embryo transfer procedure	5							X	
Ovarian cystectomy	5						X		



Procedures	Level by end of training	MoS CiP1	MoS CiP3	MoS CiP4	SST CiP1	SST CiP2	SST CiP3	SST CiP4	SST CiP5
Laparoscopic salpingostomy for distal tubal blockages (cuff salpingostomy)	3						X		
Laparoscopic ovarian diathermy for anovulatory PCOS	5				X		X		
Proficiency in: Veress needle entry, Hassan and Palmer's point entry techniques	5						X		
Safe tissue handling with laparoscopic instruments, sharp and blunt dissection	5						X		
Haemostatic techniques for laparoscopic and open surgery	5						X		
Myomectomy (open or laparoscopic)* #	5						X		
Excision of rudimentary horn of uterus (laparoscopic resection)	1						X		
TAH+/-BSO	3						X		
Ultrasound examination in gynaecology (non-pregnant patient) including variety of different pathologies and ovarian follicular assessment*	5							X	
Ultrasound examination in gynaecology (non-pregnant patient) including variety of different pathologies*	5								X



Procedures	Level by end of training	MoS CiP1	MoS CiP3	MoS CiP4	SST CiP1	SST CiP2	SST CiP3	SST CiP4	SST CiP5
Ultrasound examination of early pregnancy complications	5								X

#Myomectomy for intra-mural fibroids of more than 4 cm can be undertaken with either a laparoscopic or open approach.

OSATS are not assigned a level of entrustability, rather they are assessed as being *competent* or *working toward competence*. The entrustability levels here are given to guide the assessor in judging whether the learner has reached the required degree of independence at the end of training.

6. Evidence required

Discussion and detail on how trainees can evidence the acquisition of key skills and competencies during subspecialty training can be found in Section 4 of the [Essential Curriculum Guide](#).

The table below may be useful for learners to see whether a specific workplace-based assessment can be used as evidence of progress in each CiP:

CiP	OSATS	Mini-CEX	CbD	NOTSS	TO1/TO2	Reflective practice
MoS CiP1: The doctor recognises, assesses and investigates women experiencing infertility.	X	X	X	X	X	X
MoS CiP2: The doctor recognises, assesses and investigates men experiencing infertility.		X	X		X	X



CiP	OSATS	Mini-CEX	CbD	NOTSS	TO1/TO2	Reflective practice
MoS CiP3: The doctor manages infertility.	X	X	X	X	X	X
MoS CiP4: The doctor understands the principles of assisted reproduction techniques (ART) and their possible complications, and can counsel patients effectively.	X	X	X		X	X
SST Reproductive Medicine CiP1: The doctor is competent in recognising, assessing and managing endocrinological disorders.		X	X		X	X
SST Reproductive Medicine CiP2: The doctor is competent in providing specialist care for women with endometriosis.		X	X		X	X
SST Reproductive Medicine CiP3: The doctor has the surgical skills appropriate for a subspecialist in	X	X	X	X	X	X



CiP	OSATS	Mini-CEX	CbD	NOTSS	TO1/TO2	Reflective practice
reproductive medicine.						
SST Reproductive Medicine CiP4: The doctor is competent in recognising, assessing and managing complex fertility problems and assisted conception.	X	X	X	X	X	X
SST Reproductive Medicine CiP5: The doctor is competent in recognising, assessing and managing complex early pregnancy problems.	X	X	X	X	X	X

6.1 Generic capabilities

All subspecialty doctors will need to provide evidence collected during subspecialty training for the following areas, at the centralised assessments:

- Clinical governance
- Teaching experience
- Research and innovation
- Leadership and management
- Presentations and publications.

This evidence should be uploaded into the ‘Other evidence’ section of the ePortfolio.

Pre-CCT subspecialty doctors on the Core Curriculum 2024 will be expected to meet the expectations of the core generic and non-clinical specialty CiPs at ST5/6/7 level. They can use their experiences during subspecialty training and emergency duties to help evidence these generic capabilities and skills. The evidence should be linked to the appropriate core



generic and non-clinical specialty CiPs, and may need to be supplemented to satisfy their Educational Supervisors and Annual Review of Progression (ARCP) panels that they meet the full range of requirements at ST5/6/7 level.

For each core generic and non-clinical specialty CiP, there is a CiP guide outlining what the level of expectation is for senior doctors in ST5, ST6 and ST7.

CCT holders and overseas doctors undertaking subspecialty training do not need to complete the core generic and non-clinical specialty CiPs, although they can choose to link evidence of their generic skills into the core generic or non-clinical specialty CiPs on the ePortfolio after uploading this evidence into the 'other evidence' section of the ePortfolio.

7. Assessing progress

A trainee's progress follows the same principles of any other trainee in obstetrics and gynaecology, as detailed in [Essential Curriculum Guide](#). However, the annual subspecialty assessment of progress is performed centrally, coordinated by the RCOG. Before this assessment, the subspecialty trainee and supervisor will need have performed assessments for each of the ten CiPs, look at the evidence collected so far and give a global judgement on the trainee's progress. Together, they will construct the subspecialty-specific Educational Supervisor's Report (SST ESR), and this, alongside the evidence in the trainee's ePortfolio, will be reviewed by a subspecialty assessment panel. The panel will give a narrative outcome, stating if they judge the trainee to have successfully completed subspecialty training, to be making good progress or if they are behind schedule and may need additional focus or training time.

For pre-CCT subspecialty trainees, this narrative outcome is a major part of the trainee's evidence for their subsequent ARCP, which will also assess their progress through the Core Curriculum. Learners do need to appreciate that satisfactory progression through subspecialty training does not guarantee a satisfactory outcome (outcome 1) at the subsequent ARCP. For this reason, they will need to complete an ESR for their ARCP with their Educational Supervisor; this is separate from the SST ESR they created for their subspecialty assessment. The two different forms of ESRs are clearly marked and easily accessible on the front page of the learner or supervisor ePortfolio log-in for that learner. Learners need to ensure that they are also achieving any [Training Matrix of Progression](#) requirements for the Core Curriculum that are additional to those on the [Reproductive Medicine subspecialty matrix](#).

For pre-CCT subspecialty trainees on the Core Curriculum 2024, the key additional areas to focus on are evidencing all of the core generic and non-clinical specialty CiPs to ST5/6/7 level, and sign-off of the core clinical CiPs (9–12) to entrustability level 5 by the completion of training and the final ARCP. All subspecialty learners using the Core Curriculum 2024 should collect evidence to satisfy all four core clinical CiPs to entrustability level 5, but DO



NOT need to collect 'ongoing competency' OSATS for core procedures that they have already demonstrated competency in (with three competent summative OSAST), in line with the 2024 core matrix.

It is a GMC requirement that to achieve a CCT in Obstetrics and Gynaecology, training must be undertaken in both aspects of the specialty. Therefore, in addition to providing evidence for the core clinical CiPs 9 and 11, Reproductive Medicine pre-CCT subspecialty trainees also need to provide evidence for the obstetrics core CiPs 10 and 12. These CiPs relate to emergency and non-emergency obstetrics.

Information on the experience and evidence required for the obstetrics core CiPs 10 and 12 can be found in '[Guidance for Subspecialty Training Programme Supervisors and pre-CCT reproductive medicine subspecialty trainees on Core Curriculum 2024 on cross specialty working](#)'.

8. Career guidance

Learners require two SITMs or subspecialty training for CCT. A learner aspiring to become a reproductive medicine subspecialist should be advised to undertake the MoS SITM in order to make themselves more competitive for the subspecialty interview, as the Reproductive Medicine SST builds on this SITM. However, it is not mandated that the MoS SITM has been started, or completed, for a learner to be eligible for Reproductive Medicine SST. Any completed CiPs of the MoS SITM or all of the SITM can be used for Reproductive Medicine SST. However, learners' choices will be dependent on training opportunities available for their chosen SITMs.

Advice for learners who aspire to become a reproductive medicine subspecialist is to start preparing for this direction as early as possible. They should have career conversations early in their training with their Educational Supervisor, find a mentor in the field of reproductive medicine, complete the Clinical Research SIPM, achieve publications and start enquiring where posts may come up, as SST posts may be outside their region.

For further careers advice, learners should have a discussion with their Training Programme Director/SITM Director.

9. Further resources

The further resources listed below can be found on the [RCOG Curriculum 2024 webpages](#):

- [Essential Curriculum Guide](#)
- [Definitive Document for Reproductive Medicine SST 2024](#)
- [Training Matrix for SST RM](#)
- [Curriculum Guide for Management of Subfertility SITM](#)



- [Curriculum Guide for Clinical Research SIPM](#)
- [Definitive Document for Core Curriculum 2024](#)
- [Training Matrix of Progression](#)
- [British Fertility Society \(BFS\)](#)

Find out more at
rcog.org.uk/curriculum2024



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