

Ultrasound Guidance Document

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Introduction

Ultrasound is integral to the clinical practice of Obstetrics and Gynaecology. The RCOG has pioneered the introduction, and formalised assessment, of ultrasound as a core procedural skill in its postgraduate curriculum. This guidance document explains how ultrasound training sits within the 2019 Core Curriculum. It is intended for use by trainers and trainees in Obstetrics and Gynaecology as well as those training in ultrasound from allied professional backgrounds e.g. sonographers, radiologists and midwives. Table 1 shows the ultrasound content in the 2019 Core Curriculum which has been amalgamated into seven ultrasound procedures (three in Gynaecology and four in Obstetrics).

Table 1: Extract from the O&G Procedures table in the Core Curriculum Definitive Document showing Ultrasound Procedures

Gynaecology	Transabdominal ultrasound examination of early pregnancy (<i>mandatory</i>) x Ultrasound examination of early pregnancy complications (<i>optional</i>) x Ultrasound examination in gynaecology (non-pregnant patient) (<i>optional</i>) x
Obstetric	Transabdominal ultrasound examination in later pregnancy (<i>mandatory</i>) x Transabdominal ultrasound examination of biometry in later pregnancy (<i>formative – mandatory, summative -optional</i>) * x Transabdominal ultrasound examination of fetal anatomy in later pregnancy (<i>optional</i>) * x Transvaginal examination in later pregnancy (<i>optional</i>) x

Early pregnancy defined as <14-weeks and later pregnancy defined as >14-weeks

**Must be signed off as competent prior to undertaking the Fetal Medicine ATSM or subspecialty training in Maternal and Fetal Medicine*

Assessment

All procedures have a corresponding 'Objective Structured Assessment of Technical Skills' (OSATS) with the same name, which will be used to assess competency. All OSATS are available as either formative or summative submissions.

Formative OSATS can be undertaken as many times as the trainee and their supervisor feel necessary. A trainee is regarded as competent to perform the procedure independently (with support) upon completion of three summative OSATS by more than one appropriate assessor. Appropriate assessors include sonographers, midwives, senior trainees, and consultants. The use of simulation-based learning should be encouraged where local facilities are available but, as for all procedural skills, simulation cannot be used toward the acquisition of summative OSATS.

Once competence has been achieved it is no longer necessary to provide further OSATS as evidence of ongoing competence, unless this is felt necessary by the Educational Supervisor. However, trainees are actively encouraged to maintain a formal log of ongoing ultrasound experience for their own personal and professional development.

Trainees must achieve competency in mandatory ultrasound skills by the end of ST3. This does not mean they are immediately ready for independent practice, particularly in an out-of-hours or unsupervised environment. The utilisation of trainee-acquired ultrasound skills should be carefully determined within the local context and scanning protocols. These mandatory basic skills must be acquired as an essential foundation prior to further supervised training and development of more advanced, optional, ultrasound competences. Trainees may wish to pursue the optional ultrasound competencies depending on their career interests or intention to progress to related ATSMs, ASMs or Sub-Speciality Training. The ultrasound procedures related to each ATSM/ASM can be found below and the specific requirements can be found in the relevant curriculum.

Knowledge and Skills

Prior to performing any procedure, a trainee should demonstrate an understanding of the equipment required. Safe use of ultrasound and an understanding of how it works are covered in 'Basic Obstetrics and Gynaecology Ultrasound' courses run regionally in the UK and required by the end of ST2. Generic skills underpin the effective use of any procedural skill in clinical practice and are covered in different areas of the core-curriculum. These skills include obtaining valid consent, excellent communication, supporting informed decision making and accurately documenting findings. Trainees must remain aware of their own limitations. Skill level will vary depending on level of training and degree of experience. Any concern should be used to trigger senior opinion and/or their involvement in further management.

Mandatory Ultrasound Skills

Trainees must be competent to perform 'Transabdominal ultrasound examination of early pregnancy' and 'Transabdominal ultrasound scan examination of late pregnancy' independently with support by the end of ST3. They also require formative OSATS evidencing directly supervised practice for 'Transabdominal ultrasound examination of biometry in later pregnancy'. The same examination could be used to generate both a summative OSAT for 'Transabdominal ultrasound scan examination of late pregnancy' and a formative OSAT for 'Transabdominal ultrasound examination of biometry in later pregnancy'.

Procedure	Required For	Skills Required
Transabdominal ultrasound examination of early pregnancy	Core Training (by ST3)	<ul style="list-style-type: none"> • Ability to identify the features of a normal gestational sac and confirm its intrauterine location • Ability to identify early cardiac activity using B-mode • Ability to identify fetal number • Ability to measure gestational sac size and crown rump length

Transabdominal ultrasound scan examination in later pregnancy	Core Training (by ST3)	<ul style="list-style-type: none"> • Ability to identify the fetal heart and the presence of cardiac activity • Ability to perform ultrasound assessment of fetal presentation and lie • Ability to perform ultrasound assessment of liquor volume using either AFI or maximal pool depth • Ability to perform transabdominal ultrasound assessment of placental location
Transabdominal ultrasound examination of biometry in later pregnancy	Core Training (by ST3) **Formative evidence only	<ul style="list-style-type: none"> • Ability to use ultrasound to assess fetal biometry (head/abdominal circumference and femur length)

In many cases, transvaginal (TV) ultrasound skills are required in early pregnancy to confirm or refute pregnancy site and viability/non viability (examples include earlier gestation <8 weeks, maternal obesity, empty bladder, retroverted uterus etc). Trainees are required to gain the transabdominal ultrasound competences outlined above but should avail themselves of opportunities to gain exposure to, and experience in, use of the transvaginal probe. This is not mandatory and will depend on the availability of resources within units.

Optional Ultrasound Skills

The table below sets out which ultrasound procedures must be evidenced by at least three summative competent OSATs as part of satisfactory completion of the ATSMs which mandate higher levels of ultrasound competency, above those required during core training. However, trainees are encouraged to use these OSATs prior to entering advanced training, particularly if they wish to pursue the ATSMs or subspecialty training which include higher ultrasound scanning competencies. Completion of three summative OSATs, however, is only *required/mandated* for the FMATSM and MFM SST, prior to commencement of these advanced training modules.

Procedure	Required For	Skills Required
Transabdominal ultrasound examination of biometry in later pregnancy	ATSM: FM, HRP	<ul style="list-style-type: none"> • Ability to use ultrasound to assess fetal biometry (head/abdominal circumference and femur length)
Transabdominal ultrasound examination of fetal anatomy in later pregnancy	ATSM: FM	<ul style="list-style-type: none"> • Ability to use ultrasound to assess normal morphological ultrasound appearances of the fetus and its environment • Ability to use ultrasound to assess normal fetal anatomy
Ultrasound examination of early pregnancy complications	ATSM: AGEP, SRH	<ul style="list-style-type: none"> • Ability to use ultrasound to diagnose normal intrauterine pregnancy • Ability to use ultrasound to diagnose miscarriage

		<ul style="list-style-type: none"> • Ability to use ultrasound to diagnose tubal ectopic pregnancy • Ability to use ultrasound to diagnose non tubal ectopic pregnancy
Ultrasound examination in gynaecology (non-pregnant patient)	ATSM: AGEP, ALAP, SRH ASM: SPAC	<ul style="list-style-type: none"> • Ability to use ultrasound to identify normal morphological ultrasound appearances of the female pelvis and its variations during the menstrual cycle • Ability to use ultrasound to assess the endometrium and diagnose an endometrial abnormality • Ability to use ultrasound to assess the pelvis for pathology including causes of pelvic pain
Transvaginal examination in later pregnancy (>14-weeks)	ATSM: HRP	<ul style="list-style-type: none"> • Ability to use ultrasound to identify the normal morphological ultrasound appearances of the cervix in the second and third trimester • Ability to use ultrasound to measure the cervical length appropriately • Ability to use ultrasound to assess for placental position in relation to internal os with low lying placenta

ATSM: Fetal Medicine (FM), High Risk Pregnancy (HRP), Acute Gynaecology and Early Pregnancy (AGEP), Advanced Laparoscopic Surgery for the Excision of Benign Disease (ALAP) Subfertility and Reproductive Health (SRH). **ASM:** Safe Practice in Abortion Care (SPAC)

Generic skills are presented for each optional ultrasound but the exact requirements for each ATSM will be covered in the relevant ATSM/ASM curriculum.