**Ultrasound Training Programme (2020)**

*ST1-5 Trainees*

The YMTP Ultrasound Training Programme provides a framework in which trainees are able to acquire and develop skills in obstetric ultrasound in line with the RCOG curriculum.

It is delivered over a five-year period and encompasses training within each hospital, online learning and two courses provided by the YMTP.

It is important that trainees appreciate that completion of the basic ultrasound modules does not equate to independent competence. Instead, they serve as a springboard for further supervised training and the acquisition of more advanced skills.

The supposed format in which training takes place is not designed to be prescriptive and it is entirely plausible (and desirable) that trainees seek to surpass the minimum requirements set by the YMTP. The two courses are necessarily targeted at certain year groups but both simulation training and in-house scanning can start at any time.

**Updated USS Curriculum from RCOG**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Mandatory ultrasound skills**  **To be completed by end of ST3** | Intermediate ultrasound skills  (mandatory in some ATSMs and for subspecialty training) | |
| Obstetric  Procedures | **Transabdominal examination in later pregnancy (second and third trimester)** | Transabdominal assessment of normal fetal anatomy and fetal biometry | Transvaginal examination in late pregnancy (cervical length and placental assessment) |
| Gynaecology procedures | **Transabdominal examination of early pregnancy (first trimester)** | Ultrasound examination of early pregnancy complications | Ultrasound examination in gynaecology |

**RCOG Advice on Basic USS training** \* It is essential for trainees to achieve competence in the two mandatory ultrasound skills by end of ST3. These skills are essential for trainees and can act as steppingstones for further supervised training and acquisition of more advanced ultrasound competences. Completion of the two mandatory transabdominal ultrasound skills does not imply that a trainee is automatically ready for independent practice in diagnostic ultrasound (particularly in out of hours unsupervised clinical settings).’

**see Appendix 1 for updated modules from RCOG & competencies for ST3’s and beyond.**

Format of YMTP Ultrasound Training Programme

Principles of Ultrasound (StratOG Module)

Direct link - <https://stratog.rcog.org.uk/tutorials/core-training/antenatal-care/principles-ultrasound>

Your certificate must be uploaded to your ePortfolio and shared with your educational supervisor. Evidence of completion is a requirement for attendance at BOUTOS in ST3.

Basic Ultrasound Course (YMTP)

Please ensure study leave is arranged and the certificate of attendance is uploaded to the ePortfolio.

Direct link –

<https://www.yorksandhumberdeanery.nhs.uk/obstetrics_and_gynaecology/education/ymtp_programme_%28st1-5%29>

***Proposed changes for 2021-Virtual course 1 day and 2X ½ day HANDS on circuits for Simulation and live basic scanning. This will replace the twice a yr. 1x full day course in Basic USS in Hull Teaching Hospital.***

Simulator Training

There are 6 MedaPhor Transabdominal ScanTrainers located throughout the Yorkshire and Humber. You will be required to arrange sessions at your nearest unit – if your current unit is not a simulation centre, travel expenses can be claimed back as for YMTP courses.

Study leave should be arranged and the centre contacted in order to book the simulator.

Contact details for each Simulation Centre are as follows –

Live Scanning for ST3 and above

A minimum of two sessions (early pregnancy and obstetric fetal assessment) should be allocated for you in your own unit for ‘live’ scan training.

These may be undertaken with consultants, sonographers or other accredited trainers. Additional ad hoc sessions can be organised throughout the year through prior arrangement and opportunistic use of ultrasound machines in clinical areas.

As each unit will function differently, it is recommended that you discuss your own individual needs with your rota co-ordinator early in the training year.

If you are struggling to obtain the required “hands on” training, then you must discuss this with your educational supervisor and the hospital college tutor.

A list of college tutors and their contact details may be found at –

<https://www.yorksandhumberdeanery.nhs.uk/obstetrics_and_gynaecology/contacts/college_tutors>

BOUTOS (YMTP) ST3 course (Basic Obstetric Ultrasound Training and OSATS session.

Basic Obstetric Ultrasound Training and OSATs (BOUTOS) is a new course introduced in the 2018/19 training year.

Direct link –

<http://www.yorksandhumberdeanery.nhs.uk/obstetrics_and_gynaecology/boutos/>

BOUTOS provides an opportunity to undertake a limited number of OSATS for the basic ultrasound modules. Although attendance is not mandatory, it would be expected from all trainees who are struggling to complete the requirements of the RCOG matrix in their home unit.

In order to maximise the opportunities given to trainees, there are strict criteria which must be applied. These are –

* ST3 Trainees only
* Limited to five (exceptionally six) spaces
* Evidence of completion of the Principles of Ultrasound StratOG Module
* Evidence of attendance at the Basic Ultrasound YMTP Course
* Evidence of completion of 5 hours of simulation time
* Evidence of participation in a minimum of 2 live scanning sessions

A ‘Prerequisites for Attendance at BOUTOS” form will need to be signed by both the trainee and their educational supervisor and sent to the course co-ordinator a minimum of two weeks prior to the course date.

Direct Link to Form –

<https://www.yorksandhumberdeanery.nhs.uk/obstetrics_and_gynaecology/education/ymtp_programme_%28st1-5%29>

**It is essential that trainees understand that BOUTOS is not a replacement for assessments undertaken within their own unit and that they cannot expect to complete all RCOG Matrix requirements within one session.**

**ST2 Boot camp- Info to follow -1/2 Day senior trainee led sessions supporting USS basic training and formative OSATS to enhance Competency, piloted in 2021 Hull, York and Rotherham .For info email muna.ewadh@hey.nhs.uk**

**Summary of Basic USS training process for ST2&ST3**

***This document has been produced and edited by U. Rajesh (2020) +R.Hughes (2018).***

**APPENDIX1 –RCOG USS TRAINING UPDATED GUIDANCE**

Ultrasound training was introduced as part of the RCOG core curriculum in 2010. Use and application of ultrasound in obstetrics and gynaecology is now an integral part of clinical practice. This guidance document explains the changes related to ultrasound training in the new curriculum and is intended for trainers and trainees training for ultrasound skills in obstetrics and gynaecology. This guidance will also be relevant to ultrasound trainers from allied professional backgrounds e.g. sonographers, radiologists and midwives.

The two previous basic mandatory modules are part of the ‘mandatory ultrasound skills’ in obstetrics and gynaecology and the three previous optional intermediate ultrasound modules, along with an additional transvaginal obstetric procedure for cervical length assessment, are now part of the ‘intermediate ultrasound skills’ in Table 1 (see below). Some of the intermediate ultrasound skills are mandatory for some of the ATSMs and for entry into certain subspecialty training programs (see ATSM and subspecialty curricula for details).

The mandatory skills need to be achieved by end of ST3 and will be assessed using Objective structured assessment of technical skills ([OSATS](https://elearning.rcog.org.uk/new-curriculum-2019-training-resource/assessment-process-new-curriculum)). Some of the trainees or those pursuing ATSMs/ASMs can achieve the optional ultrasound skills after completion of the mandatory ultrasound skills with further advanced training in ultrasound. Optional obstetric ultrasound skills and competency form an integral part of the Fetal medicine (FM) and High Risk Pregnancy (HRP) ATSMs and are essential for subspecialty training in Maternal and Fetal Medicine. Optional gynaecology ultrasound skills and competency are essential for the completion of Acute Gynaecology and Early Pregnancy (AGEP), Advanced Laparoscopic Surgery for the Excision of Benign Disease (ALAP) Subfertility and Reproductive Health ATSMs and the Safe Practice in Abortion Care (SPAC) ASM. The gynaecological ultrasound skills and competences form an integral part of for subspecialty training in Reproductive Medicine depending on the individual needs.

**Table 1 – Obstetric and gynaecological ultrasound skills**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Mandatory ultrasound skills  To be completed by end of ST3 | Intermediate ultrasound skills  (mandatory in some ATSMs and for subspecialty training) | |
| Obstetric  Procedures | Transabdominal examination in later pregnancy (second and third trimester) | Transabdominal assessment of normal fetal anatomy and fetal biometry | Transvaginal examination in late pregnancy (cervical length and placental assessment) |
| Gynaecology procedures | Transabdominal examination of early pregnancy (first trimester) | Ultrasound examination of early pregnancy complications | Ultrasound examination in gynaecology |

It is essential for trainees to achieve competence in the two mandatory ultrasound skills by end of ST3. These skills are essential for trainees and can act as steppingstones for further supervised training and acquisition of more advanced ultrasound competences. Completion of the two mandatory transabdominal ultrasound skills does not imply that a trainee is automatically ready for independent practice in diagnostic ultrasound (particularly in out of hour’s unsupervised clinical settings). Care should be taken in delegating decisions about clinical management of patients to trainees who have completed only the mandatory modules (particularly where management relies on the ultrasound findings). The expected utilisation of ultrasound skills, both within and out of hours should be determined and agreed by the local ultrasound supervisor in the context of local protocols for ultrasound scanning.

Trainees are encouraged to maintain a formal log of ongoing ultrasound experience once

mandatory ultrasound skills competence has been achieved although there is no formal

requirement for further OSATs to demonstrate ongoing competence unless this was felt necessary by the educational supervisor.

**Knowledge**

Understanding the tools before using them to perform a procedure is one of the key aspects of any procedural skill. The 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, including the RCOG course on [Early Pregnancy and Gynaecological Ultrasound](https://www.rcog.org.uk/en/departmental-catalog/Departments/atsm/2315---early-pregnancy-and-gynaecological-ultrasound/).

**Procedural skills**

Whilst the procedural aspects of the skill have been emphasised in this document, we expect that the generic skills of obtaining valid consent for performing the procedure (for most scans this is verbal consent), communication skills during and after performing the scan, informed decision making, documentation of findings accurately and writing a report as listed in CiP 1 of the core curriculum to underpin the skills for performing ultrasound. Having an insight into one’s own limitations based on level of training and experience should trigger an appropriate senior opinion and/or involvement for further management. These are outlined in the core definitive document but are relevant to the effective use of USS in clinical practice.

Use of simulation-based learning should be encouraged where local facilities are available.

**Mandatory ultrasound skills**

All trainees are required to achieve these by the end of ST3. The list of skills and OSATS required for sign off are described below.

**1. Transabdominal ultrasound examination of early pregnancy**

Skills required:

* 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

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.

OSATS required:

1. Transabdominal ultrasound examination of early (8-12 week) pregnancy.

**2. Transabdominal ultrasound examination of later pregnancy (second and third trimester**

Skills required:

* Ability to perform basic ultrasound assessment of fetal presentation/lie/biometry
* Ability to perform basic ultrasound assessment of liquor volume
* Ability to perform basic assessment of placental location

OSATS required:

1. Assessment of fetal lie, presentation, liquor assessment (Amniotic fluid index (AFI) and maximum pool depth) and placental assessment.
2. Measurement of HC, AC and FL-formative OSATs required demonstrating evidence of directly supervised practice.

**Assessment**

The trainers using the OSATS tool in different clinical settings will assess ultrasound as a procedure. This tool has been validated for assessing competency in a particular technique. They can be assessed by any of the trainers including sonographers, midwives, senior trainees, consultants. Simulators may be used for formative assessments. OSATS can be undertaken as many times as the trainee and their supervisor feel is necessary (formative).

More than one assessor involved in their ultrasound training can regard a trainee as competent to perform a procedure independently after they have completed three summative OSATS.

When a trainee has been signed off as being able to perform a procedure independently, they are not required to have any further assessment (OSATS) of that procedure, unless they or their Educational Supervisor think that this is required (in line with standard professional conduct).

Ultrasound skills form part of the practical procedures, which are linked to the [clinical CiPs](https://www.rcog.org.uk/globalassets/documents/careers-and-training/curriculum/curriculum2019/core-curriculum-2019-final-gmc-approved.pdf). The mandatory early pregnancy ultrasound skills are associated with CiPs 9 and 11 and the mandatory obstetric ultrasound skills are associated with CiPs 10 and 12 (Further information is available in the [CiP guides](https://elearning.rcog.org.uk/new-curriculum-2019-training-resource/curriculum-structure/core-curriculum). All mandatory ultrasound skills should have been achieved by the end of ST3.

Assessment of the clinical CiPs is made using the entrustability scale shown in Table 2.

Table 2 shows the five supervision levels that are based on an entrustability scale, which is a behaviourally anchored ordinal scale based on progression to competence and reflects judgements that have clinical meaning for assessors and are used to assess the clinical CiPs.

**Table 2 – Levels of supervision**

|  |  |
| --- | --- |
| **Level** | **Descriptor** |
| Level 1 | Entrusted to observe |
| Level 2 | Entrusted to act under direct supervision (within sight of the supervisor) |
| Level 3 | Entrusted to act under indirect supervision (supervisor immediately available on site if needed to provide direct supervision) |
| Level 4  Level 5 | Entrusted to act independently with support (supervisor not required to be immediately available on site, but there is provision for advice or to attend if required)  Entrusted to act independently |

This method of sign off moves away from a process of box ticking and toward a process that says, “I trust you to do these work activities. If not, I need to identify the underlying competencies that need to be developed so that you can progress to the next level of trust.”

Levels of supervision emphasise the role of observation and judgment, and replicate real life practice. For example, a consultant must decide what each trainee can be trusted to do, as well as determine the amount of supervision, direct or indirect, that they need to undertake activities safely. These kinds of judgments are routinely made in the workplace and are based on the experience of the consultant. By the end of training a doctor must be trusted to undertake all the key critical tasks needed to work as a consultant—and that becomes the outcome and end point of training.

The trainee will make a self-assessment to consider whether they meet expectations for the year of training, using the five supervision levels listed in Table 2 above and highlighting the evidence in the portfolio. The Educational Supervisor will then consider whether the trainee is meeting expectations or not by assigning one of the five supervision levels.

Trainees will need to meet expectations for the year of training as a minimum to be judged satisfactory to progress. The expectations for the level of supervision expected for each year of training for the entire clinical specialty CiPs are in table 3 below.

**Appendix 2-Optional ultrasound skills-**These will be undertaken by trainees after completion of the mandatory ultrasound skills as optional skills. For those doing ATSMs some of these ultrasound skills will be essential for achieving the competencies in individual ATSMs. Please also refer to the [ATSM Curriculum](https://www.rcog.org.uk/globalassets/documents/careers-and-training/curriculum/curriculum2019/advanced-training-definitive-document-2019.pdf).**1. Transabdominal USS examination of normal fetal anatomy and fetal biometry (skills required before commencing Fetal Medicine ATSM)**Skills required:

* Ability to use ultrasound to assess normal morphological ultrasound appearances of the fetus and its environment
* Ability to use ultrasound to assess fetal biometry
* Ability to use ultrasound to assess normal fetal anatomy

OSATS required-Normal fetal anatomy and biometry.

**2. Ultrasound examination of early pregnancy complications (skills required for completion of AGEP, ALAP, SRH ATSMs and SPAC ASM**Skills required:

* Ability to use ultrasound to diagnose normal intrauterine pregnancy
* Ability to use ultrasound to diagnose early pregnancy abnormalities such as miscarriage
* Ability to use ultrasound to diagnose tubal ectopic pregnancy
* Ability to use ultrasound to diagnose non tubal ectopic pregnancy

OSATS required:

1. Ultrasound diagnosis of normal early pregnancy
2. Ultrasound diagnosis of miscarriage
3. Ultrasound assessment of a woman with suspected ectopic pregnancy

**3. Ultrasound examination in gynaecology (\*\*skills required for completion of AGEP, ALAP, SRH ATSMs, and SPAC ASM);** Skills required:

* 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 diagnose fibroid
* Ability to use ultrasound to diagnose ovarian tumours
* Ability to use ultrasound to diagnose pelvic abscess
* Ability to diagnose acute appendicitis
* Ability to diagnose urinary retention

OSATS required:

1. Ultrasound assessment of the normal female pelvis
2. Ultrasound assessment of endometrial abnormality
3. Ultrasound assessment of uterine fibroids
4. Ultrasound assessment of pelvic pain
5. Ultrasound assessment of ovarian lesions

**4. Transvaginal USS examination in late pregnancy (skills required for completion of HRP ATSM**Skills required:

* 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

OSATS required:

1. Measurement of cervical length
2. Assessment of placental location in relation to the internal so