



Module 2: Ultrasound of fetal anatomy

Learning outcomes

To understand and demonstrate appropriate knowledge, skills and attitudes to perform a fetal anomaly scan, including perform a normal scan, recognise common abnormalities, communicate normal and abnormal results, know limits of competence, complete appropriate documentation

Knowledge criteria	Clinical competency	Professional skills and attitudes	Training support	Evidence/ Assessment
Principles of ultrasound examination <ol style="list-style-type: none">1. Physics2. Safety3. Machine set-up and operation4. Patient care5. Principles of report writing6. Consent7. Cultural Diversity	 Understand the principles of conducting a safe and appropriate ultrasound examination Use an ultrasound machine competently and independently	 Safe use of the ultrasound machine Appropriate care of the patient during examination	 Course including both: Theory Practical demonstration of machine use and reporting	 Certificate of attendance at course Case discussion in clinic

Knowledge criteria	Clinical competency	Professional skills and attitudes	Training support	Evidence/ Assessment
<p>Documentation of scan</p> <ol style="list-style-type: none"> 1. Understand need for accurate documentation of scan 2. Record appropriate images 	<p>Record scan findings clearly and accurately and keep appropriate hard copy or video records of anomalies.</p>	<p>Communicate scan findings to other health professionals</p>	<p>Supervised structured clinical learning sessions</p>	<p>OSATS: Anomaly scan including recording images of fetus</p> <p>Counselling of normal scan findings with parents</p> <p>Counselling of abnormal scan findings with parents</p>

Knowledge criteria	Clinical competency	Professional skills and attitudes	Training support	Evidence/ Assessment
<p>Anomaly scan</p> <ol style="list-style-type: none"> 1. Know requirements for “minimal” and “optimal” anomaly scan as defined in RCOG report 2000, “Ultrasound screening” 2. Know anatomical landmarks for performing standard fetal measurements (BPD, HC, AC, FL) 3. Recognise normal appearance of fetal structures and appreciate different appearance at different gestations 4. Know the detection rates of common anomalies 	<p>Identify fetal position within uterus</p> <p>Be able to move probe with purpose to identify fetal structures</p> <p>Be able to consistently and systematically identify the features described in an “optimal” anomaly scan as described in RCOG report 2000, “Ultrasound Screening”</p> <p>Be able to perform standard fetal measurements (BPD, HC, AC, FL) Transcerebellar diameter, Ventricular atrium, nuchal pad, cisterna magna, renal pelvis AP diameter.</p> <p>Identify placental site</p> <p>Recognise limits of competency</p> <p>Recall patients appropriately for further scans if structures not seen clearly</p>	<p>Conduct scan to appropriate standard.</p>	<p>Mandatory education and training sessions</p> <p>Theoretical course (local or RCOG)</p> <p>Supervised structured clinical learning sessions</p> <p>Attendance at anomaly scans</p> <p>Personal study – Textbooks of obstetric ultrasound</p> <p>RCOG/RCR report 2000 “Ultrasound Screening”</p> <p>RCOG/RCR report 1997 “Ultrasound Screening for Fetal Abnormalities”</p> <p>Relevant green top guidelines</p>	<p>Certificate of course attendance</p> <p>Case discussion in clinic</p> <p>OSATS:</p> <p>Fetal biometry</p> <p>Anomaly Scan including recording images of fetus</p>

Knowledge criteria	Clinical competency	Professional skills and attitudes	Training support	Evidence/ Assessment
<p>Management of anomalies</p> <ol style="list-style-type: none"> 1. Recognise common anomalies 2. Be aware of appropriate investigations when an anomaly is identified 	<p>Identify anomalies</p> <p>Advise appropriate investigations if anomalies identified</p> <p>Appropriate referral for more complex or detailed evaluation with ultrasound</p>	<p>Recognition and appropriate management or onward referral of anomalies</p>	<p>Mandatory education and training sessions</p> <p>Theoretical course (local or RCOG)</p> <p>Supervised structured clinical learning sessions</p> <p>Personal study – textbooks of fetal ultrasound</p>	<p>Log of experience</p> <p>Certificate of course attendance</p> <p>Case discussion in clinic</p> <p>OSATS: Anomaly Scan including recording images of fetus</p>

Knowledge criteria	Clinical competency	Professional skills and attitudes	Training support	Evidence/ Assessment
<p>Communication</p> <ol style="list-style-type: none"> 1. Provide parents with necessary information in a form they understand 2. Communicate scan findings and information given to parents to other health professionals 	<p>Provide parents with information about:</p> <ol style="list-style-type: none"> 1. Normal scan findings 2. Abilities and limitations of ultrasound <p>If an anomaly is identified:</p> <ol style="list-style-type: none"> 1. Counsel about ultrasound soft marker 2. Counsel about structural anomaly 3. Discuss risks and benefits of invasive testing if appropriate 4. Counsel about termination of pregnancy if appropriate and methods required at different gestation 5. Counsel about further in utero management. 	<p>Communicate relevant information to parents and other health professionals</p>	<p>Supervised structured clinical learning sessions</p>	<p>Case discussion in clinic</p> <p>OSATS: Counselling of abnormal scan findings with parents</p>

Ultrasound of fetal anatomy logbook

Skill	Competence level					
	Observation		Direct supervision		Independent practice	
	Date	Signature	Date	Signature	Date	Signature
Safe use of US machine + correct settings						
Accurate measurements of BPD, HC, FL, TCD and lateral atrial diameter of the cerebral ventricles						
Confirm normal anatomy of head and face						
Confirm normal anatomy of spine						
Confirm normal anatomy of heart and chest						
Confirm normal anatomy of abdomen						
Confirm normal anatomy of limbs						
Perform full anomaly scan						
Recognise common structural anomalies						

Skill	Observation		Direct supervision		Independent practice	
	Date	Signature	Date	Signature	Date	Signature
Communicating normal results to parents						
Communicating abnormal results to parents						
Arranging appropriate follow up or intervention						
Working in a multi-disciplinary team						

Training Courses or sessions		
Title	Signature of educational supervisor	Date

Authorisation of signature:	
Name (please print)	Signature



OSATS: Fetal biometry

Trainee Name:		Assessor Name:		Date:	
Level of training: Grade/ Year		Post:			

Clinical details of complexity/ difficulty of case	
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	Item under observation	Needs help	Done independently
1	Counsel patient about procedure		
2	Appropriate machine setup/probe selection		
3	Confirm fetal heartbeat		
4	Measure BPD, HC, TCD, AC, FL transabdominally		
5	Demonstrate normal anatomy		
6	Demonstrate Biometric anomalies detected on scan and note differences from normal		
7	Communicate results to patient and uncertainties		
8	Identify placental site or position in relation to the cervical canal if appropriate		
9	Assess liquor volume		
10	Discuss appropriate referral to other specialities, if indicated		
11	Ensure images and video are recorded according to local protocol		
	Comments		

Signature: _____

Date: _____



OSATS: Anomaly scan including recording images of fetus

Trainee Name:		Assessor Name:		Date:
Level of training: Grade/ Year		Post:		

Clinical details of complexity/ difficulty of case	
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	Item under observation	Done independently	Needs help
1	Counsel patient about procedure		
2	Appropriate machine setup/probe selection		
3	Confirm fetal heartbeat		
4	Demonstrate normal anatomy and normal biometry including BPD, HC (Atrial measurements lateral ventricle), TCD, AC, FL		
5	Demonstrate anomaly(s) detected on scan and differences from normal		
6	Communicate results to parents and uncertainties regarding diagnosis & prognosis		
7	Identify placental site or placental position in relation to the cervical canal if appropriate		
8	Assess liquor volume		
9	Discuss appropriate referral to other specialities, if indicated		
10	Ensure images and video are recorded according to local protocol		
	Comments		

Signature: _____

Date: _____