



End-point assessment plan for Sonographer (Integrated Degree) apprenticeship standard

Standard reference number	Level of this EPA plan	Integrated
ST0554	6	Integrated degree apprenticeship

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Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Sonographer (Degree) apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to Sonographer (Degree) apprentices, their employers and training providers.

Full time apprentices will typically spend 36 months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices will spend a minimum of 12 months on-programme.

The EPA period should only start, and the EPA be arranged, once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, all of the pre-requisite gateway requirements for EPA have been met and that they can be evidenced to an EPAO.

All pre-requisites for EPA assessment methods must also be complete and available for the assessor as necessary.

As a gateway requirement and prior to taking the EPA, apprentices must complete all approved qualifications mandated in the Sonographer (Degree) standard.

These are:

- 340 credits of BSc Honours Ultrasound; BSc Honours Medical Ultrasound; BSc Honours Diagnostic Imaging; BSc Honours Diagnostic Ultrasound; BSc Honours Medical Imaging (Ultrasound); BSc Honours Ultrasound Imaging except the 20 credits assigned to the EPA
- English and mathematics at level 2. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

The EPA should be completed within an EPA period typically lasting 3 months, beginning when the apprentice has met the EPA gateway requirements.

The EPA consists of 2 distinct assessment methods.

The individual assessment methods will have the following grades:

Assessment Method 1: Demonstration of practice with question and answer session

- Fail
- Pass

Assessment Method 2: Professional Discussion

- Fail
- Pass
- Distinction

Performance in the EPA will determine the overall apprenticeship grades of:

- Fail
- Pass
- Distinction

EPA summary table

On-programme (typically 36 months)	Training to develop the occupation standard's knowledge, skills and behaviours.
End Point Assessment Gateway	<ul style="list-style-type: none"> • Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard. • English/mathematics Level 2 <p>Apprentices must complete the following approved qualifications mandated in the standard:</p> <ul style="list-style-type: none"> • Achievement of 340 credits of BSc Honours Ultrasound; BSc Honours Diagnostic Ultrasound; BSc Honours Medical Ultrasound; BSc Honours Diagnostic Imaging. <p>Apprentices must complete:</p> <ul style="list-style-type: none"> • an on-programme portfolio to underpin the Professional Discussion method. This must be submitted to the EPAO at Gateway.
End Point Assessment (which would typically take 3 months)	<p>Assessment Method 1: Demonstration of practice with question and answer session</p> <p>Assessment Method 2: Professional Discussion</p>
Professional recognition	<p>Aligns with recognition by:</p> <ul style="list-style-type: none"> • Society and College of Radiographers / Sonographer • British Medical Ultrasound Society / Sonographer

Length of end-point assessment period:

The EPA (including all assessment methods) should be completed within an EPA period typically lasting 3 months, beginning when the apprentice has met the EPA gateway requirements.

Order of assessment methods

The assessment methods can be delivered in any order.

Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

In addition to the employer's confirmation that the apprentice is working at or above the level in the occupational standard, the apprentice must have completed the following gateway requirements prior to beginning EPA:

- English and mathematics at level 2. For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

Apprentices must complete the following approved qualifications as mandated in the standard:

- Achievement of 340 credits of BSc Honours Ultrasound; BSc Honours Diagnostic Ultrasound; BSc Honours Medical Ultrasound; BSc Honours Diagnostic Imaging.

For Observation of Practice Assessment with a question and answer session:

- No specific requirements

For Professional Discussion:

- an on-programme portfolio to underpin the Professional Discussion method. This must be submitted to the EPAO at Gateway.

The apprentice will typically collate a minimum of nine to a maximum of 12 pieces of evidence mapped to the knowledge, skills and behaviours to underpin the professional discussion. The portfolio will cover the following three clinical area themes: gynaecology, obstetrics and general medical.

Theme 1: Clinical Practice:

- a single record of 300 unaided scanned examinations (100 per clinical area that are anonymised) which will enable the apprentice to discuss the KSBs relating to evidence-based pathology examinations and safety of ultrasound service and practice. A template should be used to record the scans which would typically include:
 - log number
 - date of the examination
 - examination type
 - brief report of results
- Other clinical practice evidence, eg appraisal and CPD documents.

Theme 2: Case Studies

- A written case study typically of 1000-1500 words for each clinical area covering how ultrasound contributes to patient management. The case studies will allow a wider breadth of knowledge of pathology/abnormalities to be demonstrated other than those included within the observation of practice. The case study format should include:
 - an introduction to the case study
 - a discussion of the role of ultrasound in the case study
 - a conclusion to the case study

Theme 3: Professional Issues

- One written piece of evidence typically of 1000 words per clinical area that explores a current and professional issue relating to ultrasound. This should include for example, the role of the sonographer, relevant ethical and medicolegal aspects and nationally recommended practice.

For example:

- breaking bad news for obstetrics
- patient centred care and consent for gynaecology
- report writing in general medical

Reflective accounts and self-reflection must not be included in the portfolio.

The portfolio must be submitted to the EPAO at the gateway. It is expected that portfolio will be submitted electronically. The apprentice must retain a copy of their portfolio and bring this with them to their professional discussion.

Assessment Methods

Assessment Method 1: Demonstration of Practice with question and answer session

Overview

Apprentices must be observed by an independent assessor completing 2 practical demonstrations in which they will demonstrate the KSBs assigned to this assessment method. The end-point assessment organisation will arrange for the observation to take place, in consultation with the employer. Practical demonstrations must be carried out over a maximum total assessment time of 1 Hour 30 Minutes. The demonstrations may be split into discrete sections held on the same working day. The assessor has the discretion to increase the time of the practical demonstration by up to 10% to allow the apprentice to complete the last task that is part of this element of the EPA.

The independent assessor may conduct and observe only one apprentice at a time during this assessment method.

The rationale for this assessment method is:

Sonography is a science-based profession requiring the development and use of a depth and breadth of clinical knowledge and skills to safely undertake, interpret, analyse and report ultrasound examinations in a variety of clinical settings. Ultrasound service delivery occurs in a diverse range of settings and includes sensitive and intimate examinations and high-level communication. Therefore, it is more appropriate to do an assessment and observation of practice in a controlled environment to

ensure all apprentices are provided with a consistent and standardised practical assessment process and experience. The scenario design of the assessment method will allow the apprentice to demonstrate critical elements of an ultrasound examination and therefore the KSBs required to practice both safely and effectively as per the requirements of the apprenticeship standard.

An observation of practice in a live setting was not selected in order to avoid situations where patients do not give consent and issues around patient confidentiality, and to ensure consistency of assessment for apprentices.

Delivery

Apprentices must be provided with both written and verbal instructions on the tasks they must complete, including the timescales they are working to as well as appropriate resources, such as consumables (pens, paper, ultrasound gel).

The observation of practice assessment consists of 2 clinical stations of 45 minutes each:

Station 1 – Obstetrics (either 2nd trimester (anomaly scan) or 3rd Trimester referral)

- 5 minutes to review the scenario and make notes
- 20 minutes to demonstrate a full obstetric examination, communicate the results to the patient and produce a compliant free text hand written report.
- 20 minute for independent assessor to read the report and conduct the question and answer session on the quality aspects of the examination, and to give the apprentice the opportunity to provide further evidence for any gaps in the knowledge, skills and behaviours that they could not demonstrate in the practical demonstration. The independent assessor will generate and ask a minimum of 5 questions to facilitate this.

Station 2 – Gynaecology or General medical

- 5 minutes to review the scenario and make notes
- 20 minutes to demonstrate a full ultrasound examination in gynaecology or general medical ultrasound, communicate the results to the patient and produce a compliant free text hand written report.
- 20 minute for independent assessor to read the report and conduct the question and answer session on the quality aspects of the examination, and to give the apprentice the opportunity to provide further evidence for any gaps in the knowledge, skills and behaviours that they could not demonstrate in the practical demonstration. The independent assessor will generate and ask a minimum of 5 questions to facilitate this.

Both stations must take place on the same day with the same independent assessor. The role of the 'patient' must be played by an actor or service user, or appropriate simulation equipment could be used for the scan covering communication, empathy, respect, decision making and codes of professional conduct. If a simulator is being used the independent assessor must ensure the apprentice is able to demonstrate communication, empathy and respect by generating and asking questions or observing these through role play.

The EPAO must:

- Ensure the assessment room and stations are in a controlled environment
- Develop a bank of scenarios that are 50-100 words each that must include the patient's relevant clinical history and any previous relevant diagnostic tests for the independent assessor to select from
- Recruit individuals to carry out the 'patient' role if 'live' patients are to be used. The 'patient' role can be played by an actor or service user, or appropriate simulation equipment can be used for scanning. If a simulator is being used the independent assessor must ensure the apprentice is able to demonstrate communication, empathy and respect by generating and asking questions or observing these through role play. Ensure that the assessment room is suitably set up and has the required equipment for the apprentice to demonstrate the KSBs mapped.
- Provide briefs for the patient/actor which include the patient's medical condition and additional information to help them participate in the role play. Where an actor or service user is playing the role of the patient, the independent assessor checks that they have understood the brief provided.
- Ensure the stations are completed on the same day with the same assessor.
- Provide a structured template for the independent assessor to use for managing and grading of the assessment to ensure consistency and moderation.
- Provide a grading criteria for the independent assessors to use for each station and the grade criteria for the overall grade for this assessment method.
- Provide a document for the employer and apprentice on how the assessment will be conducted.

The 'Patient' must:

- Be a 'live subject' to simulate a clinical scenario as per the brief provided
- Follow the brief for the individual at the station and enacts what is required
- Have consented to being scanned as a volunteer following the British Medical Ultrasound Society guidelines
- Be at the assessment venue and be in situ prior to the assessment
- Be briefed prior to assessment by the independent assessor
- Adhere to confidentiality about all aspects of the assessment and the brief they have been provided with

The independent assessor must:

- Be in charge of the two stations and co-ordinate the assessment
- Check the controlled environment is suitable and has the required equipment for the apprentice to demonstrate the KSBs
- Check the stations are set up properly
- Brief the 'patient' prior to assessment commencing and check they have understood the brief
- Provide the apprentice with the scenarios for each station
- Observe the apprentice demonstrating the KSBs mapped to the assessment method.
- Interact appropriately with the apprentice during the assessment, using a range of questions and prompts to seek clarity on what the apprentice does and/or why they have done it
- Use the structured template to conduct the assessment.
- Use the grading criteria provided by the EPAO to grade each station

- Grade the apprentice for this assessment method

Overview of individual stations

The following activities MUST be observed during the practical demonstration as a practical demonstration without these tasks would seriously hamper the opportunity for the apprentice to demonstrate occupational competence in the KSBs assigned to this assessment method.

Station 1 – Obstetrics ultrasound examination on patient and written report

- Title: The apprentice needs to demonstrate a personalised, safe, effective and appropriate ultrasound examination and produce a report
- Description: The apprentice will conduct a holistic obstetrics ultrasound assessment on the 'patient'

At this station the apprentice will:

- Be presented with one scenario,
- Communicate appropriately with the patient
- Obtain valid consent
- Review the history and conduct the ultrasound
- Produce a report
- Keep accurate records
- Work safely within their scope of practice

For this station the EPAO will:

- Develop a 'bank of scenarios' of ultrasound for an obstetric patient (50 -100 words per scenario)
- Provide a written brief for the 'patient'
- Ensure the relevant equipment is available to conduct the assessment for this
- Provide a 'bank of questions' for the independent assessor
- Provide a proforma for the independent assessor to record their observations
- Provide a proforma, pens and paper for the apprentice to write their report

Scenarios:

The apprentice will be given a scenario of no more than a single page (50-100 words). Scenarios for this station must focus on an ultrasound for obstetrics and the different needs or situations associated with this, below are some examples:

- 20 weeks routine anomaly scan
- First trimester dating scan
- Third trimester growth scan

These examples are just for illustrative purposes, it is up to the EPAO to develop a suitable 'bank of scenarios' of this type to be used during the demonstration of practice.

Station 2 – Gynaecology ultrasound examination on patient and written report

- Title: The apprentice needs to demonstrate a personalised, safe, effective and appropriate ultrasound examination and produce a written report

- Description: The apprentice will conduct a gynaecology holistic ultrasound assessment on the 'patient'

For this station the EPAO will:

- Develop a 'bank of scenarios' of gynaecology or general medical ultrasound (50-100 word) per scenario)
- Provide a written brief for the 'patient'
- Ensure the relevant equipment is available to conduct the assessment for this
- Provide a 'bank of questions' for the independent assessor
- Provide a proforma for the independent assessor to record their observations
- Provide a proforma, pens and paper for the apprentice to write their report

Scenarios:

The apprentice will be given a scenario of no more than a single page (50-100 words). Scenarios for this station must focus on a gynaecology or general medical ultrasound patient and the different needs or situations associated with this, below are some examples:

- Patient presents with right upper quadrant pain with query gallstones
- Patient presents with a history of heavy menstrual bleeding, query cause
- Patient presents with right iliac fossa pain, query ovarian cyst

These examples are just for illustrative purposes, it is up to the EPAO to develop a suitable 'bank of scenarios' of this type to be used during the demonstration of practice

There may be breaks during the practical demonstration to allow the apprentice to move from one location to another and for meal breaks.

KSBs observed and answers to questions must be documented by the independent assessor.

The independent assessor will make all grading decisions.

Questions and resources development

EPAOs will create and set open questions to assess related underpinning knowledge, skills and behaviours. The questions can be asked during the practical demonstration and during the question and answer session. The independent assessor must ask a minimum of 5 questions per station. Questioning must be completed within the total time allowed for each station within the practical demonstration.

EPAOs will produce specifications to outline in detail how the practical demonstrations will operate, what it will cover and what should be looked for. It is recommended that this be done in consultation with employers. EPAOs should put measures and procedures in place to maintain the security and confidentiality of their specifications if employers are consulted. Specifications must be standardised by the EPAO.

EPAOs must develop 'practical specification banks' of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose. The specifications, including questions relating to underpinning knowledge, skills and behaviours must be varied, yet allow assessment of the relevant KSBs. Assessors are permitted to

generate their own questions in order to tailor these to each apprentice, however a question bank developed by the EPAO must be supplied and used by the assessor as a guide.

Grading the stations

Each station will be graded pass/fail by the independent assessor in order to determine the overall grade for this method, using the grading criteria provided by the EPAO. See grading section for the mapped KSBs.

Venue

Practical demonstrations must be conducted in one of the following locations:

- A suitable venue selected by the EPAO (e.g. a training provider's premises or another employer's premises)

The venue must:

Provide a simulated or live, ultrasound examination room selected by the EPAO which:

- offer a designated space, in a quiet room that is free from distractions
- if the stations are set out in the same room the venue must allow for the stations to be placed at suitable intervals to minimise the chance of overhearing or seeing what is happening at other stations since more than one apprentice will be in the room at the same time
- offer a separate room so that apprentices waiting to do their demonstration of practice are not in contact with those who have finished to avoid conferring

Support material

EPAOs will produce the following material to support this assessment method:

- an outline of each station, how it should be set up and with what equipment
- a bank of scenarios of 50-100 words maximum for the independent assessor to choose from
- briefs on each scenario for the 'patient'
- a structured template for the independent assessor to use for managing and grading of the assessment to ensure consistency and moderation.
- a grading criteria for the independent assessor to use to ensure consistency and allow or moderation

Other relevant information

EPAOs must also:

- Appoint 'patients'(actors) for the assessment and ensure they are provided with the scenario brief
- Gain signed consent from 'patient' (actors) to scan as per British Medical Ultrasound Society safety guidelines

Assessment Method 2: Professional Discussion

Overview

This assessment will take the form of a professional discussion, which must be appropriately structured to draw out the best of the apprentice's competence and excellence and cover the KSBs assigned to this assessment method. It will involve the questions that will focus on coverage of prior learning or activity and problem solving.

The professional discussion can take place in any of the following:

- a suitable venue selected by the EPAO (e.g. a training provider's premises)

The rationale for this assessment method is:

The professional discussion will allow the apprentice to demonstrate the depth and breadth of the KSBs required to practise safely and effectively. As a structured, in-depth two-way conversation between the assessor and each apprentice, the professional discussion will provide an effective holistic assessment of complex understanding and knowledge. It will also provide opportunity to evidence their analytical, problem solving and decision-making abilities which are essential for sonography practice.

The discussion format is an excellent method to cover the range of KSBs required. It will include the opportunity for the apprentice to use supportive evidence from their on-programme portfolio to inform and enhance the discussion. The professional discussion will complement the demonstration of practice in providing a robust EPA for a sonography apprentice. Together they will maximise the opportunity for the apprentice to demonstrate the full range of KSBs required to practice safely and effectively as a competent sonographer.

Delivery

The independent assessor will conduct and assess the professional discussion.

The on-programme portfolio will be used to underpin this assessment method. It should be submitted by the employer to the EPAO at Gateway, so that the independent assessor can review its contents (rather than directly assess) and use this to prepare for the Professional Discussion.

The professional discussion must last for 60 minutes (+10% at the independent assessor's discretion to allow an apprentice to finish the answer they are giving). Further time may be granted for apprentices with appropriate needs in line with the EPAOs Reasonable Adjustment Policy.

During the discussion, the independent assessor must ask a minimum of 15 questions.

The professional discussion will be conducted as set out here:

The apprentice will undertake a one-to-one professional discussion with the independent assessor. The independent assessor must structure the professional discussion with a range of questions chosen from a question bank developed by the EPAO and those generated by themselves following their review of the portfolio, so that they cover the KSBs mapped to this assessment method.

Video conferencing can be used to conduct the professional discussion, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way.

The independent assessor will:

- Use a format for the discussion that facilitates professional dialogue, rather than one that adopts a formulaic approach to questions and answers. In keeping with this, the independent assessor must use a facilitative questioning style, pursuing key points and issues to explore the depth of applied knowledge and understanding held by the apprentice.
- Use the structured template to conduct the assessment.

The apprentice must:

- Interact with the independent assessor in a discussion to demonstrate their knowledge, skills and behaviours as required for the professional discussion.
- Bring a copy of their completed portfolio of evidence to the professional discussion, so they can draw on the contents of the portfolio to underpin the discussion, selecting items to inform and enhance the discussion.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion.

The independent assessor will make all grading decisions.

Venue

The professional discussion should take place in a quiet room, free from distractions.

Other relevant information

A structured specification and question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and review it regularly (and at least once a year) to ensure that it, and its content, are fit for purpose. The specifications, including questions relating to the underpinning knowledge, skills and behaviours, must be varied yet allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of professional discussions and reaching consistent judgement.

EPAOs will produce the following material to support this assessment method:

- a structured template for the independent assessor to use for managing and grading the assessment to ensure consistency and for moderation.
- a bank of questions to support the discussion, structured around each of the domains in the standard
- provide support and training to independent assessors on how to develop appropriate questions following a review of a portfolio.
- grading criteria for the independent assessor to use to grade the discussion

Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA grade.

Grading

Assessment Method 1: Observation of Practice Assessment

KSBs	Name of grade	Grade descriptor
K1 K2 K3 K4 K5 K6 K9 K10 K11 K13 K17 K24 K25 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S16 S17 S20 S22 S23 S26 S33 S42 B1 B2 B5 B6	Pass	<p>Correctly identifies the patient and gives them a full explanation and rationale for the procedure and treatment techniques, seeking valid informed consent and meeting legislative and clinical governance frameworks and requirements. (K1, K2, K6, S3, S26, B1)</p> <p>Ensures correct patient preparation and establishes that the clinical details provided are adequate to justify and perform the examination. (S2, S16, K1, K2)</p> <p>Demonstrates patient engagement in planning and evaluating care through effective communication throughout the examination to facilitate optimum co-operation and allay patient fears and anxiety (K17, K25, S3 S5, S6, B2)</p> <p>Discusses findings in a professional manner with the patient and relatives in accordance with occupational standards (K17, S26, B6)</p> <p>Using underlying scientific principles correctly uses and justifies the choice of equipment and probe selection in relation to the examination, including the use of clinical terminology (K9, K11, S16)</p> <p>Correctly manipulates the equipment controls to produce and evaluate a high-quality ultrasound scan including the use of additional technology (S8, S11, S14, K10)</p> <p>Evaluates ultrasound images to correctly recognise normal, abnormal and normal variants using the signs and symptoms of disease (K3, K4, S10, S11)</p> <p>Acquires and analyses the clinical information provided from case notes and previous diagnostic tests, and archives appropriate information in-line with professional standards and ultrasound practice (S7, S13, S17)</p>

		<p>Adapts technique in view of patient's condition and ultrasound findings. (S4, S9)</p> <p>Makes reasoned decisions and analyses and interprets the ultrasound findings, and formulates a written report in accordance with departmental guidelines (K13, S23)</p> <p>Understands the role of the ultrasound examination in the context of patient management and care pathways, and knows when to seek advice from or refer to another professional when findings are outside the scope of practice and documents this (K2, S1, S12, S20)</p> <p>Uses basic life support techniques to safely deal with a clinical emergency (S42)</p> <p>Demonstrates an awareness of their limitations and when to seek advice and report concerns in challenging situations to manage risk (K5, S22)</p> <p>Demonstrates an accurate understanding of others' roles and the importance of working collaboratively and in line with their professional code of conduct (K24, S33, B5)</p>
	Fail	The apprentice has not met the pass criteria

Assessment Method 2: Professional Discussion

KSBs	Name of grade	Grade descriptor
K7 K8 K12 K14 K15 K16 K18 K19 K20 K21 K22 K23 K26 K27 K28 K29 S15 S18 S19 S21 S24 S25 S27 S28 S29 S30 S31 S32 S34 S35 S36 S37 S38 S39 S40 S41 B3 B4 B6	Distinction	<p>Evaluates a range of solutions and options and selects for implementation that which will benefit the practice and improve patient care and outcomes eg positive feedback from patient (K8, K26, K27, S32, S34, S38, B6),</p> <p>Explains how they have evaluated and reflected on their practice to assess and measure and improve their own practice where appropriate using local and national standards and reflective frameworks (K22, S19, S21, S28, S34)</p> <p>Critically evaluate change processes within the multi-professional team that results in either improved patient outcome or improved efficiency (S32, S35, S38, B6)</p> <p>Explains actions taken when they have worked with difficult patients who do not want to be empowered and take ownership of their care and onward wellbeing (K16, S25, S36)</p>

		Explains when they have led risk assessment and or put measures in place to mitigate risks and describe the impact this had (K7, K12, K20, S18, S25)
	Pass	<p>Explains how they have ensured ultrasound safety and ergonomics to ensure own wellbeing (K21)</p> <p>Explains the risk/benefit philosophy as it applies to ultrasound safety (K12, S15)</p> <p>Explains the importance of quality assurance programmes, including the importance of learning from incidents (K14, K22, S32, S38, S39)</p> <p>Explains the legal and professional requirements of being a sonographer and how to comply with these (K20, K26, K28, S34, B3)</p> <p>Explains how to facilitate others' learning (K18, S31)</p> <p>Explains how they have resolved a problem in the context of patient management and ultrasound findings S21, S28, S36)</p> <p>Explains issues around sharing information (K7, K19, K29, S24, S37, S25, B4)</p> <p>Explains accurately how research is used to develop sonography (K15, S30, S32, S35)</p> <p>Explains the key aspects of leadership theories and their application to sonography practice including health promotion and education (S29, K26, K27, B5)</p> <p>Explains and gives an example of how they managed an unexpected emotional and psychological support and distressing situation and how they modified their communication style to address the patients individual needs (K8, S18, S19, B6)</p> <p>Explains the impact of culture, equality and diversity on practice in order to maintain patient dignity and rights (K16)</p> <p>Explains how they manage their clinical case load (S27, S40)</p> <p>Explains when the use of pharmacology of ultrasound contrast media and drugs is appropriate (K28, S41)</p> <p>Explain the importance of reflective practice and professional development (K23)</p>
	Fail	The apprentice has not met the pass criteria

Overall EPA grading

All EPA methods must be passed for the EPA to be passed overall.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Observation of Practice Assessment	Professional Discussion	Overall grading
Fail	Fail	Fail
Fail	Pass	Fail
Fail	Distinction	Fail
Pass	Fail	Fail
Pass	Pass	Pass
Pass	Distinction	Distinction

Roles and responsibilities

Role	Responsibility
Apprentice	<ul style="list-style-type: none"> • participate in development opportunities to improve their knowledge skills and behaviours as outlined in the standard • complete the on-programme element of the apprenticeship • understand the purpose and importance of EPA • prepare for and complete the EPA
Employer	<ul style="list-style-type: none"> • support the apprentice to achieve the KSBs outlined in the standard to their best ability • identify when the apprentice is ready to pass the gateway and undertake their EPA • confirm all EPA gateway requirements have been met • agree with the EPAO that the apprentice has passed the gateway • confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner • ensure apprentice is well prepared for the EPA
EPAO	<p>As a minimum EPAOs should:</p> <ul style="list-style-type: none"> • understand the occupational role • provide training and CPD to the independent assessors they employ to undertake the EPA • provide adequate information, advice and guidance documentation to enable apprentices, employers and providers to prepare for the EPA • deliver the end-point assessment outlined in this EPA plan in a timely manner • prepare and provide all required material and resources required for delivery of the EPA in-line with best practices • use appropriate assessment recording documentation to ensure a clear and auditable mechanism for providing assessment decision feedback to the apprentice • ensure there is no direct connection between the Independent Assessor and the apprentice or their employer i.e. there must be no conflict of interest • maintain robust internal quality assurance (IQA) procedures and processes, and conducts these on a regular basis • organise standardisation events and activities in accordance with this plan's IQA section • organise and conduct moderation of independent assessors' marking in accordance with this plan • have, and operate, an appeals process • conform to the requirements of the nominated EQA provider • arrange for certification with the relevant training provider

Independent assessor	<p>As a minimum an Independent assessor should:</p> <ul style="list-style-type: none"> • understand the standard and assessment plan • deliver the end-point assessment in-line with the EPA plan • comply to the IQA requirements of the EPAO • be independent of the apprentice and their employer and not have been involved in on-programme delivery i.e. there must be no conflict of interest • have undertaken independent assessor training e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading • have the capability to assess the apprentice at this level i.e. have a level 7 qualification or equivalent in medical ultrasound • maintain up to date CPD in relation to professional practice • attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section)
Training provider	<p>As a minimum the training provider should:</p> <ul style="list-style-type: none"> • work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the standard and monitor their progress during the on-programme period • advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway

Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPA organisations must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must:

- appoint independent assessors who are independent of the apprentice and their employer(s). Where the training provider is the EPAO (i.e HEI) there must be procedures in place to mitigate any conflict of interest which will be monitored by EQA activity
- appoint independent assessors who have knowledge of the following areas:
The assessor must have at least 2 years previous experience of working as a sonographer in a variety of clinical specialities and settings and be able to apply their knowledge and clinical reasoning skills to safely undertake a complete ultrasound examination including report. Examples of clinical specialities include obstetrics, general medical, and gynaecology.
- appoint independent assessors who have recent relevant experience of the occupation/sector at least one level above the apprentice gained in the last two years or significant experience of the occupation/sector.
- The assessor will have the following minimum skills, knowledge and occupational competence:
 - hold a level 7 qualification or equivalent in medical ultrasound
 - have at least 2 years post-qualification clinical experience in medical ultrasound
 - maintain up to date CPD in clinical and professional practice
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time.
- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time. Assessors must attend a standardisation session at least once per year.

Re-sits and retakes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit or re-take any failed assessment methods only.

Any assessment method re-sit or re-take must be taken during the maximum EPA period, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to distinction.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Affordability

Affordability of the EPA will be ensured by using at least some of the following practice:

- assessing multiple apprentices simultaneously during the Demonstration of Practice will be undertaken on a 1:1 basis however several assessments could be in the same room at the same time.

Professional body recognition

This apprenticeship is designed to prepare successful apprentices to meet the requirements for registration as a Sonographer with:

- Society and College of Radiographers
- British Medical Ultrasound Society

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making Reasonable Adjustments for this standard. This should include how an apprentice qualifies for Reasonable Adjustment and what Reasonable Adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this assessment plan.

Mapping of KSBs

Assessment Method 1: Demonstration of practice

Knowledge
K1 Knowledge and understanding of the Society and College of Radiographers and British Medical Ultrasound Society (2017) Guidelines For Professional Ultrasound Practice, and national and local ultrasound policies.
K2 Knowledge and understanding of the legislative and clinical governance frameworks associated with sonography and the political, social, and economic factors impacting on health and social care and ultrasound service delivery in the NHS, private and independent sectors.
K3 Knowledge of the structure and function of the human body and how to relate these to normal, normal variants and abnormal ultrasound appearances and pathophysiology.
K4 Knowledge of the signs and symptoms of disease and trauma that result in referral for ultrasound procedures, and the use of other diagnostic tests.
K5 Understanding of the limitations of own scope of practice, knowledge and skills, and when to seek advice or refer to another professional.
K6 Knowledge of the procedure for obtaining consent and the implications of not obtaining consent, including the Society and College of Radiographer consent guidance documentation
K9 Knowledge and understanding of the physics and technology of ultrasound imaging and image generation, including the underlying scientific principles.
K10 Knowledge and understanding of ultrasound equipment and its safe use and function in order to ensure that it is appropriate for purpose
K11 Knowledge and understanding of how to select, use and apply appropriate scientific and clinical terminology in all aspects of their professional practice.
K13 Knowledge and understanding of the concepts and principles involved in the practice of ultrasound and ultrasound reporting, including clinical judgement, clinical decision making and when to escalate.
K17 Knowledge and understanding of patient /service user centred care in the context of their professional practice.
K24 Understand the need to build and sustain professional relationships as both an independent professional and collaboratively as a member of a team.
K25 Understand the need to engage and empower service users and carers in planning and evaluating.
Skills
S1 Interpret, apply and reflect on professional codes of practice and legislation in order to deliver ultrasound examinations and take responsibility for own actions, exercising a professional duty of care.

S2 Receive and justify appropriateness of referrals, and advise other healthcare professionals about the relevance and application of ultrasound examinations to the service user's needs.
S3 Use independent methods to establish and confirm service user identity and confirm patient consent prior to undertaking ultrasound procedures.
S4 Assess patients clinical condition prior to, during and after ultrasound examinations, recognising changing signs, symptoms and progression of disease, and make appropriate decisions relating to ultrasound appearances and the immediate management of the patient
S5 Use effective communication with the patient to determine their suitability for the procedure before and during their examination.
S6 Assess potential communication barriers and modify communication to ensure inclusivity and form relationships and rapport with all patients.
S7 Acquire, interpret and report on the range of ultrasound examinations within their scope of practice with a high level of skill and accuracy.
S8 Optimise the ultrasound machine and controls to perform a high quality scan.
S9 Use spatial awareness and psychomotor skills when manipulating the patient's body to produce accurate ultrasound images.
S10 Distinguish between normal and abnormal appearances evident during the ultrasound examination and on resultant ultrasound images, and document findings in a written report.
S11 Critically evaluate the quality of ultrasound images for clinical manifestations and technical accuracy in relation to their diagnostic value.
S12 Work both independently and in a multi-professional team
S13 Use physical, graphical, verbal and electronic methods to collect and analyse information from a range of sources including service user's clinical history, diagnostic images and reports, pathological tests and results.
S14 Operate ultrasound equipment and related accessory equipment safely and accurately, and take appropriate action in the case of faulty functioning and operation.
S16 Select and explain the rationale for examination and treatment techniques and immobilisation procedures appropriate to the service user's physical and disease management requirements.
S17 Take responsibility for reasoned decisions when performing a broad range of clinical, technical, managerial or scientific procedures and record appropriately.
S20 Seek advice from or refer to another professional when findings are outside your scope of practice.
S22 Manage risk and report concerns about safety, and be open when things go wrong.
S23 Keep accurate records of own work and promote and protect the interests of patients, staff, and public.
S26 Provide patients or their advocates with the information necessary to enable them to make informed decisions, with regular reappraisal of their information needs, as appropriate.
S33 Work in partnership with service users, other professionals, support staff and others, and contribute effectively to work undertaken as part of a multi-disciplinary team.

S42 Use basic life support techniques and be able to deal safely with clinical emergencies

Behaviours

B1 Behave with dignity, respecting an individual's diversity, beliefs, culture, needs, and preferences.
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B2 Show respect, empathy and the right to privacy for everyone in their work environment and have the courage to challenge areas of concern.

B5 Act with professionalism, honesty, integrity and respect in all interactions. Maintain good character as outlined in their professional code of conduct and not bring their profession or organisation into disrepute.
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B6 Demonstrate emotional intelligence, remaining calm in distressing and adverse situations.

Assessment Method 2: Professional Discussion

Knowledge

K7 Knowledge and understanding of patient confidentiality, the responsibility to maintain it and understanding of the General Data Protection Regulation, including the need for accurate record keeping, in accordance with relevant legislation, protocols and guidelines.

K8 Knowledge and understanding of how to modify and tailor own communication skills address factors such as age, capacity, learning ability and physical ability whilst performing ultrasound examinations and discussing outcomes to ensure the patient and people acting on their behalf understand the message you are conveying
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K12 Knowledge and understanding of how the risk-benefit philosophy applies to ultrasound safety, to protect both individual service users and the population.
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K14 Knowledge and understanding of the importance of quality assurance, health and safety and patient centred care as they apply to the practice of ultrasound.
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K15 Knowledge and understanding of how to critically appraise current literature in order to support evidence based practice and research.

K16 Knowledge and understanding of the impact of culture, equality and diversity on practice in order to practice in a non-discriminatory manner, maintaining patients' dignity and rights.
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K18 Understanding of the importance of participation in training, supervision and mentoring.

K19 Knowledge and understanding of appropriate supplementary procedures aligned to mandatory training including manual handling, data protection, confidentiality, infection control and disposal of bodily fluids.
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K20 Knowledge and understanding of medical ethics and mental capacity.

K21 Knowledge and understanding of ergonomically sound practice to ensure own wellbeing.

K22 Knowledge and understanding of the need to monitor and evaluate the quality of practice and the value of contributing to the generation of data for quality assurance and improvement programmes.
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K23 Understand the importance of reflective practice, lifelong learning and continuing professional development within their own ultrasound practice and that of others.
K26 Understanding of the role of disease detection or role of the sonographer in the promotion of health and health education in relation to healthy living and health screen
K27 Understanding of the concept of leadership and its application to sonography practice.
K28 Knowledge and understanding of the pharmacology of ultrasound contrast media and drugs used during diagnosis and treatment, the methods of drugs administration, and how to remove and re-apply dressings.
K29 Understand cyber security in relation to ultrasound practice.

Skills
S15 Apply the risk-benefit philosophy to ultrasound safety considerations to protect both individual service users and the population.
S18 Recognise verbal and non-verbal cues that indicate the patient may require emotional and psychological support.
S19 Seek clinical supervision to ensure support whilst dealing with possibly distressing and difficult circumstances.
S21 Initiate resolutions to ultrasound problems using a comprehensive range of cognitive and practical skills associated with ultrasound.
S24 Maintain and respect patient confidentiality while following local safeguarding policy and national guidelines.
S25 Recognise and respond appropriately to situations where it is necessary to share information to safeguard ultrasound patients or the wider public.
S27 Manage own workload and resources effectively and be able to practice accordingly.
S28 Integrate theoretical and practical knowledge in order to solve problems.
S29 Work within the limits of own knowledge and skills, delegate appropriately. Lead and manage in accordance with your level of responsibility.
S30 Maintain and further develop your own skills and knowledge
S31 Ability to support and facilitate learning for others.
S32 Contribute to the development, design, and implementation of clinical audit and service improvement initiatives and use evidence-based research and clinical trials outcomes to explore and develop own clinical practice.
S34 Reflect critically on practice and contemporary evidence that underpins ultrasound practice, and apply critical thinking and problem solving to professional decision making.
S35 Apply findings from patient feedback audit and clinical trials to practice.
S36 Apply conflict resolution strategies appropriately.
S37 Keep accurate, comprehensive and comprehensible records and other information in accordance with applicable legislation, protocols and guidelines.

S38 Reflect on and learn from clinical incidences and complaints, and share learning with peers.
S39 Signpost patients and their families to the patient complaint process, support them and colleagues during incidences and the reporting process.
S40 Use information and communication technologies appropriate to their practice.
S41 Remove and re-apply dressings and supports appropriately and in a safe, effective and considerate manner.

Behaviours
B3 Be adaptable, reliable, and consistent.
B4 Show discretion, resilience and self-awareness.
B5 Act with professionalism, honesty, integrity and respect in all interactions. Maintain good character as outlined in their professional code of conduct and not bring their profession or organisation into disrepute.
B6 Demonstrate emotional intelligence, remaining calm in distressing and adverse situations.