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Nurses Performing Ultrasound Scanning in Fertility Care

CLINICAL PROFESSIONAL RESOURCE



Notes

- every unit should have a comprehensive peer review system in place, so that once qualified, practice is continually assessed, in line with the NMC Code (2018), and have access to ongoing mentorship and support, and regular clinical review of cases
- a need for nationally recognised guidelines for nurses training and maintaining their skills in USS for the purposes of fertility care/practice. The framework identified the skills required around this area of practice, and this requires enhancing to give clear guidance around the overall requirements, for example accessing education courses, practice placement, mentors, peer review and ongoing support post qualifying.

Taken from: RCN (2023) *Education and Career Progression Framework for Fertility Nursing Consensus Statement*, available at: rcn.org.uk/Professional-Development/publications/education-and-career-progression-fertility-nursing-uk-pub-010-729

Advanced nurse practice standards

Ultrasound scanning is an advanced skill and the “RCN is clear that advanced practice is a level of practice, rather than a type of practice and is across all 4 pillars of nursing. This level is underpinned by a comprehensive range of knowledge, skills and capabilities within each of the 4 pillars of nursing: clinical practice, education, research and leadership. These will have been developed through studying a master’s degree in a relevant subject area with experiential learning or by demonstrating equivalence. Integration of the capabilities across the 4 pillars, together with critical reflection, enables a nurse working at the advanced level to function to their full potential and feel empowered to make decisions in the workplace” (RCN, 2023a).

Registered nurses working at this advanced level must:

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Routes to extending academic skills

Advanced level nursing focuses on professional development and is underpinned by nursing education and critical thinking. Education for advanced practice in ultrasound scanning and critical thinking should be at master's level, and investment in nurses to enhance their practice is critically important for both patients/women and professional development to deliver better health care provision.

Demonstrating learning at master's level/advanced practice is important for career development and there are processes available for those who may not have had the opportunity to complete a full programme at this academic level. This includes being able to demonstrate and recognise former learning from experience such as recognition of prior learning (RPL) and recognition such as credentialing.

- Many students enter higher education with valuable knowledge and skills developed through a range of professional contexts. Both formal study (certificated) and informal learning (via work experience) may be accredited for either entry to a programme of study or, where the learning is at the right level, to gain exemption from parts of the programme.

It is important to stress that credit is not given for experience alone but from the learning gained through that experience. To receive RPL, evidence must be provided of prior achievements which are formally mapped and assessed against course learning outcomes. This process enables an academic judgment to be made of the amount of credit that can be granted, or for course enrolment without the formal entry requirements. In making this assessment, universities are assured that all students receiving an award have achieved the course requirements through studying the course in full or using some of their previous experience or qualifications. Learners wishing to claim RPL should contact their local university admissions office, and further information is available at: qaa.ac.uk/docs/qaa/quality-code/making-use-of-credit.pdf
- is an RCN process for assessing the background and legitimacy of nurses to practice at an advanced level through assessing their qualifications, experience and competence. It allows nurses and midwives to gain formal recognition of their level of expertise and skill in their clinical practice, their leadership, their education, and their research in a way that is recognisable to colleagues, employers, patients and the public. RCN Credentialing is open to nurses and midwives who can demonstrate that they are working at an advanced level, practise in the NHS or

Health care support workers, junior/new to fertility nurses and ultrasound scanning

There are various roles within fertility care which may involve assisting with ultrasound scanning. These include (but are not limited to) health care support workers, newly qualified and new to fertility care nurses, more experienced fertility nurses, operating theatre practitioners and theatre nurses. Assisting with ultrasound procedures is defined as providing support to a competent practitioner who is carrying out the ultrasound procedure and can include:

- assisting with ultrasound procedures by holding an ultrasound probe after placement by the operator
- adjusting settings on the ultrasound machine upon instruction from the operator
- acting as a chaperone for any ultrasound procedure.

It is important to understand that these role aspects, although an important part of fertility care, are not covered by this document and should only be carried out by those trained to carry out the procedures and under complete supervision of a competent practitioner.

Further information on competency and fertility nursing roles can be found at: rcn.org.uk/Professional-Development/publications/rcn-education-and-career-progression-framework-for-fertility-nursing-009-926-uk-pub

These guidelines are designed for nurses using ultrasound scanning as part of their comprehensive role in fertility care, rather than sonographers, whose career focus is ultrasound scanning. The RCN recognises that nursing is a safety critical profession founded on 4 pillars: clinical practice, education, research and leadership (RCN, 2024), more information is available at: [m e-12.6 \(n132.1 \(t-\)22.1 /0\)-6.4 Dten16 \(i\)947 \(t\)1014 ibon r05.8 \(i-05.8 n\)-75.4 \(c\)2 \(i-05.8 ps-64.6 \(l\)\(4.9 \(e\)-4.9 s\)-7591 -\)-201.3 \(o61.8 \(f3\)5.1 -\)-82.6 \(n-65 \(u-21.1 \(r\)-328 \(s\)-4 u u](#)

Ultrasound is a complex skill and is used in many areas of clinical practice. Nurses who are engaged in ultrasound scanning in fertility care may be involved in a range of different types of ultrasound scanning activities, as outlined below in Table 1.

Table 1 Matrix of the different types of fertility nursing scanning and the relevant skill required for each

Type of ultrasound scan	Definition	Competency/skill/knowledge required	Using Benners (see page 17) stages of clinical competence
	<p>A transvaginal scan to assess the pelvic anatomy and to assess fertility. While assessing the pelvis the uterus and ovaries should be assessed in depth and a full antral follicle count and ovarian volume should be taken to gain a clearer understanding of current fertility.</p>	<ul style="list-style-type: none"> • Proficiency in operating the ultrasound equipment, using the transvaginal probe, and obtaining clear images of the pelvic structures. • An indepth understanding of the pelvic anatomy, including the uterus, ovaries, and antral follicles, as well as the ability to differentiate between normal and abnormal findings. • Be able to recognise uterine, endometrial and ovarian pathologies such as fibroids, polyps, ovarian cysts and adnexal masses, hydrosalpinx. • The skill to interpret the images, assess the uterine lining, detect any abnormalities, count antral follicles accurately, and measure ovarian volume. • Ability to make clinical decisions based on the findings and communicate them effectively to other health care professionals and to the patient. 	
	<p>A transvaginal scan to assess follicle growth and endometrial measurement during an individual's natural cycle. It is used as an aid to assist in predicting ovulation.</p>		

	<p>A transvaginal scan to assess follicle growth and endometrial measurement during an individual's medicated tracking cycle. This scan will aid in predicting ovulation. It may be used as a guide to trigger ovulation. This scan may also be used to ensure an individual is not overstimulating (producing too many follicles) as a result of medication.</p>	<ul style="list-style-type: none"> • Proficiency in operating the ultrasoesn (o)-12. (a)-8.8 (n)wvanr esna gaking ltnq 	

	<p>This is a transvaginal scan used to assess that an individual is ready to begin an IVF/ ICSI treatment protocol - often referred to as a long down regulated cycle. The aim of the scan is to ensure a thin womb lining and ovaries are quiet with no cysts in preparation to begin gonadotropin injections.</p>	<ul style="list-style-type: none"> • Proficiency in operating the ultrasound equipment, using the transvaginal probe, and obtaining clear images of the pelvic structures. • An indepth understanding of pelvic anatomy, including the uterus, ovaries, and antral follicles, as well as the ability to differentiate between normal and abnormal findings. • Skill in analy.4 (.)2.8 (s)-se (t)3eS426 (n).2 (l a)-7.7 (s t)1.2 (h)-9.7 (e a)-9.3 (b)-8. 	

	<p>This is a transvaginal scan to assess the progress of an IVF/ ICSI cycle. The purpose of this scan is to measure the growth of the follicles growing within the ovaries following gonadotropin injections, and</p>		

	<p>This is an trans abdominal scan carried out during embryo transfer to guide the clinician during the procedure to ensure the embryo is replaced in the correct location.</p>	<ul style="list-style-type: none"> • Proficiency in operating the ultrasound equipment, using the trans abdominal probe, and obtaining clear images of the pelvic structures. • An indepth understanding of the pelvic anatomy, including the uterus and ovaries and bladder, as well as the ability to differentiate between normal and abnormal findings. • Skill in analysing images, locating and assessing the uterine lining, and detecting any abnormalities. • Full understanding of the embryo transfer procedure • Ability to make clinical decisions based on the findings and communicate them effectively to the practitioner performing the embryo transfer and to the patient. 	
	<p>This is a transvaginal scan carried out during egg collection to guide the clinician during the procedure.</p>	<ul style="list-style-type: none"> • Proficiency in operating ultrasound equipment, using the transvaginal probe, and obtaining clear images of ovarian follicles. • Comprehensive understanding of pelvic anatomy, including the ovaries, follicles, and surrounding structures, as well as recognising normal and abnormal findings. • Expertise in analysing images, identifying mature follicles, guiding needle placement for follicle aspiration, and monitoring the aspiration process. • Skill in performing ultrasound-guided follicle aspiration, including needle handling, co-ordination with embryologists, and ensuring minimal discomfort for the patient. • Full understanding of the risks involved in an egg collection procedure and skill to manage any adverse risks. • Ability to make clinical decisions based on the findings and communicate them effectively to other health care professionals and to the patient. 	

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Benner's stages of clinical competence

All registered nurses and midwives are committed to work within their scope of practice and recognise the boundaries around that practice, guided by their NMC Code (2018).

[Section 6](#) considers the needs of those nurses and midwives currently practicing and how they can be confident of their current level of competency.

The landscape for nurses advancing their education in ultrasound is complex. There is no one route, and no national guidance, until now, to support best practice. USS is

A small number of universities have a named module for fertility ultrasound scanning and there are several that offer this under a negotiated specialist module. There are other modules which are suitable for fertility nurses, for example the early pregnancy assessment module and the gynaecology module. These modules can be taken as a standalone module along with an ultrasound physics/technology module or as part of a 60 credit Postgraduate Certificate (Table 2 below).

European Society of Human Reproduction and Embryology (ESHRE)

The main aim of the ESHRE is to promote interest in infertility care and to aim for a

University of Cumbria	Only as part of PG Cert	negotiated Practice module	7/20	Gareth Bolton gareth.bolton@cumbria.ac.uk	Can be accessed as part of a PgCert, with the clinical module being via the negotiated practice route
Sheffield Hallam University	Only as part of a 2-module course	First Trimester Ultrasound focused course	7/30	Elizabeth Bullivant e.bullivant@shu.ac.uk	Only as part of Applied Ultrasound Physics course – can choose a negotiated module – Gynaecology, 1st trimester
		Negotiated learning ultrasound practice	7/15		
Birmingham University	Focused module	Ultrasound for Fertility	7/40	Zoe Hunt zoe.hunt@bcu.ac.uk	
	Focused module	Ultrasound for Early Pregnancy	7/40		
AECC University College	Only if already completed CASE accredited Pg Cert	Basic Gynaecology & Early Pregnancy Ultrasound	7/20	Farrah Elsaghir FElsaghir@aecc.ac.uk	2-day introductory course plus 1x workplace assessment
University of Derby	University Certificate in Negotiated Specialist Ultrasound	Gynaecology Ultrasound Ultrasound in Early Pregnancy Assessment	7/20	Rebecca White Admissions_US@derby.ac.uk	
Leeds University	None at present but plans in place for 2024	unknown		Ruth Brooke R.E.Brooke@leeds.ac.uk	Presently redesigning their ultrasound training provision and plan to commence CASE accredited undergraduate course in 2024
University College Dublin	Graduate Certificate in Fertility Ultrasound	Graduate Certificate in Fertility Ultrasound		Ms Ann Fleming ann.fleming@ucd.ie	
Birmingham City University	Ultrasound for Assisted Reproduction		7/20	www.bcu.ac.uk	Accepting students from September 2024

Many nurses will choose to develop their USS skills to an advanced level, however, there will be nurses who are currently competently and confidently practicing USS who choose not to advance to level 7. It is vital that all nurses uphold clear principles of good practice and peer review to ensure skills are maintained and reviewed.

Principles of good practice

- Peer review and auditing own practice.
- Time and support for continuing skills and knowledge development.
- Preceptorship.
- Mentors, assessors, and supervision.
- Clinical governance and professional responsibilities of ultrasound practice.

BMUS (2021) provides an overview of good practice principles in ultrasound care, which can be incorporated/expanded on when performing gynaecological and fertility ultrasound care.

- thorough history taking to maximise diagnostic accuracy
- the offer of a chaperone always
- maintain privacy and dignity and perform the ultrasound in a quiet private area
- adhere to infection control policies and procedures.
- ensuring accountability and taking responsibility for care provided
- manage risk and ensure patient and practitioner safety
- promote person-centred care and involve the patient in all aspects of the ultrasound procedure
- only work within own professional scope of practice and competence within fertility ultrasound care
- continuing their professional development, by ensuring they remain competent and confident in practice (for example attending relevant courses, such as the BFS Ultrasound in Fertility Care).

To achieve these principles, the RCN recommends peer review and auditing own practice as essential skills required to demonstrate ongoing competence and confidence.

Peer review and auditing own practice

All registered nurses and midwives are required, as part of continuing registration with the NMC, to demonstrate competence through the process of revalidation, which should include evidence of their ability to continue to practice ultrasound scanning safely and competently. Details of requirements for this, can be found at: nmc.org.uk/revalidation. Part of the process of ensuring competence is reflection on own practice and validation of that practice by peers and other experienced health care professions.

Actively and honestly engaging with a peer review process supports best practice and enhances standards of care, by ensuring personal practice remains contemporary and evidence based, whilst promoting professional development.

Nurses who perform ultrasound within the fertility setting should have a planned approach to peer review, which includes evaluation by qualified peers, typically fellow

Table 3 Example of peer review audit tool

Reviewee name and position:		
Reviewer name and position:		
Date of review:		
Types of scan being reviewed:		
	Score:	Comments:
Keeping to time of appointment, awareness of the aim of the scan and/or stage of treatment. Confirming patient details.		
Awareness of equipment safety, MI + TI, knobology, process and procedure with equipment malfunctions and or dysfunction. Knowledge and application of pre-sets.		
Correlation of findings to expectations, knowledge of procedure/local policy and protocol when abnormalities are found. Identification of OHSS and awareness of management according to local policy (if applicable). Awareness of pelvic and uterine pathology.		
Understanding of required images. Identification and labelling of pelvic organs on images taken.		
Documentation of findings, plan for treatment/ next steps. May provide recommendations.		
Reflective discussion with reviewer. Discussion of findings and self-reflection on reviewees ability, strengths and weaknesses.		

Adapted from: BMUS, 2014. Peer review audit tool: bmus.org

Has a basic understanding of the competency. Room for improvement. Technique and/or knowledge require review. Requires regular prompting and assistance throughout. Practitioner may aim to 'target scan'.

Satisfactory knowledge and technique. Is able to carry out competency with minimal assistance or prompting. Is able to explain rationale for actions. Technique is satisfactory. Good knowledge of machine safety and knobology.

Excellent communication and explanation of actions. Excellent technique. Excellent knowledge of machine safety and knobology.

recommendation to attend refresher course for ultrasound.

For those that score below the recommended level, a discussion should take place with the individual and a plan of action should be outlined to ensure appropriate training is provided as soon as possible.

Time and support for skills and knowledge development

Investing in skills and knowledge development is critical for safe ultrasound care.

Coaching and Mentoring (NHS Leadership Academy, 2022) leadershipacademy.nhs.uk/programmes/coaching-and-mentoring

CASE Validation and Accreditation Handbook case-uk.org/handbook

Clinical governance and professional responsibilities for ultrasound practice

Clinical governance responsibilities in ultrasound care can be varied and are typically guided by legal and ethical standards, institutional policies, and professional guidelines. At all times, health care professionals should demonstrate clinical effectiveness and ensure that ultrasound procedures reflect contemporary evidence-based practice. Some of the main responsibilities of clinical governance can include:

- nurse sonographers should maintain their knowledge, skills, and proficiency in ultrasound through continuous education and training.
- they should ensure that patients have provided informed consent before any sonographic procedure. This includes explaining the procedure, risks, benefits, and alternatives to the patient in a way they can understand.
- they must respect and protect the privacy and confidentiality of patient information. This includes adhering to the NMC code and General data protection regulations (GDPR).
- accurate and thorough documentation of the ultrasound examination is crucial. This includes documenting findings, any communication with the patient or healthcare team, and any deviations from normal protocols.
- engaging in quality assurance and improvement activities to ensure the accuracy and reliability of ultrasound results. Performing audit, reflective practice and incident reporting where required.
- communicating effectively with patients, partners if applicable, and the wider multidisciplinary team, including reporting sonographic findings and any concerns to the person managing the patients care or a senior colleague.
- ensuring a safe environment for the patient, oneself, and others. This includes following infection control practices and ensuring that the practitioner is competent to use the sonography equipment. Ensure that there are effective policies and processes in place and an accountability structure.
- acting in the best interests of patients and maintaining professional boundaries which includes working within the scope of competence.
- complying with relevant legal requirements and responsibilities, including the NMC Code and within the scope of the certification or qualification obtained within ultrasound scanning. NMC registrants have a legal and professional obligation to 'do no harm' and this should be displayed at all times.

To demonstrate safety, ongoing competence and to promote best practice, it is essential for nurses to remain up to date on the relevant legal and professional standards in fertility care. Nurses performing ultrasound should be aware that they are legally accountable for ultrasound procedures that they perform including the clinical reporting of these procedures.

All nurses and midwives are duty bound to maintain and improve their skills set, as they continue to practice. The development of ultrasound scanning has enhanced clinical practice, and nurses have engaged with professional development to enable them to carry out this advanced skill, in line with their NMC Code (2018).

The standard being set now is more comprehensive than previously used, and the project team recognise that many nurses and midwives are already practicing with competence and confidence to support best practice. Nurses who choose not to pursue independent practice in USS, need to have transparent protocols in place to ensure they are well supported and supervised in the practice environment.

Recognising that nurses currently in practice may be anxious about demonstrating their expertise at this national standard, the project team have some suggestions below on how to do this. Many nurses will also be interested in expanding their skills to meet the standards now set for advanced practice.

Evidence suggest that some nurses will have gained their qualifications at the equivalent of level 5 or 6 in academic study terms and may wish to progress to level 7 or be able to demonstrate their current competence to practice at this advanced level of practice.

can include evidence of prior learning, additional study, experience in practice and of continued professional development. This can include peer review (see below), evidence of audit of own practice, and feedback from mentors/experts.

(see [introduction](#)), are ways demonstrating advanced practice in ultrasound.

If study has been at level 6, then to progress to Level 7 would require evidence of continued scanning, peer review and evidence of a critique, for example critical reading around ultrasound, research into ultrasound.

Possible options for progression/maintaining competence

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Nurses using ultrasound scanning in fertility care should be competent and confident in their practice. This is an advanced skill, which will enhance individual practice and improve continuity of care, patient experience, and safety.

These guidelines have been developed to provide national standards for nurses working in fertility care settings to develop this highly skilled advance practice.

Nurses wishing to expand their skills to include ultrasound scanning

Nurses wishing to develop ultrasound scanning skills will need to be educated at academic level 7 (or equivalent), have access to appropriate practice placements, and be well supported by their managers. This should include protected time to study, access to mentors and assessors, as well as being encouraged to peer review and audit their own practice. Continuing professional development is also key to ensuring they can revalidate to maintain and enhance those skills, once established.

Nurses currently practicing ultrasound scanning

Some nurses will be competently and confidently practicing ultrasound skills already and will have completed an initial education different to the recommendations in this publication.

As with any developing skill, it is the responsibility of the individual registrant to ensure they are competent and confident to practice at a contemporary level to meet current and future service requirements,

Managers and employers supporting best practice

Employers and managers have a responsibility to provide opportunities for employees to assess and review their skill set to ensure they meet current requirements; this applies to registrants already practising ultrasound, as well as those wishing to advance their level of practice. This should include:

- support for nurses wishing to expand their skills in ultrasound screening needs to include access to level 7 courses, which will provide the right level of education
- support for nurses currently practicing, who may wish to expand their skills to ensure they remain competent and confident to practice safely
- skills analysis of the unit requirements and opportunities for nurses to advance their skills. This should include consideration of appropriate funding and protected time for learning
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Royal College of Nursing (2022) *Nursing Workforce Standards*, London: RCN. Available at: rcn.org.uk/Professional-Development/Nursing-Workforce-Standards and rcn.org.uk/professional-development/publications/rcn-workforce-standards-uk-pub-009681 (accessed 9 July 2024)

Royal College of Nursing (2022) *Advanced Practice Standards*, London: RCN. Available at: rcn.org.uk/Professional-Development/Advanced-Practice-Standards (accessed 9 July 2024)

Royal College of Nursing (2023a) *Four Pillars of Nursing* (web) Available at: rcn.org.uk/Professional-Development/Levels-of-nursing/Four-pillars-of-nursing (accessed 2 August 2024)

Royal College of Nursing (2023) *Education and Career Progression Framework for Fertility Nursing Consensus Statement*, London: RCN. Available at: rcn.org.uk/Professional-Development/publications/education-and-career-progression-fertility-nursing-uk-pub-010-729 (accessed 9 July 2024)

Royal College of Nursing (2024a) *Levels of Nursing*, London: RCN. Available at: rcn.org.uk/Professional-Development/Levels-of-nursing (accessed 9 July 2024)

Royal College of Nursing (2024) *Advanced Nursing Practice for Gynaecology and Women's Health*, London: RCN. Available at: rcn.org.uk/Professional-Development/publications/rcn-anp-gynaecology-womens-health-uk-pub-011-260 (accessed 9 July 2024)

Society of Radiographers and British Medical Ultrasound Society (2023) *SoR and BMUS Guidelines for Professional Ultrasound Practice*. Available at: sor.org/learning-advice/professional-body-guidance-and-publications/documents-and-publications/policy-guidance-document-library/sor-and-bmus-guidelines-for-ultrasound-8th (accessed 9 July 2024)

RCN quality assurance

Publication

This is an RCN practice guidance. Practice guidance are evidence-based consensus documents, used to guide decisions about appropriate care of an individual, family or population in a specific context.

Description

This guidance has been developed to support best practice for nurses working at advanced level practice in performing and reporting on ultrasound scanning, specifically in fertility care. Nurses are well placed to develop competency in ultrasound scanning, which can improve continuity of care, patient experience, and safety.

Publication date: September 2024 Review date: October 2027

The Nine Quality Standards

This publication has met the nine quality standards of the quality framework for RCN professional publications. For more information, or to request further details on how the nine quality standards have been met in relation to this particular professional publication, please contact publications.feedback@rcn.org.uk

Evaluation

The authors would value any feedback you have about this publication. Please contact publications.feedback@rcn.org.uk

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