

Guidance and recommendations for running an effective, high-quality obstetric ultrasound service and supporting obstetric sonographer career development

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Endorsed by



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Foreword

Obstetric ultrasound is an essential service which contributes to safe antenatal care and the screening for and detection of unexpected conditions, allowing expectant parents to make informed decisions about their pregnancy. Additionally, it enables risk assessment of the pregnancy, highlighting differences in fetal growth, amniotic fluid levels, and fetal and placental blood flow, and contributes to the reduction of preterm birth, neonatal mortality and morbidity. Ultrasound is a fundamental part of antenatal screening programmes¹⁻³ and contributes to maternity strategies to improve health outcomes in pregnancy.⁴⁻⁶

Sonographers in the UK have a high level of autonomy and provide excellent standards of obstetric ultrasound provision, due to the quality of education and training, and their commitment and dedication. Sonographers aim to provide safe and timely care to expectant parents by assessing, interpreting and reporting on complex fetal anatomy during the examination. There are many examples of excellent practice among the sonographer workforce and the services they provide. Sonographers across the UK have extended their role to advanced and consultant-level practice, offering additional clinical care within their scope of practice, expanding and improving service delivery and engaging with education and research to impact on care and pregnancy outcomes. In order to retain obstetric sonographers' expertise and experience and encourage others to join the sonographer workforce, it is essential to provide a supportive and healthy working environment, with opportunities to flourish, to engage in continuous learning and to facilitate interprofessional working, collaboration with service users and development of the obstetric ultrasound provision.

This document is for policy makers, antenatal leads, sonography managers, obstetric sonographers and the wider antenatal care team. A fundamental ambition of the document is to support improvements in antenatal ultrasound services, with a focus on different aspects of service provision and staff wellbeing. The ultimate aim is to support sonographers to make changes that impact on multiprofessional teams, communication, job satisfaction, and ultimately service delivery and the care provided for expectant parents. Following reviews of perinatal and neonatal services in the UK, a number of key issues have been raised that impact on pregnancy outcomes. These will be used as a focus to explore potential improvements that can be made to antenatal ultrasound services, based on research, evidence-based practice guidance and anecdotal evidence from sonographers about the challenges and opportunities for improvement within the service. The document reinforces recommendations published in a range of documents, such as the Kirkup reports and the Ockenden report and other national guidance aimed at improving antenatal care and outcomes,^{4,6-11} with a focus on antenatal ultrasound services and supporting the sonographer workforce. This document should be read in association with the 2023 publication 'Three year delivery plan for maternity and neonatal services'.¹²

In relation to national reports into care within specific National Health Service (NHS) Trusts and Health Boards^{7–10,13,14} and reports by health regulators such as the Care Quality Commission (CQC) and Health Inspectorate Wales,^{15–17} elements within this document include:

- Clinical governance and leadership
- Workforce planning, recruitment and retention of staff
- Safe staffing levels and skill mix across services
- Learning from incidents and complaints monitoring
- Culture
- Multidisciplinary team working and communication
- Interprofessional education and support
- Managing care in complex antenatal cases
- Compassionate, inclusive and personalised care, ensuring that women and pregnant people are listened to

How to use the document

The resources within the document aim to provide guidance and recommendations for departments to consider where improvements can be made to the obstetric ultrasound provision for service users, sonographers and the wider antenatal team. Departmental/Trust/Health Board needs will vary, depending on multiple factors and current working practices. Some departments will have many of these aspects already in place, whereas other departments may need to review some of the fundamentals before progressing to other elements of service improvement.

Due to the differing local, regional and national requirements, challenges and priorities, suggestions have been made for potential short-, medium- and long-term actions to support improvements to local services. These are recommendations that individual departments may want to tailor/adjust to local needs, working together with other stakeholders and antenatal staff to implement change and make improvements to positively impact on sonographer career progression, role satisfaction, service delivery, and ultimately pregnancy care and outcomes. No specific time scales for the different priorities are given, as these can be determined by local services based on particular needs and capacity. The short-, medium- and long-term actions are suggested as a guide to how long they may take to implement. Possible actions are included within relevant sections of the document. These are not prescriptive, but are simply ideas that can be considered within the local service provision to address challenges or make additional improvements.

Good practice examples and case studies are presented within the document to provide inspiration and stimulate ideas and discussion at a local or regional level. It is important to consider co-production of changes to the service with the wider antenatal team and service users, while ensuring that risk assessment underpins any changes and the outcomes are reviewed and monitored.

While these guidelines have been written with a view to improving obstetric ultrasound career pathways, working practice and service provision, many elements will also be beneficial to ultrasound departments providing non-obstetric ultrasound services.

Abbreviations

AHPs	Allied Health Professions
ANNB	Antenatal and newborn
ARC	Antenatal Results and Choices
ASW	Antenatal Screening Wales
BMI	Body mass index
BMUS	British Medical Ultrasound Society
CARDRISS	Congenital Conditions and Rare Diseases Registration & Information Service for Scotland
CARIS	Congenital Anomaly Register and Information Service
CASE	Consortium for the Accreditation of Sonographic Education
CoR	College of Radiographers
CPD	Continuing professional development
CQC	Care Quality Commission
CS	Clinical support
DQASS	Down's syndrome screening quality assurance support service
DR	Detection rate
DSE	Display screen equipment
ECF	Education and career framework
EDI	Equality, diversity and inclusion
EFSUMB	European Federation of Societies for Ultrasound in Medicine and Biology
FMU	Fetal medicine unit
HCPC	Health and Care Professions Council
HEE	Health Education England
HEI	Higher Education Institution
HSE	Health and Safety Executive
HyCoSy	Hysterosalpingo contrast sonography
HSG	Hysterosalpingogram
ICS	Integrated care system

Abbreviations continued:

MBRRACE-UK	Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK
MDT	Multidisciplinary team
MHRA	Medicines and Healthcare Products Regulatory Agency
MVP	Maternity Voices Partnership
NCARDRS	National Congenital Anomaly and Rare Disease Registration Service
NHS	National Health Service
NHS FASP	NHS fetal anomaly screening programme
NICE	National Institute for Health and Care Excellence
NMC	Nursing and Midwifery Council
PDP	Personal development plan
QA	Quality assurance
QSI	Quality Standard for Imaging
RCM	Royal College of Midwives
RCOG	Royal College of Obstetricians and Gynaecologists
RCR	Royal College of Radiologists
RCT	Register of Clinical Technologists
REALM	Radiology events and learning meetings
SCoR	Society and College of Radiographers
SLA	Service level agreement
SoR	Society of Radiographers
SPA	Supporting professional activities
SQAS	Screening quality assurance service
SSS	Screening support sonographer
UKAS	United Kingdom Accreditation Service
UK NSC	United Kingdom National Screening Committee
WRMSD	Work-related musculoskeletal disorders

1. Introduction

The National Health Service (NHS) in the UK provides services for women and pregnant people throughout their antenatal period. Ultrasound examinations are an essential part of the service offered and include:

- Early pregnancy assessment
- Dating scan. Accurately date the pregnancy, identify multiple pregnancies and determine amnionity and chorionicity. To include screening for Down's syndrome, Edwards' syndrome and Patau's syndrome as recommended by the UK National Screening Committee (UK NSC), where the offer of screening is accepted
- 20-week screening scan as part of the NHS fetal anomaly screening programme (NHS FASP), Antenatal Screening Wales (ASW), National Screening Division (Scotland), where the offer of screening is accepted
- Follow-up scans after the detection of pregnancy-related complications
- Monitoring fetal growth, placental position, amniotic fluid, cervical length and blood flow to the uterus and within the fetus

Highly skilled ultrasound practitioners, known as sonographers, commonly perform ultrasound examinations. The title of 'sonographer' is not a protected title and, as such, there is no statutory registration for sonographers. Obstetric sonographers come from a variety of professional backgrounds, including radiography, midwifery and nursing. There are also some sonographers who have come through a 'direct entry' route (for non-healthcare professionals) in the UK or overseas. All sonographers should have undergone suitable educational training via accredited programmes, for example Consortium for the Accreditation of Sonographic Education (CASE) in the UK, or be able to demonstrate equivalence mapped to CASE Standards for Sonographic Education.¹⁸

There is a recognised national shortage of sonographers.^{19–24} Added to this, a survey carried out by the Society of Radiographers (SoR) in 2021²⁵ highlighted concern among members about morale and working conditions within obstetric ultrasound, which was exacerbated by unforeseen events such as the COVID-19 pandemic. Self-reported role satisfaction among obstetric sonographers showed a significant reduction during the pandemic compared with pre-pandemic levels.²⁶ Of particular concern was that 73.9% of participants in this survey²⁶ were considering leaving or changing their role or working hours, which reflected comments in the qualitative feedback within the SoR (2021) survey. This comes at a time when Health Education England (HEE) had forecast the need for an additional 400 to 700 sonographers in 2021 to meet the demands for obstetric ultrasound provision.²¹

Sonographers may work solely in the antenatal department; however, many also perform a range of non-obstetric examinations, including gynaecology, general medical, paediatrics, and musculoskeletal and vascular studies. Obstetric ultrasound is unique as it requires complex interaction and communication, particularly as detection and subsequent delivery of unexpected news occurs without time for the sonographer to prepare for delivery of this information. Career progression opportunities towards consultant-level working are more limited for obstetric sonographers. The British Medical Ultrasound Society (BMUS) reported that most sonographers were working at an advanced level of practice in obstetrics.²⁷ Very few (<3%) were working at consultant-level practice in fields such as early pregnancy or obstetric ultrasound, compared with 19% in head and neck or musculoskeletal, and none of those obstetric consultant-level roles were held by radiographers.²⁷ Anecdotal evidence, in discussions with sonographers, suggests that career progression in obstetric ultrasound is an area of concern, and this is supported by comments in an SoR survey of 401 sonographers, such as the view that obstetric ultrasound is “not being recognised as a valued career” (2021).²⁵ Research has suggested a link between staff job satisfaction, empowerment and effective leadership on patient outcomes.^{28,29} The 2022 Allied Health Professions (AHPs) strategy recognises the need to support career development “through advancing practice and new roles” to improve retention of existing allied health professionals.³⁰

The National Maternity Review document ‘Better Births: Improving outcomes of maternity services in England – A Five Year Forward View for maternity care’¹¹ outlined a vision for obstetric care:

Our vision for maternity services across England is for them to become safer, more personalised, kinder, professional and more family friendly; where every woman has access to information to enable her to make decisions about her care; and where she and her baby can access support that is centred around their individual needs and circumstances. And for all staff to be supported to deliver care which is women centred, working in high performing teams, in organisations which are well led and in cultures which promote innovation, continuous learning, and break down organisational and professional boundaries.

Similarly, in Wales the vision for obstetric care⁶ is as follows:

Our vision for maternity services in Wales is to ensure that: ‘Pregnancy and childbirth are a safe and positive experience, and parents are supported to give their child the best start in life.’ High performing multi professional teams will deliver family-centred care within Health Boards which display strong leadership within a culture of research and development, continuous learning, best practice and innovation.

Comparable recommendations were made in the Ockenden report⁹ and Cwm Taf reports.^{10,31–33} This obstetric ultrasound toolkit aims to support the vision of ‘Better Births’ (England),¹¹ ‘The best start: five-year plan for maternity and neonatal care’(Scotland),⁴ ‘A strategy for maternity care in Northern Ireland 2012 – 2018’³⁴ and ‘Maternity Care in Wales’.³⁵ It also aims to build on the actions required in response to the Ockenden,⁹ Cwm Taf^{10,31–33} and Kirkup reports^{7,8} by providing guidance for antenatal services, ultrasound managers and sonographers to promote improvements to obstetric ultrasound services and sonographer career development in this modality. It provides good practice suggestions and ideas for teams to consider implementing to improve recruitment, retention, career progression and role satisfaction among sonographers, to enhance team working within antenatal services and to provide high-quality parent-centred care. Care of pregnant women, pregnant people and their chosen birth companions is at the heart of what sonographers do, and the only way to achieve good parent care is to work as an integral part of the antenatal team.

The document has been co-created and developed with input from a range of stakeholders, including parent voice, to ensure that parental needs were considered.

1.1 Terminology

A number of different terms are used within this document to represent the service users involved with obstetric ultrasound. These are:

Term	Meaning
Expectant parents	Where applicable, this relates to both parents
Service user	A person who is using or engaging with the service, which might include expectant parent(s), birth companion and/or other support person
Woman and pregnant person	The person carrying the baby

In some instances within the documentation, direct quotes that are used include the terms ‘women’ or ‘woman’ and we are unable to change this. However, where possible we use additive language to ensure that all women and pregnant people who use our services are addressed and supported.

2. Strategic oversight, governance and local policy development

This section aims to provide an overview of relevant governance arrangements that can facilitate the safe delivery of ultrasound care, while also ensuring that sonographers are supported and protected within the role.

A number of reports – such as the Ockenden report, the Kirkup report, ‘Review of maternity services at Cwm Taf Health Board’ and ‘Independent review of Moray maternity services’ – have highlighted several shortcomings in maternity services.^{7–10,14} Some of these relate specifically to the strategic leadership and oversight of services, including failures in governance and leadership, poor culture and fear around escalating concerns, poor working relationships with and between professional groups and poor clinical governance processes.

A successful obstetric ultrasound department will have the following in place, as a minimum:

- A well-led service following best practice guidance³⁶
- Safe staffing levels
- Clear, evidence-based, current local protocols
- Service level agreements (SLAs) if antenatal ultrasound services are provided by a different directorate
- A clear recruitment and induction policy and process for new staff, including bank and agency staff
- Job plans for all sonographers that include non-patient-facing or non-parent-facing activities to support the service and develop the skills needed for enhanced, advanced or consultant practice
- Sonographer involvement in risk management strategies
- Conflict resolution training for all staff
- Chaperone policy with the availability of appropriately trained chaperones for every ultrasound list

2.1 Safe staffing

Safe staffing levels need to be determined within each unit or across a region, Health Board or integrated care system (ICS). The SoR document [‘Principles of safe staffing for radiography leaders’](#)

should be considered when reviewing staffing levels and safe practice.³⁷ This should include the number of sonographers, support workers and other staff required to provide a safe and effective ultrasound service for the current workload. If staffing levels impact on the ability to deliver the service safely or the care provided to women and pregnant people, this should be reported. Without a Datix report there is no evidence at a regional or national level to support workforce discussions.³⁸

Any changes to the working practice, such as implementation of new techniques, additional requirements added to an existing scan or offering additional scans, should be fully costed and staffing levels agreed as part of a business case or proposal. Adequate time should be allocated for each examination. This allocation may need to be extended in some circumstances, for example multiple pregnancies, complex clinical history, people with additional needs such as disability or learning difficulties, and for student training.

It is good practice to assess the capacity and demand of the obstetric ultrasound service using relevant tools such as that published by NHS England.³⁹ Vetting procedures, with clear vetting guidelines agreed across the wider antenatal team, can help to manage duplicate or inappropriate requests for scans performed outside of the national screening programmes. Collaborative working and clear communication strategies are important to ensure the safety of women and pregnant people and their babies.

This could be linked to the following pillars of the career framework:

- Leadership and management

Appropriate skill mix is important within antenatal ultrasound units. To maintain a safe service, support workforce development and quality of education, enhance service delivery and outcomes, improve quality standards and innovate, sonographers need to be equipped with the appropriate levels of knowledge, skills and competence. Ultrasound departments should look to support the development of all four pillars of practice, in line with the CoR [Education and Career Framework](#)⁴⁰ and HEE advanced and consultant practice guidance.^{41,42} Career progression opportunities should be available to encourage sonographers to progress from practitioner to consultant practitioner, should they chose to do so ([see section 7](#)).

The four pillars of practice

Clinical expertise

Education

Leadership and
management

Research

Area	Short-term actions	Medium-term actions	Long-term actions
Safe staffing	National NHS leads begin to determine how the obstetric sonography workforce figures can be collated	National NHS implementation of sonography workforce planning specific to obstetric ultrasound	National or regional sonography workforce planning and recruitment and retention strategies implementation
	NHS organisations responsible for antenatal care in England and the devolved countries to include the professional bodies and regional/local AHP leads in communication relating to anything that impacts on sonographers	National, local and regional leads in antenatal care open channels of communication and explore ways to help sonographers feel integral to the antenatal teams	Evaluate the effectiveness of sonographer integration within antenatal teams on sonographer satisfaction, team working and pregnancy outcomes Further explore how best to increase integration of teams
	Prior to any changes to national policy that affect the ultrasound workforce, discuss with national and regional sonographer and AHP leads	Fully cost and fund any new initiatives that impact on the sonographer workforce Provide support and training to ensure appropriately skilled staff are in place prior to implementation	
	Review current local staffing levels	Undertake capacity and demand work to determine staffing needs to provide the service	Invest in staffing and succession planning to provide safe staffing levels to meet service requirements
	Report incidents where staffing levels have impacted on the service or care provided to women and pregnant people	Monitor staffing levels and escalate concerns at a local and regional level	Consider regular training of sonographers to increase the sonographer workforce

2.2 Service level agreements (SLAs)

SLAs are useful when cross-directorate working is in place. Antenatal services should have adequate arrangements for the level of work that sonographers will be required to perform. SLAs should be renegotiated so that appropriate staffing, equipment, support and estate are available and costed when new procedures, policies or practices are to be implemented.

In departments where there are limited resources, staffing or equipment, or where capacity outstrips demand, SLAs need to include information about what can be provided with the available resources, with sign-off at Trust board level. This might include, but is not limited to:

- How many available appointments can be provided per day/week
- If X number of staff are available, Y number of examinations can be performed. This will support safe practice if staffing levels change
- Which pathways can be offered – particularly relevant if new pathways are proposed

In situations like this, there should also be a risk assessment that includes the impact on pregnancy care, and the issues should be reported on the Trust or Health Board’s risk register.

Area	Short-term actions	Medium-term actions	Long-term actions
Service level agreements	Determine whether SLAs are needed or review existing SLAs when obstetric ultrasound services are provided by another directorate	Review and update existing SLAs that do not meet current requirements Ensure any limitations to current SLAs are reported on the provider’s risk register	Ongoing review and amendment of SLAs if required
	Review current staffing and appointment availability	Plan services according to capacity and demand outcomes	
	Undertake risk assessment and report on the risk register if staffing levels fall to a level that impacts on service delivery, safe care and/or sonographer safety	Prepare local policy in the event of changes to safe staffing levels, in consultation with the wider antenatal team	

2.3 Risk management

Risk management is an essential part of operating a safe service. Sonographers should be involved in all levels of risk management relevant to the ultrasound service provision within the antenatal unit. Their input is essential when learning from clinical incidents. All sonographers should feel able to speak up about concerns within the service without prejudice and should have access to a [freedom to speak up guardian](#)⁴³ within the Trust (England), have an awareness of the [Independent National Whistleblowing Officer](#) (Scotland),⁴⁴ or local alternatives (Wales and Northern Ireland).

During the COVID-19 pandemic, surveys suggested that sonographers were not always involved with or consulted during risk assessments.^{25,45} Risk assessments should ensure that ultrasound rooms meet current standards and provide a safe environment for staff and service users. Risk mitigation should be documented, with input from relevant professionals including sonographers, infection prevention and control teams, occupational health specialists, estates colleagues and elected health and safety representatives, if in place.

Training plans and checks should be in place to confirm all staff have undertaken mandatory training and appropriate updates to ensure safe working practices. Health and safety and ergonomic training should be provided for sonographers (section 6.2). All staff should be familiar with current best practice techniques and guidance for decontamination of equipment.⁴⁶⁻⁴⁹

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
Risk management	Undertake regular risk assessments with input from appropriate members of the team, including sonographers	Continue to monitor the impact of mitigations implemented as a result of risk assessments	Implement training for sonographers to undertake risk assessment, if not already in place
	Identify mitigations and act on the risk assessment findings		
	Provide a clear policy for the induction of any new member of staff, including locum and bank staff	Regularly review the induction policy to ensure it is meeting service and sonographer needs	
	Ensure that all sonographers know how to contact the freedom to speak up guardian (England) or similar (devolved countries) to provide support if needed		

2.4 Conflict resolution

Almost 15% of NHS staff reported experiencing “at least one incident of physical violence” in the NHS staff survey (2021), with only 71.4% of those who did experience violence reporting the most recent incident.⁵⁰ Violence, aggression or abuse can affect staff wellbeing and their ability to provide the appropriate level of sensitive care needed to undertake high-quality ultrasound examinations. In a survey of sonographers during the pandemic (n=401), 21 made unsolicited comments relating to abuse, non-compliance with safety guidance and/or violence from obstetric service users. NHS Trusts and Health Boards should have a violence prevention and reduction strategy in place to ensure that staff and service users are safe and to meet relevant health and safety legislation,⁵¹ with a zero-tolerance approach.

Regular risk assessment should be undertaken, with input from appropriate staff within the ultrasound department and wider antenatal unit. Trusts should consider staff training in de-escalation of situations as part of the training for sonographers.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

All incidents of violence, aggression or abuse of staff within the ultrasound department should be reported on Datix, to provide evidence of the extent of local and national issues. Mitigations should be in place to reduce risk to staff in the ultrasound department and antenatal unit.

Staff should be provided with support if they have been subjected to any form of violence, aggression or abuse, including social media abuse. Strong leadership is required to follow through with any actions recommended in the event of abuse by a woman or pregnant person, their partner or support person. If an incident raises concerns about safeguarding, the local safeguarding process should also be followed.

Recording or photographing the sonographer during ultrasound examinations is not a normal expectation during NHS examinations. An SoR document 'Recording images of sonographers performing NHS obstetric ultrasound examinations: Guidance to support local policy development' provides further information.⁵²

Area	Short-term actions	Medium-term actions	Long-term actions
Conflict resolution	Encourage and support all staff to report (Datix) incidents of violence and/or aggression, to ensure accurate data is collected at a regional and national level	Regularly review Datix reports of aggression, abuse or violence towards staff Use these to inform risk assessments and mitigations	Engage with Maternity Voices Partnerships (MVPs) and the wider antenatal care team and/or regional teams to explore ways to reduce conflict within the ultrasound service
	Implement conflict resolution training for all sonographers and members of the ultrasound team		
	Provide resources and signposting for staff to access support should they need it		

2.5 Local protocols

Protocols and guidelines are required to ensure a consistently high standard of care for all examinations undertaken within the antenatal ultrasound department. These should be clear, comprehensive and easily accessible to all the team. They should be evidence-based, linked to relevant country-specific national screening committee policies, guidelines such as those from the National Institute for Health and Care Excellence (NICE) and the Royal College of Obstetricians and Gynaecologists (RCOG), and developed in conjunction with all members of the antenatal team, including sonographers. Where appropriate, local Maternity Voices Partnership (MVP) input should be sought. Clear referral pathways and fail-safe mechanisms should be in place to ensure appropriate follow-up is provided, where necessary. A schedule to ensure that protocols are regularly reviewed and updated is recommended, with archived protocols stored for retrospective review. Sonographers should ensure that local protocols are current, are easily available to all staff and align with recommendations for best practice; where this is not the case, it should be highlighted and recorded.

Where protocols deviate from NHS FASP, ASW or Pregnancy and Newborn Screening Scotland guidance, or other relevant guidance, specific details should be provided in relation to what should be seen, and the requirements if a structure is not seen during the examination, for example whether a rescan is required or simply a report that the structure was not clearly seen. There is increased medico-legal risk if clarity is not provided in the protocols. Evidence-based justification is also required for any deviation from national standards and guidelines. Commissioning guidance should also be considered if a service is commissioned by the NHS.

Equality, diversity and inclusion (EDI) should be a consideration when developing local protocols, to meet the needs of the local population and reduce health inequalities. A report on behalf of MBRRACE-UK⁵³ highlights disparities in maternal mortality between women and pregnant people from Black and Asian ethnic groups compared with White women and pregnant people. A wider range of associated factors also impact on healthcare outcomes for some groups during pregnancy. The focus on individualised care and listening to the concerns of parents is a key factor in improving outcomes. Stillbirth rates are higher in babies of Black and Black British, Asian and Asian British ethnicities than in babies of White ethnicity. Intersectionality can further impact on neonatal and maternal outcomes.

Stillbirth rates are also increased in areas of higher deprivation compared with those in areas of lower deprivation.^{54,55}

The MBRRACE-UK Perinatal Mortality Surveillance Report⁵⁴ highlights that:

Due to considerably higher proportions of babies of Black African, Black Caribbean, Pakistani and Bangladeshi ethnicity being from more deprived areas, they are disproportionately affected by the higher rates of stillbirth and neonatal death associated with deprivation.

The needs of trans and non-binary people should also be considered when developing local protocols, to increase confidence that they will be treated with dignity and respect. A report in 2022 found that 30% of trans and non-binary respondents did not access healthcare support during pregnancy.⁵⁶

Protocol development necessitates sensitivity to the varying population needs and contributing factors that can impact on the quality of care and experience of parents. This includes factors such as charging for images.⁵⁷

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
Local protocols	Audit all protocols to ensure that they are <ul style="list-style-type: none"> • current • evidence-based • dated and that they meet local and national standards	Update any protocols that are outdated, following local and national guidance	Set up a system for regular protocol review and amendment Audit practice against the protocols
	Review local protocols to confirm that they meet the needs of the local population	Where necessary, amend protocols to meet local population needs and help to reduce health inequalities	
	Ensure an archiving system is in place when new protocols are implemented		

2.6 Chaperones

Chaperones should be used for any examination that might be deemed ‘intimate’ by a woman or pregnant person.⁵⁸

Intimate examinations can be embarrassing or distressing for patients and whenever you examine a patient you should be sensitive to what they may think of as intimate. This is likely to include examinations of breasts, genitalia and rectum, but could also include any examination where it is necessary to touch or even be close to the patient.

This definition of what might be considered an ‘intimate examination’ would include all antenatal ultrasound examinations as they involve touch and are undertaken in a darkened scan room. To safeguard both parties:⁵⁹

It is also good practice to be prepared to offer a chaperone when the examination is not considered to be an intimate one. The name and role of the chaperone should be communicated with the patient as part of the consent process.

Patients should be offered the security of having an impartial observer of the same gender as the patient (a chaperone) present during an intimate examination and the patient has a right to request that one is present. For professional integrity and safety, equal consideration should be given to the practitioner’s own need for a chaperone irrespective of the examination being undertaken or the gender of the patient. This applies whether or not the practitioner is or identifies as the same gender as the patient.

Where chaperones are used, their presence, name and title should be documented in the report.

Area	Short-term actions	Medium-term actions	Long-term actions
Chaperones	Review the chaperone policy to ensure that it meets current best practice guidance	Implement an action plan to improve chaperone availability if this has been identified as a concern during review	Monitor chaperone use and service user feedback
		Provide ongoing support and training for chaperones	

3. Interprofessional team working

Obstetric services are provided by a range of different professional groups. Safe, effective antenatal services require good communication, learning, understanding and support among the multiprofessional team. Kirkup highlights the importance of interprofessional teamworking to pregnancy outcomes:⁸

Clinical care increasingly depends on effective teamworking by groups of different professionals who bring their own skills and experience to bear in coordination. Nowhere is this more important than in maternity and neonatal services, but nowhere has it proved more problematic. Where it works well, care can be outstanding, but in almost every failed maternity service to date, flawed teamworking has been a significant finding, often at the heart of the problems.

An essential part of running an effective antenatal ultrasound service is communication between different professional groups involved in antenatal care. Sonographers are an integral part of the antenatal care team and should have input into the development of a quality service. Professional recognition and appreciation have also been demonstrated to increase radiographer wellbeing and job satisfaction, which is also likely to reflect sonographer experience and impact on outcomes.⁶⁰ It is essential for antenatal managers to involve sonographers, so that staff feel engaged and can input into decision-making processes. Equally, it is important for sonographers to proactively engage in these discussions and be offered protected time to do so within their job plan. In some scenarios, sonographers will be best placed to lead the discussions, and support should be made available for this to be achieved.

With the right support and respect, the whole unit and team becomes a better place to work, and the ultimate results are:

Cohesive team:	Support for each individual sonographer from the team Low sickness record for the unit
Dedicated team:	Wanting to learn more, gives better work satisfaction
Interested team:	Better learning, better skills, better scanning ability

(MDT Case study, appendix 4.1.2)

It is important to raise awareness and understanding of the purpose of the screening scans, the challenges within ultrasound service delivery and the importance of managing the expectations of service users. This is crucial to successfully building good working relationships both internally within antenatal teams and externally with parents and other stakeholders. There are instances where parents have been given advice contrary to local policy or national guidance. This can create confusion and upset, and can potentially lead to confrontation. Improved communication within the wider interprofessional teams can reduce this and improve the parent and staff experience.

Although ultrasound is pivotal to maternity services, the role of the sonographer remains poorly understood by many of our colleagues. At times, this can lead to unrealistic expectations and conflict. To overcome this, we welcome midwifery students and junior doctors to attend our scan lists; this provides them with an insight into our skills and our challenges! (MDT Case study, appendix 4.1.4)

Communication within the antenatal care team is essential to providing a safe and effective antenatal service for women and pregnant people and their families.⁹ Poor team communication was highlighted in the 2020 report 'Each baby counts', so development on intra- and interprofessional communication is imperative for improving pregnancy outcomes.^{7-9,13,61}

Education and team working with midwives, obstetricians, sonographers, fetal medicine specialists and other staff involved in antenatal care can help build better working relationships and understanding of the role that each professional plays in the pregnancy pathway and multidisciplinary team (MDT). Sonographer inclusion in joint MDT meetings, education sessions, journal clubs and other educational events is central to building relationships.

Sonography should be included at induction sessions for midwives and junior doctors, to explain the importance of the sonographer role in the antenatal pathway, how the service is delivered, local protocols for referral and how to ensure that reports are actioned.

To increase recognition of their expertise and role, sonographers need to consult with other staff in the antenatal team, create opportunities to open up communication channels, push boundaries and build respect for their skills.

We provide a yearly update session to medical and midwifery staff on changes to screening programmes, department performance, data collection and GROW outcomes for reducing stillbirth, in keeping with Saving Babies' Lives. (MDT Case study, appendix 4.1.5)

All healthcare professionals involved in antenatal care should have a good understanding of the purpose of the ultrasound examination, the complexities and the challenges. There should be clear criteria for justification of ultrasound examinations, agreed with clinicians, and robust pathways for cancelling unnecessary duplication of ultrasound scans, to reduce confusion for parents and enable greater availability of appointments for clinically required examinations.

It is hard work to maintain good working relations with all of the team dynamics and specialities to create a good team that work cohesively and support each other. (MDT Case study, appendix 4.1.2)

3.1 Interprofessional communication and personalised informed choice

Personalised informed choice for screening and consent for ultrasound examinations is a process, so it is important for all professionals to understand the screening process and the information needed to make informed parent-centred decisions, and be confident regarding their part in this process, to ensure consistent messaging is provided. All healthcare professionals who have encounters with parents prior to ultrasound examinations should play a part in ensuring that expectations are realistic for an NHS screening scan or follow-up scans in pregnancy. Accurate pre-scan information can support parental understanding and personal informed choice for screening ultrasound examinations, as detection of uncertain or unexpected findings can occur during any examination.⁶² Pre-scan information is also important, to provide parents with time to consider their options and choices fully. While parents' decisions on screening will be confirmed by the sonographer in the scan room, it is essential that the full discussion is had in advance of the scan appointment. Where this has not happened, locally agreed processes should be in place to manage these situations. This relies on education and support of the wider antenatal and midwifery team. It is also important to raise awareness of creating an environment conducive to high-quality screening and diagnosis. This includes having minimal distractions and a calm scan room to enable the sonographer to concentrate on the examination.^{52,63,64}

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

Students should be encouraged to shadow other healthcare professionals throughout the pregnancy pathway, to observe and question others about their roles, the challenges they face, and their role in the pregnancy pathway, and to be able to openly share ideas for improvements to the parent journey.

Area	Short-term actions	Medium-term actions	Long-term actions
Interprofessional team working	Evaluate ways to integrate sonographers into the wider antenatal team, if this is not already in place	Develop education and training opportunities for sonographers to work with other professionals within the antenatal care teams	
	Develop internal interprofessional communication networks	Ensure wide representation of staff at MDT meetings and learning events, including sonographers	Evaluate interprofessional working and elicit feedback from all members of the antenatal team
	Introduce work shadowing for learners across all disciplines	Introduce work shadowing for staff across all disciplines	Evaluate the impact of work shadowing on interprofessional working and parent outcomes
	Introduce regular opportunities to celebrate success across the multiprofessional team	Encourage sonographers to input into education programmes for antenatal healthcare workers, to highlight the sonographer role, the challenges, opportunities for collaborative working and inputting into the care of women and pregnant people	

4. Communication and personalised care

Within this section the aim is to consider the challenges specific to obstetric ultrasound and expectations of the antenatal ultrasound examination(s). It is important to review communication strategies and feedback, to continue developing the service to meet the needs of expectant parents, particularly in light of the CQC survey (2022), which found that only 59% of women and pregnant people were “always being given information and explanations they needed during their care in hospital”.⁶⁵ National and local policy should be followed in relation to appropriate communication with a wide range of service users. While it is recognised that sonographers should be informed prior to the examination when additional communication requirements are needed, to arrange appropriate support and/or interpreters in line with local policy, this is beyond the scope of this guidance.

4.1 Communication with service users

4.1.1 Managing expectations

Managing parental expectations of NHS ultrasound examinations is increasingly relevant, as many parents choose to have additional private ultrasound scans that include 3D/4D scans of the baby, fetal

sexing and the sale of additional keepsake items such as heartbeat bears, keyrings, video clips, 'gender reveal' canons and scratch cards. The misconstrual of ultrasound examinations as primarily social occasions rather than screening or diagnostic examinations can compound feelings of shock when deviations from expected fetal development are identified.⁶⁶

Information about the role of the NHS ultrasound scan, the expectations and what can be offered should be made available in multiple accessible formats such as digital media, antenatal information, and posters in waiting areas, before the initial screening scan appointment. This should include local policy, based on risk assessment, with consistency in the application of policy, to give expectant parents equitable treatment.⁵² Policy and communication with expectant parents should include information about the provision of images and/or an opinion on the fetal sex and offering the opportunity to have an accompanying adult to provide support for the woman or pregnant person.^{52,67} Healthcare professionals should be provided with appropriate training to provide consistent messaging to expectant parents.

Local policy should be in place for managing expectations and dealing with common challenges faced by obstetric sonographers. An example might be a local policy for late attendance to appointments, which could suggest that this is managed by the sonographer and/or healthcare assistant/receptionist speaking to the parents in a private space, having a discussion and writing a report highlighting what was discussed and the action taken, then re-booking the appointment.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

4.1.2 Support person

It is acknowledged that having a partner or support person can be of benefit to the woman or pregnant person. The 'Better Births' report¹¹ states:

Some fathers told us that they had felt excluded, that their role had not been recognised and so opportunities were missed to support the family and to have as positive an experience as possible. Some women told us that they relied on their partner to support them in pregnancy and with the care of the baby and the NHS needed to recognise this and help their partners to help them.

The SoR document provides a form of wording that can be adapted in collaboration with the local MVPs to help inform expectant parents about the nature of NHS obstetric ultrasound examinations.⁵² This includes advice on the attendance of one adult support person to accompany the woman or pregnant

person, when circumstances allow this.

Care should be taken to avoid assumptions about the relationship between the woman or pregnant person and the support person in attendance with them.

4.1.3 Additional support needs

When additional requirements are needed to support the woman or pregnant person to fully engage with the examination, such as the need for an interpreter, these should be communicated with the ultrasound department in advance of the first appointment, so that suitable arrangements can be made for support to be available. Reasonable adjustments should be made to enable access to care.^{68,69} Professional interpreters or support should be offered for a number of reasons, including to:⁷⁰

- *ensure accuracy and impartiality of interpreting*
- *minimise legal risk of misinterpretation of important clinical information (for example informed consent to undergo clinical treatments and procedures)*
- *minimise safeguarding risk (for example for victims of human trafficking, where the trafficker may introduce themselves as family member or friend and speak on behalf of the patient)*
- *allow family members and friends to attend appointments and support the patient (emotionally and with decision-making) without the added pressure of needing to interpret*
- *foster trust with the patient*

Area	Short-term actions	Medium-term actions	Long-term actions
Communication with service users	If not already in place, introduce policies to support best practice within the obstetric ultrasound department for dealing with common challenges	Provide education and updates for all staff involved in communicating with expectant parents prior to an ultrasound examination, to provide consistency of messaging	Review the impact of any changes to processes and determine if further amendments to local policy are required
	<p>Ensure all staff referring women and pregnant people for ultrasound understand the need for early communication of additional support needs</p> <p>Local policy should be in place for supporting individuals with additional requirements</p> <p>Sonographers and other ultrasound staff should be trained to provide this additional support as appropriate</p>	Work with MVPs and, if relevant, across ICS or Health Boards to develop communication strategies to explain the role of NHS obstetric ultrasound scans to expectant parents (draft to support local policy: appendix 1)	

4.2 Safe and personalised care

The provision of safe and effective care includes ensuring that service user needs are respected, where possible, without impacting on the delivery of the service and care offered to others. Local policy and procedures should be co-created with a range of input, including sonographers, antenatal colleagues from other professional backgrounds and MVPs. Fundamental principles of parent-centred care should be considered and teams need to explore ways to reduce health inequalities within their service.

We work collaboratively together with the MVPs group, listening to feedback and ensuring any changes, such as no children attending for scan, are decided upon with service user representation.

We have quarterly feedback questionnaires we give to all patients using our service to see if we can improve and monitor any trends. (MDT Case study, appendix 4.1.5)

It is imperative to regularly obtain parent feedback and use that to make improvements to the service and to deliver care that not only meets national standards, but also provides appropriate personalised care for the local communities. Working closely with the MVPs will assist obstetric ultrasound departments to ensure the parent voice is heard and that parents can input into service improvements in line with recommendations.^{6–9,71} The importance of positive feedback to highlight areas of good practice and to commend teams for high-quality service provision should also be considered.

This could be linked to the following pillars of the career framework:

- Leadership and management
- Research

4.3 Personalised care

Personalised care should be central to any care in pregnancy. ‘Better Births’ highlights that:¹¹

Every woman, every pregnancy, every baby and every family is different. Therefore, quality services (by which we mean safe, clinically effective and providing a good experience) must be personalised.

Sonographers, as part of the antenatal team, need to consider how they can provide:

Personalised care, centred on the woman, her baby and her family, based around their needs and their decisions, where they have genuine choice, informed by unbiased information.

Informed choice for ultrasound examinations was highlighted in a 2019 high court case.⁷² Sonographers should ensure that the woman or pregnant person is fully informed about the ultrasound examination, screening test or procedure they are about to perform. This includes reviewing previous discussions and decisions, and checking capacity and understanding of the benefits, risks and consequences of having or not having the test.⁷³ The sonographer undertaking the examination has responsibility for assessing that the woman or pregnant person understands and has made an informed choice. There should be agreed protocols to refer people for additional counselling if the sonographer believes that this is needed to provide parent-centred choice. All healthcare professionals are responsible for recording decisions clearly and accurately in line with local guidelines.

Communication should be non-directive to enable parental choice and discussion focused on the woman or pregnant person’s needs, values and decisions. Examples of non-directive advice and communication can be found in a number of documents, such as:

-
- [UK Consensus guidelines on the communication of unexpected news via ultrasound](#)^{74,75}
 - [Sharing the news. The maternity experience of parents of a baby with Down syndrome](#)⁷⁶
 - [ASUM Guidelines for parent-centred communication in obstetric ultrasound](#)⁷⁷

Additional communication requirements need to be considered and sonographers should make the necessary arrangements in such cases, for example arranging for an interpreter, in line with current national guidance. It is important to reduce health inequalities and provide accessible information⁷⁸⁻⁸¹ to enable all service users to access safe, parent-centred care and shared decision making^{82,83} which aligns to the AHP Strategy for England 'Area of Focus 1: People First'.³⁰

All staff involved in antenatal care within the ultrasound department should be aware of the different types of family unit, and requirements for an adult support person may vary for different communities. Assumptions should not be made about the relationship between the expectant parent and the accompanying person. It is also essential that sonographers understand the importance that language can have on service user experience of care, particularly when communicating with trans and non-binary people.⁸⁴ Guidance is available to support education and understanding of some of the different language needs. However, conversations are required to ensure that communication is tailored to the specific needs of individuals, as recommended in the document [Gender inclusive language in perinatal services](#).⁸⁴

Sonographers should provide appropriate support if further advice or counselling is the preferred option. Additional advice is also available on the [NHS England](#)⁸⁵ and [Public Health Wales](#)⁸⁶ websites.

[A] daily 'clinical support' (CS) sonographer ... is rotated to a 'scan free' session, whose role is to liaise with our clerical and clinical colleagues in antenatal clinic and the early pregnancy unit ... to help patients resolve issues in a timely manner which improves satisfaction.

One of the key roles of the CS sonographer is to over the scan list of a sonographer scanning in antenatal clinic should a miscarriage or unexpected physical condition be identified. This provides the scanning sonographer adequate time to discuss the scan findings with the patient and ensure the correct onward care is actioned. (MDT Case study, appendix 4.1.4)

This could be linked to the following pillars of the career framework:

- Clinical expertise
- Education
- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
Personalised care	Undertake a base-line audit of service user feedback, if there is no recent data	Elicit feedback from service users and antenatal colleagues to make improvements to the service from a user’s perspective Provide feedback to service users, eg “You said, we did”	Continue to monitor the service and make changes, as necessary, based on service user and sonographer experience
	Review staffing levels to ensure that appropriate staffing levels are available to provide parent-centred care	Implement a co-ordinator or support sonographer role into the rota, giving protected time for a sonographer to be available to trouble-shoot and to support expectant parents, clinicians, sonographers and other members of the ultrasound team without interrupting direct parent care	Develop a lead role within the team to encourage learning from good practice and celebrating success
	Provide support and training for all staff to enable parent-centred, individualised care and communication of unexpected findings Set up an annual review and update	Ensure that compassionate care is “embedded as part of continuous professional development, at all levels” ⁸	Work with education providers and CASE to ensure that parent-centred care, EDI and compassionate care are embedded into the ultrasound curriculum and assessment processes
	Ensure that personalised care, EDI and compassionate care are embedded within the appraisal system for all ultrasound staff	Develop communication forums with MVPs to ensure the parent voice is at the heart of service improvements and developments	Monitor progress across all aspects of the ultrasound service, particularly in relation to EDI and compassionate care

5. Sonographer workforce

The sonographer workforce is an integral part of the antenatal care team and needs to be recognised as such. Robust workforce planning is essential at national and regional level, to ensure that sonographers can meet service needs and provide safe, competent and effective care. This includes access to ongoing training and continuing professional development (CPD) support, and regular review of workforce capacity and demand, particularly when sonographers work between antenatal services and radiology or other directorates,³⁹ both nationally and locally to support the development of realistic SLAs to manage discrepancies in capacity and demand.

Prior to any changes to national policy that affect the ultrasound workforce, full costings, funding and training should be considered to ensure that appropriate staffing is in place before implementation. This includes appropriate planning to ensure that the training can be rolled out and achieved within the required timescale, along with consideration of training models, resources and capacity.

As sonography is not a statutorily registered profession, and as developments in ultrasound education continue to enable access to sonography via 'direct entry' routes for non-healthcare professionals, at both undergraduate and postgraduate levels,¹⁸ it is imperative to provide equality of access to CPD funding and educational opportunities to advance along the career progression pathway and develop into advanced and consultant practice roles.⁸⁷ Support to implement the [Preceptorship and capability development framework for sonographers](#)⁸⁸ is an essential part of developing the sonographer workforce to meet the minimum requirements for performing ultrasound examinations as part of national screening programmes such as NHS FASP,^{89,90} ASW1 and Pregnancy and Newborn Screening Scotland.⁹¹

This section aims to highlight the optimal local-level education and leadership skills development for sonographers and related management training and succession planning to ensure that obstetric sonography is integral to antenatal care pathway developments and that sonographers have the requisite knowledge, skills and competence to drive change and improve services.

One of the recurring elements in the national reviews of maternity care and regulator reports is leadership. Leadership is defined as:⁹²

The process of understanding people's motivation and leveraging it to achieve a common goal. Although there is no definition of leadership that satisfies all, it's clear that leadership has three integral elements:

- *Self: self-awareness and skilful expression of personal qualities*
- *Other people: influencing, motivating, and inspiring stakeholders*
- *The job to be done: defining, clarifying, and revising the task to be achieved.*

It has been found that inclusive leadership can lead to improved productivity, engagement, collaboration and team working, respect, staff satisfaction, retention, and better service provision.^{93,94} Within this document, leadership refers to the role that any sonographer can have in motivating others, highlighting areas for improvement and being the driver to make the change happen.

Management, in the context of this document, refers to the manager role within the ultrasound department, with responsibility for the smooth running of the ultrasound department, staffing and overall quality of the service.⁹⁵

Area	Short-term actions	Medium-term actions	Long-term actions
Sonographer workforce	Elicit feedback from the ultrasound staff on how to make improvements to the service and working practices	Implement changes based on sonographer feedback following appropriate risk assessment	Monitor changes to the service and continue to engage with sonographers on how to improve service delivery, staff development and support
	Provide feedback to service users, eg "You said, we did"		
	Implement the preceptorship and capability development framework into the ultrasound department	Develop succession planning for management and leadership roles, eg deputy roles, coaching, mentoring, work shadowing	
		Provide equality of access to CPD funding and educational opportunities for all sonographers, regardless of registration status	

5.1 Sonographer leadership

It is recognised that first-rate leadership can make a huge difference in healthcare.⁹³ This needs investment in staff time and should be a priority for services, as highlighted in the 2022 [Independent report: Leadership for a collaborative and inclusive future](#):⁹³

[A] well-led, motivated, valued, collaborative, inclusive, resilient workforce is ‘the’ key to better patient and health and care outcomes, and that investment in people must sit alongside other operational and political priorities. To do anything else risks inexorable decline.

Excellent diverse, compassionate and inclusive leadership is essential for well-managed, progressive obstetric ultrasound departments and antenatal services. All sonographers and members of the ultrasound team should be provided with opportunities to develop leadership skills and influence change to improve the service for both staff and service users.⁹⁶

I ensure that all staff have a voice that is heard, we encourage discussion and resolve issues quickly, discuss change of practice at peer review and have any additional meetings to discuss new implementations that are evidenced based and will be a positive step to improve outcomes. It is vital that the team are encouraged to be open, honest, feel valued and are listened to. Positive feedback and delegation of initiatives leads to ownership and productivity. (MDT Case study, appendix 4.1.5)

The ‘Better Births’ report¹¹ suggests that:

Establishing the right culture needs leadership and commitment from everyone: individual health professionals and teams, as well as senior management. Above all, it requires individuals to operate as part of a team across professional disciplines.

Although hierarchy is needed with seniority and experience in any unit, this team flourished with the integration of all the sonographers regardless. With confidence to communicate, the effect was that parents were given the best possible care and opportunity to see their baby and be guided through their scans. (MDT Case study, appendix 4.1.2)

The ethos of leadership and within all teams in antenatal ultrasound should be on ensuring EDI is considered at every level, for example during recruitment, retention initiatives, promotion, CPD opportunities and the development of policies, procedures and working practice.

5.1.1 Leadership training for sonographers

Leadership should be an integral part of the sonographer's role and, as such, provision for learning and developing skills should be included within appraisals and job planning. It is helpful for ultrasound teams to be familiar with guidance documents – for example, the [well-led framework](#)³⁶ – to inform developmental reviews.

Sonographers should be given support to access and protected time to complete these courses.

There are a range of NHS training programmes that can be accessed at different career points for sonographers; for example:

- [Edward Jenner programme](#) (Suitable for all sonographers)
- [Mary Seacole programme](#) (Suitable for any sonographer in leadership roles, for example the manager and deputy manager, practice educator, screening support sonographer (SSS), quality assurance lead, audit leads)
- [King's Fund Emerging clinical leaders' course](#) (Suitable for sonographers in senior leadership or management roles)
- [Stepping up programme](#) (Suitable for all sonographers from ethnic minority groups)
- Courses offered via professional bodies, eg the [SoR Leadership Mentoring Scheme](#) or the [Royal College of Midwives Leadership Academy](#).

This list is not comprehensive, as there may be other leadership development opportunities that are accessible regionally or locally, eg in-house opportunities, apprenticeship pathways and university courses.

This could be linked to the following pillars of the career framework:

- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
Sonographer leadership	Review current leadership training within the obstetric sonographer workforce	Ensure that leadership training is integrated into appraisal objectives and job planning for all sonographers	Monitor ongoing leadership skills and encourage further development at all levels
	Include leadership discussions within clinical governance and/or CPD meetings	Develop education, training, work shadowing, mentoring and coaching for leadership skills development	Consider leadership opportunities for sonographers within both the local service and the wider ultrasound and/or AHP community

5.2 Sonography managers

Ultrasound managers have a duty to take responsibility for the development and ongoing quality improvements within the ultrasound department, supported by senior management and antenatal teams. It is important that time and resources are available for meeting the requirements of the Ockenden report:⁹

All members of the multidisciplinary team working within maternity should attend regular joint training, governance and audit events. Staff should have allocated time in job plans to ensure attendance, which must be monitored.

The most important thing is to have a voice, be involved in investigations and really look for the root cause when issues arise. When creating action plans it is important that, as the sonography manager, I am involved in the sign-off process. (MDT Case study, appendix 4.1.1)

Managers and senior staff within the ultrasound team also need to role model professional, collegiate, compassionate and supportive behaviour towards service users and staff. They should encourage an open culture within the ultrasound service, where staff can discuss concerns and ideas for improvements, openly discuss errors and learn from mistakes, and flourish as professionals. As highlighted in the Kirkup report:⁸

The influence of role models, those whose positions more junior staff would aspire to fill one day, can be significantly greater than classroom teaching. If those role models themselves display poor behaviours, the potential is there for a negative cycle of declining standards.

5.2.1 Management training for sonographers

Succession planning for the manager role is crucial to continuity and should be a fundamental part of managing a service.

The College of Radiographers (CoR) Education and Career Framework provides detail of the knowledge, skills and attributes of a service manager/service leader.⁴⁰

Aspiring sonography managers should be provided with support, mentoring and guidance to develop the requisite skills and ensure succession planning for this role within departments or Health Boards. These skills include writing a business case, SLAs, undertaking service evaluations, negotiating resources – for example, staffing and equipment requirements when new techniques or changes to national policy are introduced – and working with members of the antenatal team to provide a collaborative approach to service delivery and improvement. Succession planning for the manager role is crucial to continuity and should be a fundamental part of managing a service.

This could be linked to the following pillars of the career framework:

- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
Sonographer leadership	Review current management training for the ultrasound manager and deputy manager roles	Ensure that management training is integrated into appraisal objectives and job planning for sonographers	Monitor ongoing leadership skills and encourage further development at all levels
	Sonographer manager and/or deputy should engage with the antenatal MDT	Provide time within the job plan and support for education, training, work shadowing, mentoring and/or coaching for sonographer managers	Review succession planning strategies and provide support to those who wish to develop the necessary knowledge, skills and competencies to become managers
	Managers review how they role model professional, collegiate, compassionate and supportive behaviour towards service users and staff	Have open discussions about how to encourage or expand on the need for an open culture within the ultrasound team	Review staff feedback on any changes made to support an open learning culture

5.3 Job planning

All sonographers should have a job plan as part of their role. NHS guidance on allied health professionals' job planning should be used to provide consistency across the obstetric ultrasound workforce.⁹⁷ Included within the job plan should be direct clinical care, specified supporting professional activities (SPA), including CPD, audit, teaching and research, additional NHS responsibilities such as input into MDT working groups, external NHS committees such as work with the screening committees, and consultations and externally funded duties such as consultancy, guest lecturing and externally funded research.⁹⁷ At the time of writing, the authors have been unable to source a job plan specifically for obstetric sonographer roles.

Sonographers' job plans need to be reviewed. Currently due to the workload pressures they do not have time within their job plan for other activities that might be expected of a Band 7 member of the antenatal team or comparable allied health professional. (MDT Case study, appendix 4.1.1)

Further information about NHS job planning can be accessed on the future.nhs.uk site.

5.3.1 Co-ordinator or clinical support sonographer role

The provision of a specific protected responsibility, on a rotation basis, for a sonographer to be assigned the role of co-ordinator or clinical support sonographer for a session or day is recommended, in centres with several ultrasound rooms. This co-ordinator or clinical support sonographer can provide appropriate care, support and advice for service users, clinicians, sonographers and also other members of the ultrasound department to maintain the efficiency of the department. This role can improve workflow and productivity in many ways, for example:

- Liaising with service users
- Dealing with queries, complaints, late arrivals
- Providing a second opinion or supporting less experienced colleagues where this is required
- Being available for a debrief or to enable a colleague to take additional time when complications arise
- Vetting or triaging

This could be linked to the following pillars of the career framework:

- Clinical expertise
- Education
- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
Job planning	<p>Audit the current situation in relation to job plans for all sonographers, including:</p> <ul style="list-style-type: none"> • Who has a job plan? • What is included within the job plan? • Does it include SPA time, as recommended in national guidance? • Is leadership development included within the job plan? • Does it provide time within the job plan for the preceptor role? 	Implement job plans for all sonographers following national guidance, if not already in place	<p>Monitor the effect of job plans on factors such as:</p> <ul style="list-style-type: none"> • Service delivery • Sonographer satisfaction • Service user satisfaction • Service innovations • Recruitment, retention and staffing levels • Integration of new staff into the team
	Investigate ways to use job planning to develop sonographer skills in areas other than direct clinical care, to enhance the service and improve career development opportunities	Ensure that sonographer job plans align to the four pillars of practice (clinical expertise, education, leadership and management, research)	
	Assess the current obstetric ultrasound service to identify 'pinch points'	If not already in place, consider the implementation of a co-ordinator or clinical support sonographer for each session	Review the impact of the co-ordinator or clinical support sonographer role

6. Sonographer wellbeing

This section aims to provide guidance to promote sonographer wellbeing and job satisfaction. To enable sonographers to provide good-quality care, NHS managers need to create an environment which allows the workforce to thrive. This includes raising awareness to identify signs of staff fatigue and burnout, to allow strategies to be put in place to support staff, increase staff wellbeing and job satisfaction, and to reduce attrition. The NHS makes a commitment to the “health, wellbeing and safety” of staff.⁹⁸

The NHS health and wellbeing framework⁹⁹ suggests that:

Enabling our diverse NHS people to be healthy with a sense of wellbeing is crucial to high-quality patient care. Putting the health and wellbeing of NHS people first should be a fundamental part of the DNA of the Service, enabling our NHS people to put our patients first.

To support sonographer wellbeing, departments should consider, as a minimum:

- Flexible working options
- Job plans that include non-clinical SPA time
- Sonographer involvement in decision-making relating to service improvements
- Fully implemented and resourced preceptorship and capability development framework
- Training and awareness to identify signs of burnout and how to manage that
- Staff support options, including protected time to access these
- Ongoing opportunities and encouragement to celebrate success
- Education, training and facilities to support ergonomic working and workplace assessment

6.1 Sonographer support

A number of factors can influence healthcare professionals’ motivation and impact on their plans to remain within or leave the profession, including levels of burnout.¹⁰⁰ Burnout is a response to prolonged or chronic work stress, where work demands exceed the psychological, intellectual or practical resources an employee has.¹⁰¹

The NHS introduced questions relating to burnout in the 2021 staff survey and recounted that 34.3% of respondents felt burnt out because of work.⁵⁰ High levels of burnout have been reported among sonographers in a number of countries.^{66,102–105} In a recent UK study of sonographers, over 90% met burnout thresholds,²⁶ which is concerning as there is evidence to suggest that patient outcomes can be negatively affected by high levels of burnout among healthcare professionals.¹⁰⁶ A 2022 systematic review and meta-analysis found that burnout is linked with reduced job satisfaction, increased staff turnover and double the chance of patient safety incidents. Burnout is also associated with poorer professionalism, which can lead to lower levels of patient satisfaction.¹⁰⁷ To help reduce this there is a particular need in obstetric ultrasound settings to support the development of realistic expectations and positive relationships between the healthcare team and parents.^{26,100}

Recommendations to reduce burnout usually target some or all of the following:

1. Reducing work demands
2. Increasing work autonomy
3. Increasing an employees' resources to meet these demands¹⁰⁸

- **Paid rest breaks in the working day.**
- **Review of workloads. Due to the high demand for ultrasound examinations there were concerns over quantity not quality of scans. ... audited our day lists. If anyone scanned more than they should ... images were checked and conversations ... undertaken to make sure the demand was not impacting quality and patient safety.**

(MDT Case study, appendix 4.1.3)

Strategies to reduce work demands can include decreasing work hours and varying work type, so that more emotionally demanding clinical work is interspersed with non-patient-facing or non-parent-facing work. Further support may include offering professional training or employee assistance programmes.¹⁰⁹ In ultrasound, potentially useful improvements could include enhancing work environments, increasing collaborative working and empowering staff to make improvements to their working practices. Greater autonomy can be achieved by offering greater work flexibility, within the boundaries of local flexible working policies. For example, part-time working options, compressed hours or hybrid roles can help support a good work/life balance for sonographers. Autonomy can

also be promoted by involving sonographers in shared decision-making around changes to working practices that will impact on their ability to provide a safe and effective service. Fully implementing the preceptorship and capability development framework in all departments, to support newly qualified sonographers and those new in post or progressing through the career framework, can help to make the sonographer workforce feel supported, improve their confidence and empower them to develop services that benefit all services users and staff.^{88,110}

To enable sonographers to provide good-quality care, NHS managers need to create an environment which allows the workforce to thrive. This includes raising awareness to identify signs of staff fatigue and burnout, to allow strategies to be put in place to support staff, increase staff wellbeing and job satisfaction, and to reduce attrition. The NHS makes a commitment to the “health, wellbeing and safety” of staff.⁹⁸

6.1.1 Resources to support wellbeing

A range of education and training resources are available to support staff and managers, including the RCOG workplace behaviour toolkit¹¹¹ and NHS staff mental health and wellbeing hubs.^{112–115} The staff wellbeing hubs, for example, offer a range of services to support staff, including one-to-one psychological support, which staff can access confidentially, without having to inform their employer. Initial evaluation of these hubs indicates that the services they provide are appropriate for staff and beneficial for their wellbeing.¹¹⁶ However, having these resources available is only one part of the solution; research shows that for staff to access these, they usually need to be signposted to them by colleagues and supported by their line manager, emphasising the need for supportive systems and environments.^{116,117} [Antenatal Results and Choices \(ARC\)](#) provides online resources and forums for sonographers and other staff involved in delivering unexpected news to expectant parents, and has a confidential helpline available for both professionals and parents.

Celebrating staff success was highlighted in a report into maternity services in Wales as a motivator for staff.¹¹⁸ Examples included:

- *Kindness boards displayed in staff areas*
- *Greatix electronic database for recording of good practice/care*
- *‘Caring for you’ campaign (improving the health, safety and wellbeing of members in their workplaces)*
- *Employee of the month*
- *Feedback Friday cards*

-
- *Letters from supervisors highlighting areas of good practice*
 - *Recognition awards for volunteers*

Ultrasound departments are encouraged to consider how they can implement approaches to celebrating success in an inclusive and positive way, to ensure that all staff feel valued and that good practice is shared to enable learning from the positive to take place.

Celebrating success ensuring ultrasound is included at all times.

(MDT Case study, appendix 4.1.1)

6.2 Work-related musculoskeletal disorder reduction

Work-related musculoskeletal disorders (WRMSDs) are common among sonographers, so equipment selection should consider the reduction of WRMSDs. Provision of moveable couch and ultrasound chairs to facilitate optimal positioning for individuals is essential to reduce the risk of WRMSDs.^{119–122} All sonographers should undergo training in ergonomics and ways to reduce work-related injury. This should include regular risk assessment and possible use of the body mapping tool to monitor staff on a regular (six-monthly) basis, or more frequently if new techniques or equipment are introduced.¹²³ The employer has a responsibility to ensure that reasonable adjustments are made for individuals, if required, following risk assessment.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management
- Research

Where possible, lists of mixed examinations should be offered for sonographers to reduce the chance of repetitive actions causing WRMSDs. Where the same examinations are repeated throughout the day, additional breaks should be factored into the list to provide sonographers with an opportunity to rest and recover, thus reducing the chance of injury and sickness absence. Minimum appointment times should be adhered to, to ensure that safe working practice is possible in terms of both examination quality and sonographer wellbeing. A number of documents suggest appropriate appointment

times for obstetric ultrasound examinations.^{60,124–127} If departments do not adhere to these minimum standards, they put their staff at risk of WRMSDs and are at higher risk of medico-legal action for errors or misdiagnosis and for work-related injuries, in addition to putting parents at risk of substandard examinations.

The impact of scanning those with high body mass index (BMI) should be assessed and mitigations put in place to ensure that, where possible, one sonographer is not scanning all attendees with higher BMI. Other factors, such as ergonomics, equipment settings and facilities, should be considered, as referenced in published guidance.^{122,128–130}

Consideration should be given to Health and Safety (Display Screen Equipment) Regulations^{131,132} when using computers and reporting stations. Display screen equipment (DSE) risk assessments should be undertaken to ensure compliance with the regulations; this should include appropriate furniture such as moveable chairs. The Health and Safety Executive (HSE) has a helpful checklist.¹³³ Regulations state that:

*Employers must plan work so there are breaks or changes of activity for employees who are ...
DSE users*

Moreover, regular short breaks are preferable to longer, less frequent breaks. The regulations should be adhered to in all aspects, including the provision of eye tests and training for DSE use.¹³¹ It is important for sonographers to view the monitor without turning it. A secondary monitor should be provided to enable parents to view the screen without impacting on the sonographer's posture and clear view of the monitor.¹²²

Area	Short-term actions	Medium-term actions	Long-term actions
Sonographer wellbeing	Ensure access to psychological support is available for all sonographers	Train managers to identify signs of staff fatigue and burnout and put mitigations in place to support staff	Investigate the potential to provide dedicated rest area(s) for sonographers to relax during breaks
	Encourage staff to become SoR learning representatives, health and safety representatives and/or trade union and industrial relations representatives, to support the workforce to develop knowledge, skills and safer working practices	Train staff in roles such as mental health first-aider to support colleagues in the workplace	Review ways to build staffing levels to offer flexible working options, if these are not currently available for staff
	Review ergonomic risk assessments and appointment times and work towards meeting minimum best practice timing for all examinations to ensure safe working practice guidelines are being adhered to	Undertake and monitor body mapping for sonographers, to assess for WRMSDs and review working practices if required	Consider ergonomics when purchasing new equipment or designing new rooms
	Consider the development of a health and safety or wellbeing sonographer to lead on this important area of work	Implement ergonomic training and monitoring for all sonographers	
	Provide secondary monitors for parents to see the images during the examination		

7. Training and career structure for sonographers

Ultrasound education and workforce planning is essential for the staffing of antenatal ultrasound departments. Changes within the sonography career structure⁸⁷ and the need to increase the number of highly skilled sonographers in the workforce^{19,20,23} have led to innovative developments in clinical ultrasound training academies in England and Scotland. The academies provide opportunities for supportive clinical learning, extended appointment times and the development of existing sonographer skills to meet advanced and consultant-level practice.^{41,42} When learners are working within the obstetric ultrasound department, extended appointment times should be provided to facilitate high-quality education with time for debriefing and quality feedback, particularly in the early stages of clinical training.¹³⁴

We have a rolling recruitment training programme that we wish to develop.

(MDT Case study, appendix 4.1.5)

Sonography is not a statutorily regulated profession, despite attempts to change this by professional bodies including SoR, the Royal College of Radiologists (RCR), RCOG, RCM and professional and educational organisations such as BMUS. It is strongly encouraged that those sonographers who can register with a statutory regulator, such as the Health and Care Professions Council (HCPC) or the Nursing and Midwifery Council (NMC), should do so. Those who are unable to register with a statutory regulator should be encouraged to apply for voluntary registration with the [Register of Clinical Technologists \(RCT\)](#).

Professional supervision can be utilised to support sonographers in their professional role, clinical development and restorative needs, with the ultimate aim of improving care and supporting their career aspirations and wellbeing.^{135–137} HCPC¹³⁸ defines professional supervision as being:

... about supporting and enhancing a person's practice, by enabling a person to reflect on and review their work. Unlike managerial supervision, practice supervision should be led by the supervisee so that they can identify individual training and development needs. It should also take place on a regular basis, to enable continued support.

[It]... enables you to openly reflect on and improve your professional skills and practice.

All professionals involved in the provision of an ultrasound service for antenatal screening will need to comply with the training requirements detailed in the relevant documents related to their country, such as the [ASW Obstetric Ultrasound Handbook](#), the [NHS FASP handbook](#), and [NHS Scotland Fetal anomaly and Down's syndrome screening handbook](#).^{1,2,139}

7.1 Career framework

There is an expectation set out in several NHS documents that to grow and retain the workforce, the full range of skills should be employed, and staff development is paramount to this.^{140–142} The CoR education and career framework (ECF) also sets out knowledge, skills and attributes for different roles, many of which are relevant to sonographers.⁴⁰ NHS priorities for 2022/23 include a focus on increasing the advanced clinical practice workforce.⁹⁸ Ideally, advanced and consultant-level sonographer training pathways should be developed to assist sonographers to develop skills, experience and competence to fulfil all components of the role.⁸⁷ As part of this pathway, sonographers should be

encouraged and supported to gain accreditation at advanced or consultant level with, for example, HEE or CoR. Opportunities should be available for sonographers to progress through the sonography career framework to fulfil the expectations of advanced and/or consultant practice, should they wish.^{41,42,87}

To enable sonographers to develop their knowledge, skills, competence and capabilities to progress in their obstetric careers, there should be protected non-clinical SPA time in all job plans.⁹⁷ There is evidence to suggest that combining clinical work with non-patient-facing or non-parent-facing work can reduce burnout, hence time for SPA can support sonographers' physical and mental wellbeing, which has an impact on patient care.¹⁰³ It is recommended that 15 to 30% of time is allocated pro-rata for full-time staff, dependent on their role.⁹⁷ The SoR document refers to "no less than 50% of a consultant" allied health professional's role being expert clinical practice, covering both direct and indirect patient care.¹⁴³ A minimum of 30%, but ideally 50%, of the consultant practitioners' job plan should be allocated to working on the other three domains of consultant-level practice.¹⁴³

Non-clinical time can be used for a variety of purposes, such as coaching, mentoring, preceptorship development, CPD, audit, research, service development projects, preparation of material for MDT meetings, preparing for and delivering lectures, conference presentations and posters, input into national policy, professional body working group or local/national working groups. It could also include attending screening programme boards, fulfilling specific functions related to NHS FASP, ASW, or Pregnancy and Newborn Screening in Scotland, such as departmental image review and reviewing Down's syndrome screening quality assurance support service (DQASS) feedback plots.

All the staff are expected to attend the weekly MDT meeting. This was very much a working lunch but again brought the team together and allowed follow-up cases they themselves may have been involved in or just for interest. Through the MDT meetings, consultant faces from other specialities became familiar thereby making them far more approachable to discuss patients with. (MDT Case study, appendix 4.1.2)

Preceptorship is an essential component for assisting the transition from student to newly qualified sonographer, but also for new staff and those returning to practice or progressing to different roles within an organisation. A well-constructed preceptorship programme can help people settle in to their roles, reduce attrition, and increase confidence and staff satisfaction, leading to improvements in patient experience.^{88,110}

7.1.1 Practice educator roles

Practice educators should be identified within each unit to provide support and leadership for all aspects of education, including for sonography trainees, obstetricians, midwives and other healthcare professionals, preceptors and those working through advanced and consultant training pathways. Protected time is important for this role and leadership training is advised.

A practice educator is defined as follows:¹⁴⁴

A practice educator is usually a registered professional who supports learners in the workplace. They facilitate practice education alongside clinical and academic colleagues. In addition, the practice educator is likely to hold responsibility for signing off competency and assessment criteria, based upon the standards produced by the education provider and relevant professional body; although it is recognised that local models of delivery and assessment will apply.

Practice educator accreditation is encouraged, following appropriate education or portfolio assessment, to ensure a high standard of education and support is provided for learners and that practice educators can demonstrate ongoing CPD in relation to the role.^{40,144}

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
Sonographer career framework	Encourage sonographers to become registered with a statutory regulator where possible, or with the RCT where this is not possible	Investigate whether sonographers would value/benefit from professional supervision to support them in their role	
	Implement the preceptorship and capability development framework in the ultrasound department Provide time within the job plan for the preceptor role and training	Discuss career aspirations with sonographers and support career development opportunities in line with service needs and improving care and outcomes	Use job planning to develop sonographer skills in areas other than direct clinical care, to enhance the service and improve career development opportunities
	Encourage practice educators to apply for and regularly renew practice educator accreditation	Encourage sonographers who wish to do so to develop their skills to advanced and consultant-level practice and gain accreditation within the roles	

7.2 Continuing professional development

CPD is an essential part of the sonographer's professional role.¹⁴⁵ Protected study time should be available to ensure this is meaningful and relevant to improving the service delivery.¹⁴⁵ NHS FASP specifies that the provider should ensure the provision of ongoing education, fund training requirements, including CPD, and maintain a record of training.^{89,90} In Scotland there is a charter recommending a guaranteed minimum of six days per year pro-rata study time for all radiographers.¹⁴⁶ To meet 'Better Births' recommendation 5.2, elements of multiprofessional CPD in the antenatal unit should include sonographers.¹¹ Sonographer involvement in learning events and huddles with other antenatal staff should be the norm to assist in team building, shared learning and feedback, and thus continue to improve the quality of care offered to expectant parents. Monthly learning event meetings and staff meetings, to include sonographers as active participants, would facilitate a community of learning in addition to developing a greater understanding of the different antenatal care professionals' roles.

Encouraging staff to take part in local training days, presenting or being involved in unit audits ... they will feel more accomplished and also respected by their peers.

As a result the team ... was cohesive, experienced, they learned from one another and they cared about each other which meant that parents scanned by them were managed and scanned competently. (MDT Case study, appendix 4.1.2)

Sonographers should be provided with protected time to develop their clinical and non-clinical skills in the workplace, attend online and face-to-face study days, conferences and events, complete mandatory training, shadow colleagues, visit other departments to enhance their knowledge and skills, and facilitate or undertake mentorship and/or coaching. Rotation through the fetal medicine unit would be a way to increase knowledge, skills and job satisfaction for sonographers, while strengthening shared learning across teams.

Developing a learning culture within the ultrasound departments and the wider antenatal team can enhance knowledge and shared learning and lead to improvements in care. An essential element of all obstetric sonographers' roles is the follow-up of complex pregnancies or cases where unexpected physical conditions have been detected during the ultrasound examination. Time should be available for sonographers to regularly follow up cases to ensure that ongoing learning occurs. Shared learning from cases should be a regular activity within ultrasound departments, to enable open, no-blame discussion about cases. Reflecting on ultrasound findings and pregnancy outcomes, discussing new evidence and providing a supportive learning environment will enable the whole team to learn and improve. The example of [radiology events and learning meetings \(REALM\)](#) could be used to develop local ultrasound events and learning meetings. An example of the Plan-Do-Study-Act cycle to improve detection rates (DRs) for fetal cleft lip is available.¹⁴⁷

... it was key to make each and every member of the sonography team feel valued by telling them when they had done something well, give them more responsibility and pass on compliments, but this must be balanced with feedback from audits which may show that more diligence is required from them. (MDT Case study, appendix 4.1.2)

It is advisable to set up a regional obstetric sonographer leads network for sharing good practice, protocols and expertise and to provide support for ultrasound managers/leads. These can be virtual, face-to-face, hybrid or via an email network. The regional leads group can assist in the development of regional decisions on specific aspects of protocols and guidance to ensure consistency across an area.

This could be linked to the following pillars of the career framework:

- Leadership and management

Medico-legal expert witness work can be an alternative option for sonographers to diversify their practice and continue their learning. The number of legal cases relating to ultrasound examinations is increasing annually, and the expert witness role is a rapidly evolving and interesting area to work in. Sonographers with approximately ten years' clinical experience in ultrasound could consider becoming expert witnesses and undergo further training to develop their skills and proficiency in this area of work. Sonographers would need to be credible experts in the field, which might include being accredited advanced or consultant practitioners,¹⁴⁸ educators and/or published professionals. The role provides many learning opportunities for the expert witness themselves, but that learning can also be used to assist others in the ultrasound team to understand how an external expert evaluates their practice. This, in turn, can lead to improvements in practice, potentially reducing litigation risk, which is extremely stressful for all involved. The CoR has an expert witness list and information for [expert witnesses](#).¹⁴⁹

This could be linked to the following pillars of the career framework:

- Leadership and management

7.3 Communication skills and delivering unexpected news in obstetrics

Communicating ultrasound findings is an integral part of a sonographer's role. Sonographers are frequently required to explain unexpected findings to expectant parents or to communicate complex information in an unbiased and sensitive way. This impartial communication should continue during any encounter with expectant parents. Expectations and the evidence relating to appropriate communication in antenatal care has evolved over time. In 2020, a framework for communicating unexpected ultrasound findings to parents was published.⁷⁵ In addition to providing consistency in terminology used to explain common ultrasound findings, the guidance could potentially reduce the stress associated with this part of the sonographer's role.⁷⁵

7.3.1 Communication skills training

To ensure that sonographers have the skills, knowledge and understanding of how to communicate, all sonographers undertaking obstetric ultrasound should have completed formal training for communicating in obstetrics, including consent, explaining unexpected findings, cultural awareness, and EDI. This may be as part of their initial ultrasound qualificatory programme or arranged in addition. Regular mandatory updates should be provided for sonographers as part of their ongoing CPD. This could be in the form of in-house organised training, discussion groups, e-learning for healthcare, training courses such as those facilitated by ARC, SSS-organised regional or national training, and maternity-wide interprofessional education and learning meetings.^{150,151} A survey of sonographers suggested that training to communicate unexpected findings during the 20-week screening scan was important, as was mandating the training to overcome challenges of staffing shortages, CPD funding and access to quality education.¹⁵¹

7.3.2 Support for sonographers

Complaints monitoring can highlight trends in communication that might need addressing on an individual or departmental basis. Communicating unexpected findings and complex, sometimes uncertain results to families can be challenging for sonographers. Ultrasound departments should implement robust mechanisms to support sonographers in this challenging part of their role, such as opportunities to debrief with colleagues, a mentor or their manager. The clinical support sonographer or co-ordinator role can provide an opportunity for sonographers to take ‘time-out’ and process their own emotions before returning to a busy list, when the need arises, such as when they have imparted unexpected news to parents. In smaller units or where a sonographer works alone, additional mechanisms should be in place to ensure that the emotional wellbeing of the sonographer is supported.

Professional supervision is also a good tool to assist in supporting sonographers to reflect on challenging situations, and to consider alternative ways of providing support and communicating in those situations.¹³⁵ Peer observation and feedback can be used as a two-way process to share good practice suggestions. Coaching is also being used to individualise support and development of staff skills in this challenging area of practice.¹⁵² Psychological support should be available from professionals who are trained to support sonographers following difficult situations.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

Area	Short-term actions	Medium-term actions	Long-term actions
CPD	Encourage sonographers to apply for and maintain accreditation of practice educator, advanced and consultant practice roles, eg CoR, HEE	Integrate multiprofessional learning within the antenatal service (see section 5)	Build supportive, inclusive communities within the antenatal team
	Review access to CPD opportunities across the sonographer team	Integrate multiprofessional learning within the antenatal service (see section 5) Provide protected CPD time and study leave within the job plan for all sonographers	Review CPD activities to ensure that CPD is impacting on service delivery Promote sharing of learning within the team
	Implement monthly ultrasound learning event meetings, if not already in place	Ensure learning event meetings include the multiprofessional team	Provide protected time for sonographers to follow up and share complex cases
	Ensure that all sonographers have a job plan and assess if they meet national recommendations	Review job plans in relation to SPA time and link to appraisal objectives and job roles	Support experienced sonographers to consider becoming expert witnesses Encourage shared learning from their experiences
	Review staff development options in the delivery of unexpected findings or difficult news	Implement regular training updates for all sonographers to ensure they are up to date with the latest evidence and guidance on delivering unexpected findings	Review service user feedback and undertake peer-review observations and/or coaching to provide ongoing support for developing sonographer communication skills
	Explore coaching opportunities for sonographers within the workplace	Consider the implementation of a clinical support sonographer or co-ordinator role for each session to enable sonographers to take time-out or debrief if needed (see section 3.3)	Integrate coaching skills for sonographers into CPD and job plans and develop a coaching culture within the team, to assist sonographers to identify solutions

CPD	Ensure access to psychological support is available for all sonographers	Provide appropriate support mechanisms for sonographers to debrief following delivery of unexpected findings or difficult news or challenging cases; this may be locally or at a regional level, sonographers only or multiprofessional support, depending on the nature of the ultrasound service	Elicit feedback from sonographers about their support needs and ways to improve their wellbeing Include emotional support and sonographer needs in risk assessments
	Connect with regional sonography leads to share good practice and exchange ideas	Ultrasound leads could request to join the informal SoR sonography managers' email list to ask questions and exchange ideas	

7.4 Ultrasound clinical teaching

Training sonographers and other antenatal care professionals is a crucial part of the sonographers' role. Without excellent clinical experience with good supportive mentors, the sonographer workforce will not grow to the levels required for safe service provision and to meet the targets set by the NHS.^{141,142}

Time is required for this, to provide a high-quality learning environment to support the student to fulfil the requirements of an educational programme and attain competence. SLAs should include the training of staff within the capacity available. Training lists are a way to help support the learner in their development. It is recommended that a training list should have a reduced number of scans booked, to facilitate a high-quality learning experience. This should be factored into the SLA, depending on the number of multiprofessional learners expected through the department.

Role development of sonographers can include practice educator roles, giving an opportunity for them to build strong collaborative relationships with the education providers. It is strongly recommended that practice educators are provided with the time and resources to undertake formal training and to become accredited practice educators,¹⁴⁴ to facilitate the highest quality of clinical support and learning for trainees. Clinical staff can develop their own skills and expertise within the education pillar of advanced and consultant practice frameworks by taking on roles such as honorary or associate lecturers in ultrasound education and/or clinical skills tutor in clinical ultrasound training academies/imaging academies.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management
- Research

Area	Short-term actions	Medium-term actions	Long-term actions
Learning and teaching	Encourage sonographers to develop skills to support learners	Review the service provision to implement training lists to support learners and reduce the pressure on supervising sonographers	Encourage sonographers to complete qualifications and accreditation for their practice educator role
	Explore options for sonographer career development in the education pillar	Forge links with imaging academies and educational institutions to support regular ongoing sonographer training to increase the sonographer workforce and potentially enable existing staff to develop their skills and competencies	

7.5 Potential role development opportunities

Role development opportunities within obstetric ultrasound could enhance sonographers' careers by improving retention, role satisfaction and career progression, while also utilising sonographer expertise to deliver effective, high-quality, progressive antenatal care. Team members should have their own projects, providing them with developmental opportunities and ownership; these might include mini audits, research, reflective practice and non-scanning training sessions with learners. These can be developed through a [personal development plan](#) (PDP) and discussed during appraisals.

To ensure service continuity, it is essential to secure succession planning for leadership roles, SSS and other key positions within antenatal ultrasound. Deputy positions should be implemented within departments. These also offer an opportunity for sonographers to develop skills and experience with coaching and support from experienced members of the team.

Increased satisfaction with the role, improved parent experience and reduced pressure on other antenatal care professionals are seen as advantages of extended roles within ultrasound, including obstetric services.¹⁵³

New scopes of practice to improve parent experience, such as sonographer-led discharge. These help parent pathways and reduce unnecessary midwife appointments, helping support the antenatal team, who are also under pressure.

Developing roles within the team, for example a training lead, a twin lead and uterine artery lead trainer. This has proven really good for team building, morale and resilience within the team. (MDT Case study, appendix 4.1.3)

7.5.1 Suggestions for sonographer career development in obstetric ultrasound services

Several suggestions for sonographer career development are provided below. Some of these will require additional education and competencies; others may be combined roles. Development opportunities can be reviewed in association with the preceptorship and capability development framework for sonographers⁸⁸ and the ECF.⁴⁰ It is important to provide adequate support, in-house and/or external education, assessment and ongoing audit for any role development undertaken by sonographers in the antenatal setting. Within most of these suggested roles, there is potential to develop all four pillars of practice. Sonographers would need to be engaged with expert clinical practice, leadership and management, education of others and the wider professions, and service development and service improvement, audit and research.

The roles recommended in this section are in addition to ultrasound management roles with overall responsibility for service delivery.

- Early pregnancy specialist ([case 4.2.11](#)): communication, scanning, input into management pathways and counselling where relevant. One-stop clinics with sonographer-led discharge. **[clinical expertise, leadership, education, research]**
- Obstetric clinical specialist ([case 4.2.1](#); [case 4.2.3](#); [case 4.2.5](#); [case 4.2.6](#)): for example, leading high-risk pregnancy clinics, multiple pregnancy expert, diabetic specialist, fetal medicine sonographer (covering some of the follow-up cases that do not require fetal medicine specialist input), advanced Doppler assessment, fetal cardiac specialist/lead, premature prevention clinics, invasive procedures, sonographer-led discharge.¹⁵³ **[clinical expertise, leadership, education, research]**

[NICE Quality Standard \[QS46\]](#) recommends specialist sonographer involvement in the care of multiple pregnancies:¹⁵⁴

A multidisciplinary core team of named specialists consists of specialist obstetricians, specialist midwives and ultrasonographers, all of whom have experience and knowledge of managing twin and triplet pregnancies.

- Audit lead or quality assurance (QA) lead ([case 4.2.2](#); [case 4.2.5](#); [case 4.2.6](#); [case 4.2.8](#)) **[leadership, education, research]**
- SSS and deputy SSS, nuchal translucency (NT) lead ([case 4.2.2](#); [case 4.2.5](#); [case 4.2.7](#); [case 4.2.8](#)) **[leadership, education, research]**
- [Professional/clinical advisor](#) for regional screening QA teams ([case 4.2.2](#); [case 4.2.8](#)) **[clinical expertise, leadership, education, research]**

- Equipment QA lead [**leadership, education, research**]
- Parent experience lead working with MVPs [**leadership, education, research**]
- Specialist communication, support and/or counselling [**clinical expertise, leadership, education, research**]
- Communication skills trainer [**clinical expertise, leadership, education**]
- Early pregnancy specialist ([case 4.2.11](#)): communication, scanning, input into management pathways and counselling where relevant. One-stop clinics with sonographer-led discharge. [**clinical expertise, leadership, education, research**]
- Obstetric clinical specialist ([case 4.2.1](#); [case 4.2.3](#); [case 4.2.5](#); [case 4.2.6](#)): for example, leading high-risk pregnancy clinics, multiple pregnancy expert, diabetic specialist, fetal medicine sonographer (covering some of the follow-up cases that do not require fetal medicine specialist input), advanced Doppler assessment, fetal cardiac specialist/lead, premature prevention clinics, invasive procedures, sonographer-led discharge.¹⁵³ [**clinical expertise, leadership, education, research**]

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- Audit lead or quality assurance (QA) lead ([case 4.2.2](#); [case 4.2.5](#); [case 4.2.6](#); [case 4.2.8](#)) [**leadership, education, research**]
- SSS and deputy SSS, nuchal translucency (NT) lead ([case 4.2.2](#); [case 4.2.5](#); [case 4.2.7](#); [case 4.2.8](#)) [**leadership, education, research**]
- [Professional/clinical advisor](#) for regional screening QA teams ([case 4.2.2](#); [case 4.2.8](#)) [**clinical expertise, leadership, education, research**]
- Equipment QA lead [**leadership, education, research**]
- Parent experience lead working with MVPs [**leadership, education, research**]
- Specialist communication, support and/or counselling [**clinical expertise, leadership, education, research**]

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- Communication skills trainer [**clinical expertise, leadership, education**]
 - Practice educator, including education of RCOG and other trainees ([case 4.2.7](#)) [**education**]
 - Health promotion lead [**leadership, education, research**]
 - Research lead ([case 4.2.6](#); [case 4.2.10](#)) [**leadership, education, research**]
 - SoR learning representative, health and safety representative or trade union and industrial relations representative [**leadership**]
 - Freedom to speak up guardian [**leadership**]
 - Medico-legal expert witness roles to support wider awareness of medico-legal issues within the team ([case 4.2.4](#)) [**leadership, education, research**]
 - Regional trainer in an area of expertise [**education**]
 - Lead for national consultations; input into national consultations; engage at national or regional level with developments or project teams ([case 4.2.1](#); [case 4.2.2](#); [case 4.2.4](#); [case 4.2.9](#); [case 4.2.11](#)) [**leadership, education, research**]
 - Advisor or assessor roles such as [CQC specialist professional advisor](#), United Kingdom Accreditation Service ([UKAS](#)) [independent technical assessor](#) [**leadership, education**]
 - Advisory group member, eg Ultrasound Advisory Group (SoR) ([case 4.2.11](#)) [**leadership, education, research**]
 - Journal club lead ([case 4.2.1](#)) [**leadership, education**]
 - Lecturer, associate lecturer, guest lecturer ([case 4.2.1](#); [case 4.2.4](#); [case 4.2.7](#); [case 4.2.8](#); [case 4.2.9](#); [case 4.2.10](#); [case 4.2.11](#)) [**leadership, education, research**]
 - Celebrating success and learning from good practice lead [**leadership, education, research**]
 - Patient and staff complaints lead, with oversight of issues, providing feedback at team and wider antenatal level and ensuring appropriate support is provided for staff during incident investigations [**leadership, education, research**]

This would align with the 2022 Ockenden report⁹, which stated that:

There must be a robust process in place to ensure that all safety concerns raised by staff are investigated, with feedback given to the person raising the concern.

When considering career development for sonographers, a holistic approach to antenatal care is essential. Sonographers, particularly at advanced and consultant level, can champion this approach within their local, regional and national networks. Advanced or consultant practitioner sonographers should be expert clinical practitioners who can provide support for parents, promote positive pregnancy health behaviours, work with parents to promote parent-centred care and support the family unit to improve child health outcomes. Additionally, their role should include education, leadership and research.^{41,42}

Sonographers are positively encouraged to take part in teaching, presenting, medical education (training), research and publishing. (MDT Case study, appendix 4.1.2)

7.5.2 Sonographer engagement with the wider obstetric community

Sonographers should be empowered and encouraged to engage with the wider obstetric community at a local, regional and national level, to work with regional and national teams when reviewing workforce and issues related to ultrasound practice, and to engage in consultations. National policies are developed based on input to consultations, surveys and research. If obstetric sonographers are not involved in constructive dialogue at regional and national level, their concerns are not heard and the ultrasound community's voice is less powerful. Changes will be made that are not always in the best interests of the service, the staff or those accessing the service.

There is an expectation that sonographers working at consultant level will be working strategically at a national and/or international level. Consultant practitioners should be strategic thinkers, add to national debate and make positive changes to improve parent-centred care.¹⁵⁵ Advanced practitioners should also develop skills at a national and/or local level to meet HEE requirements⁴¹ to

provide consultancy across professional and service boundaries, influencing clinical practice to enhance quality, reduce unwarranted variation and promote the sharing and adoption of best practice

Examples of areas where sonographers need to have input include:

- Responding to scoping surveys, antenatal surveys and relevant research studies
- Inputting into consultations by NICE, RCOG, the antenatal screening programmes across the four countries and other relevant organisations
- Joining stakeholder groups

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management
- Research

Area	Short-term actions	Medium-term actions	Long-term actions
Role development	Encourage all sonographers to regularly update a PDP	Offer opportunities for sonographers to assume specific roles that help them to develop skills and competencies in line with service needs, appraisal objectives, the capability development framework and the ECF	Develop succession planning for management and leadership roles, eg deputy roles, coaching, mentoring, work shadowing
	Provide opportunities for all staff within the obstetric ultrasound team to develop and learn	Consider coaching, mentoring and/or work shadowing for senior roles within the team and wider service	Review staff satisfaction on an ongoing basis and implement changes to improve things, where relevant
	Consider asking sonographers to review the suggestions (section 7.5.1) and select areas they have an interest in, or suggest alternative options	Review sonographer job plans and integrate specific role development opportunities/ tasks within these	Encourage sonographers to engage at a local, regional and national level to ensure the sonographer voice is heard: sonographers should be encouraged to proffer solutions, rather than simply challenges to issues specific to the ultrasound service

8. Ultrasound estates and facilities

8.1 Introduction

In addition to sonographers, midwives and obstetricians may also provide antenatal ultrasound services. In some units, the sonographers are employed by maternity services and are an integral part of the antenatal team. In others, they are part of the radiology/imaging department and provide ultrasound services in the antenatal clinic. The location of the ultrasound rooms in relation to maternity services varies across different Trusts and Health Boards in the UK. Some ultrasound rooms are integrated within the antenatal clinics, whereas others are separate from maternity services.

This section provides advice and links to relevant guidance on issues relating to the optimal scenarios including:

- Location of the ultrasound service within antenatal clinics – this may be a challenge to alter in the current situation but should be considered in any future developments
- Facilities and room size
- Adequate ventilation

8.2 Location of obstetric ultrasound rooms

Ultrasound rooms should ideally be located within the antenatal clinic, to foster collegiate working within obstetric departments, enable sonographers to feel part of the antenatal team and assist in the smooth transition of care for women and pregnant people.¹⁵⁶ Direct access to obstetric colleagues can help the development of teams within the unit and enable sonographers to engage with multiprofessional working, education and meetings, in line with best practice advice.^{7,8,11,13} Shared facilities with other staff for rest and refreshment breaks are important; details are available in the NHS Healthy Building Note 00-03.¹⁵⁷ There is evidence from NHS FASP screening safety incident reports that where ultrasound services are not co-located in antenatal departments, this can be factor in the screening pathway not being completed. This can be due to navigational and communication issues, which have the potential to further increase health inequalities and impact on the user experience.

The 'Better Births' report¹¹ suggests that:

It is more difficult to ensure a positive culture in units that are isolated, either clinically or geographically. It can be more difficult to recruit staff who may then have fewer opportunities to learn from the variety of other professionals, experiences and training available in larger units. Poor practice can go unchallenged. Small units should therefore not operate in isolation.

We have always been integrated within the obstetric service, working closely with our management and clinicians to ensure an MDT approach, integrating our screening midwives, antenatal clinics, specialist clinics and diagnostic ultrasound together. (MDT Case study, appendix 4.1.5)

The waiting area for those attending obstetric scans should be located near the antenatal clinic and there should be easy access to drinking water. Toilet facilities should be available “immediately adjacent” to ultrasound rooms, one for each ultrasound room, one of which should be an accessible toilet.^{156,158} It is important to have counselling rooms adjacent to ultrasound rooms, to provide appropriate support when unexpected news is given during an ultrasound scan.¹⁵⁶

8.3 Room size and facilities

There is no definitive UK guidance on ultrasound room size. Minimum size requirements will depend on the type of work carried out and the nature of the people attending for ultrasound examinations, eg out patients, in patients, interventional procedures. NHS England¹⁵⁸ provides suggested layouts, with a single room being 3.75 x 4.25m and en-suite patient bathroom measuring 2.5 x 2.5m, with larger space requirements for interventional procedures. Room size also needs to factor in a variety of considerations, including space for a support person to sit, and any requirements for transducer decontamination, particularly where chemicals are used. The European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB) has a position paper which provides more information about room sizes for general ultrasound services.¹⁵⁹

Mechanisms to darken the room, such as blackout blinds, and dimmable lighting are required for all ultrasound rooms. Patient privacy is important when dressing and undressing for transvaginal ultrasound examinations, so facilities should be available for this.^{156,158} Noise insulation and a door for privacy are a requirement.¹⁵⁸ Handwashing facilities are essential within the ultrasound room.^{158,160} Other infection prevention and control measures can be found in the NHS Healthy Building Note 00-09.¹⁶⁰ Consideration should also be given to security alarms.¹⁵⁸

For obstetric ultrasound, sharing the images with expectant parents is an integral part of the examinations. Sonographers should be provided with facilities to enable this without impacting on their position and good ergonomic practice.^{121,122} A secondary monitor is essential for obstetric ultrasound rooms, to provide this opportunity to share the images with expectant parents, while protecting the health and wellbeing of sonographers.¹²²

8.4 Ventilation

Risk assessment should include ultrasound room ventilation, factoring in the number of people potentially in attendance during an examination. Current HSE guidance should be followed when risk assessing ultrasound rooms and associated facilities.^{161,162} Air-conditioning should include “a fractional intake of filtered air from outside, in order to clear the stale air and odour originating from patients or from chemicals used for cleaning and disinfecting”.¹⁵⁸ Guidance also recommends that the room be dust-free to protect ultrasound and computer systems.¹⁵⁸

A minimum air exchange should be 6 air changes per hour (ac/h), although an interventional imaging suite would be higher with 10ac/h.¹⁶³ The HSE¹⁶⁴ states that the “fresh-air supply rate should not normally fall below 5 to 8 litres per second, per occupant” and factors such as the equipment involved should also be considered. Additional ventilation may be required, dependent on the ultrasound transducer decontamination procedures used.^{47,165}

Ventilation is even more crucial when community viral infection levels are high, such as was seen during the COVID-19 pandemic.¹⁶⁶ Recommended airflow rates should be as high as possible, but no less than 10 litres per person per second, with a minimum of 6ac/h.¹⁶⁷ Carbon dioxide (CO²) monitoring can be used to assess ventilation of ultrasound rooms, if required.¹⁶⁹ Another helpful tool for workplaces is the Cambridge University online CO² calculator [Airborne.cam](https://www.airborne.cam.ac.uk/), to evaluate COVID-19 risk of infection from airborne transmission.

The NHSE documentation [Application of ultraviolet \(UVC\) devices for air cleaning in occupied healthcare spaces: guidance and standards](#) and [Application of HEPA filter devices for air cleaning in healthcare spaces: guidance and standards](#) should be reviewed when there is “poorly performing or inadequate ventilation” within the ultrasound rooms.^{169,170}

CO² levels provide “only a broad guide to ventilation rather than demonstrating ‘safe levels’”.¹⁶² Recommended CO² levels for areas where there is talking, such as an ultrasound room, should be below 800ppm; CO² levels consistently above 1500ppm indicate poor ventilation in an occupied room, for which action should be taken.¹⁶² A survey of UK obstetric sonographers’ working practices during the COVID-19 pandemic found that ventilation in scan rooms was identified as a risk by 54.2% of respondents following departmental risk assessments; however, only 9.1% reported that changes had been made to improve ventilation following the assessment.⁴⁵ Increased sonographer burnout and psychological distress was significantly associated with a lower perception of safety at work during the COVID-19 pandemic;²⁶ thus, staff need to feel safe in their working environment and should be fully involved in risk assessments. Psychological wellbeing is an important consideration when considering ventilation during periods of high community viral infection.

Area	Short-term actions	Medium-term actions	Long-term actions
Estates	Risk assess ultrasound rooms to ensure they meet national health and safety standards	Ensure facilities are available for staff rest and refreshment breaks	Evaluate the existing estate and consider ways to improve facilities to provide a safer environment for staff and service users and/or more integrated care, in line with national guidance
		Ensure secondary monitors are available for obstetric ultrasound rooms	

9. Quality

To facilitate the optimal service and ensure that quality standards of practice and equipment are met, it is important to consider ongoing audit, peer review and equipment QA. This section highlights some factors to consider when monitoring the quality of obstetric ultrasound provision to provide a supportive ongoing learning environment.

9.1 Quality standards in obstetric sonography

Ongoing audit and peer review will help to improve service quality and imaging standards. Audit is an essential component of the NHS screening programmes and is a requirement for meeting the Quality Standard for Imaging (QSI).

NHS FASP recommends that providers have a [screening support sonographer](#) and a deputy SSS with administrative support in place. [Antenatal Screening Wales](#) has similar requirements with named lead roles.¹ These roles oversee the implementation, delivery and monitoring of the ultrasound aspects of the screening service. The SSS and deputy SSS or leads for screening should have protected time to undertake these roles. If this time is not made available, the SSS or lead should firstly escalate to their line manager and if necessary contact the regional (SQAS) team for advice and support. There should be documented processes in place for all the functions as outlined by NHS FASP and DQASS or equivalent in the devolved countries; this is part of the NHS commissioning process. An essential part of this role is to provide updates to the ultrasound team and ensure any required cascade training is in place. In England the SSS is responsible for communication with NHS FASP, SQAS and DQASS, and attendance is required at provider and commissioner-led antenatal and newborn (ANNB) screening programme boards to represent the ultrasound service. The SSS is also responsible for providing feedback regarding the internal and external QA process. Each country has slightly

different terminology, but the sonographer leads will have similar responsibilities and requirements for communication and quality oversight.

Reviewing and learning from discrepancies and adverse events can provide evidence of reflective practice, and can contribute to the evidence for providers and users of the service as to its safety. Structuring the learning to help identify contributing factors can also help inform the organisation of trends that can be addressed to mitigate against reoccurrence and contribute to the enhancement of service user safety.

Sonographers ... attend a monthly early pregnancy MDT meeting which includes sonographers, consultants, and junior doctors. This meeting is focused on shared learning from an interesting or difficult case

... [It] benefits all staff as we gain knowledge from outside of our traditional roles, which builds a mutual respect among colleagues. It is important that we come together to discuss where challenges have arisen and that we learn from these as one team.

Dedicated Sonographer Events and Learning Meetings ... share audit findings, learning from discrepancy and excellence and invite internal and external colleagues to talk with us and share where they feel we can improve. By providing this forum for feedback, we are able to adapt, grow and improve cohesion with stakeholders. (MDT Case study, appendix 4.1.4)

The 'Better Births' report¹¹ suggests that:

Teams should routinely collect data on the quality and outcomes of their services, measure their own performance and compare against others' so that they can improve.

Annual DRs from the national screening programmes – such as the NHS FASP detection rates – provider-level report' sent to each provider by the National Congenital Anomaly and Rare Disease Registration Service (NCARDRS) in England, Congenital Anomaly Register and Information Service (CARIS) in Wales or Congenital Conditions and Rare Diseases Registration & Information Service for Scotland (CARDRISS) in Scotland – should be shared with the ultrasound team in a timely manner. These reports can be used to benchmark local DRs against thresholds set by the national screening programme for physical conditions, regional and/or national averages and previous local DRs.

Other areas of obstetric ultrasound can be audited using tools such as the BMUS growth scan audit tool,¹²⁷ audit templates in the SoR and BMUS Guidelines for Clinical Ultrasound Practice¹⁷¹ or alternative audit tools.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management
- Research

9.2 Quality Standard for Imaging (QSI)

Obstetric ultrasound departments should ensure that they are meeting the appropriate standards within the QSI. This will ensure that the service is meeting the expectations of both CoR and RCR. The service can also apply for accreditation against the QSI. Accreditation is managed independently by UKAS.¹⁷² Working through the QSI standards can assist services to make improvements to the quality of care, and ensure parents are involved and that their experience is improved. It also provides evidence that effective leadership, governance and operational processes are in place. Achieving this also provides stakeholders with reassurance that the obstetric ultrasound imaging service meets the high standards.

Services would be expected to meet Standards XR 1 through to XR 7 and US 8.¹⁷³ Services can also self-assess using the development and support tool. Further information is available on the CoR website.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management

9.3 Equipment quality assurance

QA of ultrasound equipment is an important element of any ultrasound service, particularly an obstetric service where measurement accuracy can influence pregnancy management and outcomes.^{174,175} Despite being a requirement of the NHS FASP,^{89,90} the Medicines and Healthcare Products Regulatory Agency (MHRA)¹⁷⁶ and the CQC,¹⁷⁷ in a survey of NHS Trusts, 7% of respondents had no QA programme and a further 23% reported only undertaking annual QA.¹⁷⁸ A sonographer-led QA programme should be in place for all antenatal ultrasound departments, supported by scientists or engineers to assist with acceptance testing and fault management.^{173,174,179}

All equipment should have maintenance contracts, to ensure equipment safety and ongoing quality. Providers offering antenatal screening should also meet NHS FASP service specifications by having “appropriate policies in place for equipment calibration and electronic safety checks, maintenance, repair and replacement in accordance with manufacturer specification to ensure programme sustainability”.^{89,90} In addition, regular inspection of ultrasound equipment should take place to check for

damage or wear. Where damage occurs, this should be reported and action taken to protect women and pregnant people and users.¹⁷² QA guidance for sonographers should be followed.^{171,174,175,179} Additional QA can be undertaken by the medical physics department or external providers, as required.

In addition to regular QA, the RCR and the Society and College of Radiographers (SCoR) recommend reviewing ultrasound equipment four to six years after installation to check the performance of the machine and whether there is a need to replace older equipment.¹⁷⁵ The quality of ultrasound equipment is extremely important in obstetric ultrasound departments, where the difference in measurement accuracy of 0.1mm can have significant consequences for pregnancy management and potential outcomes.

This could be linked to the following pillars of the career framework:

- Education
- Leadership and management
- Research

Area	Short-term actions	Medium-term actions	Long-term actions
Quality standards	Standardise peer review of images and reports within the department to provide a supportive learning culture	Develop the skills of all sonographers, to enable everyone to take part in the peer-review audits and learning	Consider implementing peer observation of scanning lists to increase learning and feedback opportunities
	Ensure processes are in place and used to support staff if concerns are raised during audits such as three-monthly image review	Ensure processes are in place to act on and support staff following external feedback such as six-monthly DQASS reports and annual NCARDS report	Consider the appointment of an obstetric sonographer audit lead within the department
	Ensure that an SSS (or equivalent) post is in place within the obstetric ultrasound department	Look to appoint a deputy SSS (or equivalent) if one is not already in post	Encourage sonographers to become regional professional/clinical advisors (or equivalent) for the national screening programme Plan regular team updates based on their learning
	Determine local DRs for national screening programmes	Compare local DRs against national standard; if local DRs are lower, investigate and implement ways to improve outcomes	Continue to monitor local outcomes with a view to improving DRs
	Review the QSI and assess whether the obstetric ultrasound department is meeting the standards	Explore whether the obstetric ultrasound department should progress to UKAS accreditation, if not part of the imaging department	Undertake the process and achieve UKAS accreditation for the ultrasound department
	Review current equipment QA processes and determine local requirements to meet best practice guidance and national screening standards	If not already established, ensure QA processes are in place to provide safe care for women and pregnant people and accuracy of measurements	Implement an equipment review and replacement programme within the obstetric ultrasound department

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Appendix 1: Patient information. Who will be performing your scan

Who will be performing your ultrasound scan?

Highly trained specialist practitioners called sonographers carry out ultrasound scans.

Sonographers, who are already healthcare professionals such as radiographers, nurses or midwives, study at university for at least 12 months to achieve a postgraduate certificate or diploma. Some also hold a Master's degree. Many of these sonographers are registered healthcare professionals with the Health and Care Professions Council (HCPC) or the Nursing and Midwifery Council (NMC).

Some sonographers start their healthcare role as a sonographer, spending two to three years completing their qualification in ultrasound. Sonographers without a healthcare background can register with the Professional Standards Authority accredited voluntary register, the Register of Clinical Technologists (RCT).

The sonographer is responsible for acquiring necessary images, interpreting those images, helping to make a diagnosis and writing a report of the findings. They should also be able to tell you what they have seen during the scan. Sometimes the sonographer will not have enough information to give you detailed information about the scan findings, but they should be able to tell you who will be able to give you more information and support, if there are any unexpected findings.

Ultrasound scans are very important medical examinations to check the development of your baby. It is important that the sonographer is able to concentrate during the scan so that they can check your baby is developing as expected. A number of people in the room can be distracting so one adult can come into the scan room with you. Please do not take photographs or videos within the scan room.

If you have any questions about your scan, please ask the sonographer.

Appendix 2: Example of an obstetric sonographer career pathway

Suggestions for roles within the obstetric sonographer career framework are highlighted in the chart below. More detailed information is available from a range of sources.^{17,40,41,87,182}

Obstetric sonographer	Enhanced practitioner obstetric sonographer	Advanced practitioner obstetric sonographer	Consultant practitioner obstetric sonographer
<ul style="list-style-type: none"> • Undertakes, interprets and analyses screening examinations if meets screening programme requirements • Performs and reports on a range of scans for monitoring pregnancy • Undertakes audit and assists with service development • Involved in clinical teaching, mentoring and supervision of student sonographers and healthcare professionals • Develops skills under supervision, if required, to undertake screening programme examinations 	<ul style="list-style-type: none"> • Undertakes, interprets and analyses screening examinations • Performs and reports on a range of scans for monitoring pregnancy • Undertakes audit and assists with service development • Involved in clinical teaching, mentoring and supervision of student sonographers and healthcare professionals • Preceptor for newly qualified sonographers 	<ul style="list-style-type: none"> • Undertakes, interprets and analyses complex examinations in high-risk pregnancies • Leads audits and service development projects • Teaches a range of professionals • Involved in research teams • Provides leadership in a specific area of clinical practice or manages a team • See Section 7 for possible areas of clinical leadership 	<ul style="list-style-type: none"> • Expert clinical practitioner, leading on complex examinations and/or procedures • Leads audits, service development and inputs into interprofessional local and national strategy • Provides educational expertise • Mentors and coaches others • Active researcher, presenting findings in papers and at conferences

Appendix 3: Example of a consultant sonographer job description

The job description provides suggestions for adaptation to local needs for a consultant obstetric sonographer role.

JOB DESCRIPTION

NAME:

JOB TITLE: **Consultant Sonographer (Obstetrics)**

GRADE: 8C

QUALIFICATIONS: Sonographer with a minimum of XX years post graduate experience in medical ultrasound with a Master's / Doctoral level award in medical ultrasound.

RESPONSIBLE TO:

REPORTS TO:

JOB SUMMARY

Key Tasks

- To demonstrate highly specialised clinical skills in ultrasound and act in a consultancy capacity and educational resource.
- To participate in the critical evaluation and review of clinical practice and/or research projects as required.
- To develop specialist based programmes/protocols using evidence-based practice and strive to improve and enhance standards of care, health and wellbeing for women and pregnant people.
- To perform complex diagnostic ultrasound examinations on women and pregnant people within obstetrics.
- Consultant sonographer lead in obstetric ultrasound (could specify a specific area) performing highly specialised and/or complex obstetric ultrasound examinations (could be specific, eg cardiac, multiple pregnancy, fetal medicine or general).

-
- To teach, supervise and develop multiprofessional staff to perform ultrasound examinations in line with the strategic direction of the Trust/Health Board.
 - Could add something here about expanded role, eg
 - SSS
 - Fetal medicine sonographer expert
 - multiple pregnancy expert/lead
 - communication skills trainer
 - quality and audit lead
 - sonographer-led discharge
 - To liaise with sonographers, obstetricians, midwives, other clinical staff and general practitioners on a broad range of issues associated with ultrasound.
 - To contribute to the research culture and support the development of the research groups within the organisation.
 - To be the lead sonographer in XXXX (region)-wide multidisciplinary meetings involving obstetric ultrasound imaging.
 - To be the lead for ultrasound clinical governance within the Trust/Health Board/antenatal services/ICS.
 - To provide strategic clinical ultrasound leadership through membership of the national ultrasound advisory group.
 - To be the lead within the maternity ultrasound department for the continuing education of ultrasound staff by the organisation of education and training programmes encompassing clinical governance requirements.
 - To participate in development of local, regional and national guidelines and interdisciplinary pathways/policies working across the health economy.
 - To advise the lead XXX (change dependent on who is responsible for the service) for ultrasound and business manager on the needs of the service.
 - To participate in the ultrasound on-call rota to provide ultrasound on-call cover when required.
-

Organisational and supervisory duties

- To develop with the senior obstetric management staff and lead clinicians a strategy for the development of ultrasound services for the Trust and developments with primary care Trusts.
- To define the scope and standards of clinical practice from evidence-based practice with senior staff within radiology, the Trust and Primary Care.
- To lead and develop the strategic direction of services in line with changing clinical need within the Trust. This includes meeting modernisation needs.
- To act as a departmental budget signatory when required.
- To have an effective contribution in MDTs.
- To attend and contribute at learning event meetings.
- To teach and instruct professional techniques and good working practices relevant to ultrasound staff.
- To attend relevant meetings on a broad range of Trust issues as required and develop policies and procedures in association with other professionals.

Training and governance responsibility

- To provide practical instruction, tutorials and assessment of learners undertaking postgraduate ultrasound training, ensuring developments of the educational IT base library and general resources.
- To be responsible for ultrasound clinical governance throughout the Trust.
- To train clinicians in ultrasound examinations in obstetrics.
- To develop and lead the XXXX ultrasound imaging XXX initiative.
- To organise the continuing professional development programme for ultrasound staff in conjunction with the lead practice educator/XXXX to ensure continued competence. This should include communication skills training specific to obstetric ultrasound.
- To maintain and improve the quality of ultrasound examinations and techniques by organising an effective programme of training and further study.

-
- To undertake and further external links with outside organisations for education and career development in ultrasound.
 - To carry out effective audit of ultrasound services.

Sonographic Responsibilities

- To independently perform, interpret, analyse and report routine and complex ultrasound examinations that are informed by but can vary from departmental protocols, including
 - A) Obstetric ultrasound
 - B) Early pregnancy ultrasound
 - C) Gynaecological ultrasound
- To liaise directly with other healthcare professionals, especially where the results of the ultrasound examination require treatment or referral to be expedited.
- To competently perform ultrasound examinations that demand complex analysis.
- To perform complex xxx.
- To perform eye ultrasound examinations.
- To contribute and lead audit projects within the ultrasound department.
- To integrates research evidence into clinical practice.
- To work autonomously and take responsibility for their own actions.
- To be responsible for delivering unexpected news to parents and ensuring that all staff have ongoing supportive training in this area.

Appendix 4: Case studies

A number of case studies have been provided to showcase different ways that MDT working has been successfully implemented within antenatal units to benefit the experience of both staff and parents, and how individual sonographers have developed their role within obstetric ultrasound.

Appendix 4.1 Case studies: Multidisciplinary working within obstetric services

The following case studies show how several UK ultrasound departments have integrated within the multidisciplinary obstetric service and the impact this has had.

4.1.1 MDT Case study 1

Mrs Suzanne Beattie-Jones

Imperial College Healthcare NHS Trust – Maternity Ultrasound

- **Tell us a little about your ultrasound unit**

We are based in Maternity and are accountable to Fetal Medicine and Gynaecology appropriately. We work cross site at both St Mary's Hospital (SMH) and Queen Charlotte's and Chelsea Hospital (QCCH). There are ten rooms (six at QCCH and four at SMH). There is an 8am–6pm rota and a rolling day off. There is a lead sonographer on each site. We have two students working across the sites.

- **How have you integrated the ultrasound team within the obstetric service?**

By building a close working relationship with the Head of Midwifery and General Manager. This has allowed me to be invited to all midwifery meetings that are appropriate, including: Safety and Quality, Risk Management, Department of Maternity, Senior Midwives, Trust Screening Steering Group Meeting (TSSG), Fetal Medicine MDT. The most important thing is to have a voice, be involved in investigations and really look for the root cause when issues arise. When creating action plans it is important that, as the sonography manager, I am involved in the sign-off process.

- **Are sonographers involved in MDT meetings, learning and other activities?**

Yes, where practical. I would love for all the Band 7 sonographers to be more involved but that would mean increasing the establishment.

- **How does the team work together in the best interests of both staff and parents?**

Over the years there have been a variety of methods, including: serious incident investigations, quality improvement projects, a 'Big Room' initiative, off-site training for all leaders. Audit is used to identify areas for improvement in the wider team and antenatal care. Most importantly, listening to each other.

- **What challenges did you have in developing the team working and how did you overcome them?**

Lots of different opinions, finding time to discuss and listen. To overcome this we ensure that meetings are well chaired, minutes are taken and actions followed up on. When there is a discrepancy, finding a resolution that all are happy with. Team meetings have helped in some way; however, they too can be a challenge. Away days have helped and celebrating success ensuring ultrasound is included at all times.

- **How has this integrated working made a difference?**

Staff and patients feel listened to. As such if there is an issue, staff are able to resolve it quickly and easily as they know who to contact.

- **What do you plan to do next to develop this multidisciplinary team working?**

Continue to ensure that ultrasound voice is heard and listened to.

Morale is low, the team are tired, so will look at establishment so we can send more staff to MDT meetings, courses and offer further development opportunities.

Sonographers' job plans need to be reviewed. Currently due to the workload pressures they do not have time within their job plan for other activities that might be expected of a Band 7 member of the antenatal team or comparable allied health professional.

4.1.2 MDT Case study 2

Kathryn A Cook – Lead Sonographer
St George's Fetal Medicine Unit 2013–2019

I qualified in Radiography in 1980 and took my ultrasound DMU in 1986. I worked in various hospitals but finally in the Fetal Medicine unit (FMU) at St Georges Hospital (SGH) in London as the lead sonographer from 2013, having specialised in obstetric scanning within that unit for several years before.

- **Tell us a little about your ultrasound unit**

This FMU is a vibrant multicultural ultrasound department, combining routine screening, fetal medicine and day assessment. It is at the cutting edge of new evidence and research and as a tertiary referral centre, sonographers have easy access to excellent CPD in fetal anomalies and observing management of difficult cases, thereby gaining valuable experience in parental approach when scanning.

- **How have you integrated the ultrasound team within the obstetric service?**

Sonographers are positively encouraged to take part in teaching, presenting, medical education (training), research and publishing and there is huge support in circumstances where a sonographer may feel unable to challenge a consultant team.

My work here started in late 1997 and with unit director encouragement and guidance quickly moved forward to publishing and presenting on cleft lip and palate, as well as fetal cardiac image auditing, publishing a case report on Binder Syndrome and also involved in research into muscle biofeedback in postnatal women and pregnant people and publishing on this topic.

The lead position came next, which meant being familiar in depth with the workings of the department and the staff within. It is hard work to maintain good working relations with all of the team dynamics and specialities to create a good team that work cohesively and support each other.

- **Are sonographers involved in MDT meetings, learning and other activities?**

All the staff are expected to attend the weekly MDT meeting. This was very much a working lunch but again brought the team together and allowed follow-up cases they themselves may have been involved in or just for interest. Through the MDT meetings, consultant faces from other specialities became familiar, thereby making them far more approachable to discuss patients with.

- **How does the team work together in the best interests of both staff and parents?**

The rota allowed, as much as was possible, for the sonographers to rotate through FMU, to learn and observe and occasionally follow up specific patients they may have referred there.

A key factor in the team was working independently but meeting others in the team at a single point for printing results. I think that we are never too old to learn and this gave an opportunity to each sonographer to ask an opinion if they had a difficult case, whether that was from a challenging technical issue or from a further management aspect.

Although hierarchy is needed with seniority and experience in any unit, this team flourished with the integration of all the sonographers regardless. With confidence to communicate, the effect was that parents were given the best possible care and opportunity to see their baby and be guided through their scans.

- **What challenges did you have in developing the team working and how did you overcome them?**

Getting the team to work together could sometimes be difficult and there will always be times when it isn't perfect. I found that it was key to make each and every member of the sonography team feel valued by telling them when they had done something well, give them more responsibility and pass on compliments, but this must be balanced with feedback from audits which may show that more diligence is required from them.

- **How has this integrated working made a difference?**

Encouraging staff to take part in local training days, presenting or being involved in unit audits. This means that they will feel more accomplished and also respected by their peers.

As a result, the team at SGH was cohesive, experienced, they learned from one another and they cared about each other, which meant that parents scanned by them were managed and scanned competently.

- **What do you plan to do next to develop this multidisciplinary team working?**

It is really important for any ultrasound unit to move forward with medical advances. With evidence-based practice, care for the women and pregnant people will improve and local changes with local support can be implemented.

Another key point is support for the lead sonographer within their management structure.

With the right support and respect, the whole unit and team becomes a better place to work, and the ultimate results are:

Cohesive team:	Support for each individual sonographer from the team
	Low sickness record for the unit
Dedicated team:	Wanting to learn more, gives better work satisfaction
Interested team:	Better learning, better skills, better scanning ability

4.1.3 MDT Case study 3

Hayley Whitehouse – Professional Lead for Ultrasound
Walsall Manor Healthcare

- **Tell us a little about your ultrasound unit**

Walsall is a small district general hospital which provides an obstetric ultrasound service to patients local to Walsall and its surrounding areas. We are in close proximity to Birmingham and Wolverhampton where our tertiary referral centres are placed. Historically, we have been one of the worst areas in the UK for poor obstetric outcomes due to the poor socio-economic status of the majority of our patients, and sadly with the rising cost of living this is becoming more evident. We have an FMU consisting of three consultant obstetricians and a fetal medicine midwife, where we refer people if an unexpected physical condition is detected. We have five ultrasound rooms which are constantly staffed due to the demands on the service, and we also offer an out-of-hours service (evenings until 8pm, and Saturdays all day) which is predominantly covered by bank staff as we do not have enough resources to fully introduce this working pattern as part of the core hours. More recently, a few sonographers have been asked to change their hours to suit the service by doing longer days and to hopefully give them a better work/life balance.

- **How have you integrated the ultrasound team within the obstetric service?**

When I started working at the Trust five years ago as a Band 7 sonographer, relations between the maternity team and sonographers were strained. I recognised that this relationship could not continue, so I took the following steps to enable better integration and collaborative working between both teams. I managed this by introducing:

- Monthly meetings with the antenatal clinical manager. These were sometimes fractious but we both persisted, because it was important to show that we were a united front (if sonographers were in the wrong I would tell them, but I would also stand up for them if they were in the right). This I feel helped show that as a team we were reasonable.
- Meetings with the care group managers to gain support to extend the scope of the service, particularly as Saving Babies' Lives Care Bundle v2 was at the forefront of maternity services. Together we wrote a business case to try and support this better. Although this business case was not future proofed as demand increased further, it at least made a start on improving things.
- Sonographer involvement in perinatal mortality and morbidity meetings. This has helped sonographers to learn, but also share their knowledge and skills.
- New scopes of practice to improve parent experience, such as sonographer-led discharge. These help parent pathways and reduce unnecessary midwife appointments, helping support the antenatal team, who are also under pressure.

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- Paid rest breaks in the working day, using my expertise as a SoR union representative and relevant legislation such as Health and Safety (Display Screen Equipment) Regulations.
 - Review of workloads. Due to the high demand for ultrasound examinations there were concerns over quantity not quality of scans. One of our consultant sonographers audited our day lists. If anyone scanned more than they should have, their images were checked and conversations and monitoring were undertaken to make sure the demand was not impacting quality and patient safety.
 - New automated transducer decontamination systems across maternity, gynaecology and early pregnancy unit. This helped to build relations with the wider teams.
 - Developing roles within the team, for example a training lead, a twin lead and uterine artery lead trainer. This has proven really good for team building, morale and resilience within the team.
 - Training of midwife sonographers, which had not been successful in previous years. This has helped interprofessional development and integrates our teams.

- **How has this integrated working made a difference?**

Over time, the relationship between the sonographers and the maternity team has grown. We have realised that we are stronger together. We have just developed a pathway to implement uterine artery Doppler scans and there is a clear understanding that we want to provide a good service but we have to do it the right way by working together, involving each other and by realising that no disagreement is personal – we just all have different reasoning for our decisions. There is lots of work going on in Walsall but I feel we are going from strength to strength together as a team.

- **What do you plan to do next to develop this multidisciplinary team working?**

Going forwards, I aim to produce more streamlined pathways for expectant parents, in discussion with the maternity team, to help workload across the maternity team, improve parental experiences and sonographer role development. As part of that we aim to look at increasing pay banding for sonographers or use recruitment and retention premiums to attract sonographers to work here, increase training and development opportunities, including the development of two more consultant sonographer posts, and offer stability in our roles not only within the team but to the wider multidisciplinary teams.

4.1.4 MDT Case study 4

Roxanne Sicklen – Clinical specialist sonographer
Royal Free London NHS Trust

- **How have you integrated the ultrasound team within the obstetric service?**

Advancements in ultrasound practice have positioned sonographers at the centre of modern maternity care in the UK. The work of our medical, midwifery and nursing colleagues relies heavily upon our services; this is particularly true of early pregnancy care. At our hospitals, the majority of ultrasound scans are performed by sonographers. These sonographers work in both the early pregnancy and main maternity departments, thus creating an element of consistency and a vital link between these often-separate areas of care.

Our department has achieved funding for a daily ‘clinical support’ (CS) sonographer. The CS is a senior sonographer who is rotated to a ‘scan free’ session, whose role is to liaise with our clerical and clinical colleagues in antenatal clinic and the early pregnancy unit on behalf of the sonography team. They are also able to help patients resolve issues in a timely manner which improves satisfaction and reduces complaints. One of the key roles of the CS sonographer is to take over the scan list of a sonographer scanning in antenatal clinic should a miscarriage or unexpected physical condition be identified. This provides the scanning sonographer adequate time to discuss the scan findings with the patient and ensure the correct onward care is actioned (eg transfer to the early pregnancy unit for counselling and management of miscarriage advice).

- **Are sonographers involved in MDT meetings, learning and other activities?**

Sonographers are invited to attend a monthly early pregnancy MDT meeting which includes sonographers, consultants, and junior doctors. This meeting is focused on shared learning from an interesting or difficult case from the previous month. Because these meetings are attended by a multidisciplinary team, the discussions include both clinical and ultrasound-based content. This format benefits all staff as we gain knowledge from outside of our traditional roles, which builds a mutual respect among colleagues. It is important that we come together to discuss where challenges have arisen and that we learn from these as one team.

We also hold quarterly meetings between the sonographers and early pregnancy lead consultant. The sonographers are invited to discuss cases which they have found difficult or feel they would like further feedback on. In future we hope to include the early pregnancy nurses within these meetings as they are central to the early pregnancy patient pathway.

- **How does the team work together in the best interests of both staff and parents?**

Because our sonographers work across our early pregnancy and maternity departments, we are able to facilitate a seamless link for patients that require care in an alternative setting. An example of this would be a patient attending the early pregnancy unit beyond eleven weeks and two days. Our sonographers would offer to perform the nuchal scan for patients that have booked their antenatal care at our Trust and would like combined screening. This benefits the patient as they do not have to return for a separate visit and benefits the department by freeing up capacity for another patient enabling us to achieve our screening responsibilities.

- **What challenges did you have in developing the team working and how did you overcome them?**

Although ultrasound is pivotal to maternity services, the role of the sonographer remains poorly understood by many of our colleagues. At times, this can lead to unrealistic expectations and conflict. To overcome this, we welcome midwifery students and junior doctors to attend our scan lists; this provides them with an insight into our skills and our challenges!

Our department has a good relationship with our wider colleagues and an open culture of shared learning. To facilitate this within ultrasound, we have dedicated learning meetings (SEALM – Sonographer Events And Learning Meetings) during which we share audit findings, learning from discrepancy and excellence, and invite internal and external colleagues to talk with us and share where they feel we can improve. By providing this forum for feedback, we are able to adapt, grow and improve cohesion with stakeholders.

4.1.5 MDT Case study 5

Jocelyn Reid – Lead Midwife Sonographer for scanning and screening
Raigmore Hospital, Inverness

- **Tell us a little about your ultrasound unit**

We are a small team of eight midwife and radiographer sonographers in Highland. We cover a vast area in Highland, including Fort William and Skye. We have a two-site model, offering obstetric ultrasound services within the maternity units at Raigmore, Inverness and Caithness General, Caithness. We have approximately 1800 deliveries per year, eight GE E10 scan machines, a rolling recruitment training programme for trainee obstetric/midwife sonographers, and provide a second opinion for Caithness at Inverness while maintaining excellent services with our tertiary ultrasound services in Aberdeen and Glasgow.

- **How have you integrated the ultrasound team within the obstetric service?**

We have always been integrated within the obstetric service, working closely with our management and clinicians to ensure an MDT approach, integrating our screening midwives, antenatal clinics, specialist clinics and diagnostic ultrasound together.

Our team are actively involved in the following MDT approach. This includes:

1. Medical student teaching
2. Student midwife placements to educate our students on consent for diagnostic ultrasound and the importance of identifying the at-risk fetus
3. Monthly peer review with the sonographers/medical staff/screening midwives –QA of imaging/discussion of cases/ongoing fetal medicine case review
4. Weekly meetings with paediatricians – assessing upcoming caseloads – twins/fetal anomaly and outcomes
5. Monthly lead midwives meeting
6. Actively involved with national screening division
7. Provide feedback to team lead midwives and sonographers using GAPSCORE, which is a tool to help midwives and sonographers when babies are born undetected below the 10th centile with missed opportunities such as symphysis fundal height or inaccurate EFW on scan
8. Provide a yearly update session to medical and midwifery staff on changes to screening programmes, department performance, data collection and GROW outcomes for reducing stillbirth, in keeping with Saving Babies' Lives

- **How does the team work together in the best interests of both staff and parents?**

We work collaboratively together with the MVPs group, listening to feedback and ensuring any changes, such as no children attending for scan, are decided upon with service user representation. We have quarterly feedback questionnaires we give to all patients using our service to see if we can improve, and monitor any trends. We ensure that our obstetric ultrasound framework is a live document which is kept up to date with the latest RCOG, SoR and BMUS guidance for safe, effective practice. Any Datix and complaints are investigated with quick response and learning outcomes where applicable.

- **What challenges did you have in developing the team working and how did you overcome them?**

We are a team that work together very well. I ensure that all staff have a voice that is heard, we encourage discussion and resolve issues quickly, discuss change of practice at peer review and have any additional meetings to discuss new implementations that are evidenced based and will be a positive step to improve outcomes. It is vital that the team are encouraged to be open and honest, feel valued and are listened to. Positive feedback and delegation of initiatives leads to ownership and productivity.

- **How has this integrated working made a difference?**

We work together very well; we have an MDT approach for fetal medicine and specialty clinics. Data analysis is collated and the databases we have for twins/SGA/fetal anomaly/QA for NT are all shared within the department. This has led to a team approach where everyone has an identified role to contribute and help develop our levels of knowledge, change in practice and expertise.

- **What do you plan to do next to develop this multidisciplinary team working?**

We have a rolling recruitment training programme that we wish to develop and are currently being assessed for a review in location for our obstetric ultrasound services. We aim to have the antenatal clinics, specialist twins/SGA/diabetes and maternal medicine clinics together to have a collaborative working approach to antenatal service delivery in Highlands.

Appendix 4.2 Case Studies: Individual obstetric sonographer career development

The following case studies demonstrate how sonographers have developed a variety of skills and roles within obstetric ultrasound and beyond.

4.2.1 Case study 1: Consultant sonographer and ultrasound manager

Alexandra Drought – Superintendent and Consultant Ultrasonographer
Chelsea and Westminster NHS Foundation Trust

- **Tell us a little about your role/area of expertise**

I have a dual role as Superintendent and Consultant Ultrasonographer of the Obstetrics and Gynaecology Ultrasound Department. The Ultrasound Department consists of ten ultrasound rooms and I manage 16 sonographers and one student sonographer. The department sees approximately 120 obstetrics and gynaecology patients per day.

As the consultant sonographer, my role is currently fourfold: clinical expert, educator, professional leader and researcher. My passion is clinical work and I spend 50% of my time scanning patients. During the week, I rotate around the ultrasound department so that I work in every speciality each week, which includes obstetrics, gynaecology, gynae oncology and early pregnancy. My aim is to always deliver a high-quality ultrasound service and excellent patient care. I regularly provide specialist knowledge in obstetrics, gynaecology and early pregnancy ultrasound to the doctors working alongside me in the various clinics. As consultant, I am seen as the clinical expert in my sonographer-led department and I regularly have to run between clinics to give second opinions and carry out the complex scans.

- **What steps did you take to get to this role?**

My journey to becoming an accredited CoR consultant sonographer began with supervising, training and mentoring student sonographers, which I still do regularly. I enjoy teaching a great deal, so I facilitated a learning culture within the ultrasound department, by teaching and lecturing to my team of sonographers on a weekly basis, during a dedicated one-hour education meeting. During these meetings I give lectures, review journal articles, discuss recent audits and look at obstetric and gynaecological feedback from interesting patient cases.

Mentoring students meant I formed a good working relationship with the lecturers from City, University of London, who used to visit the department as my students' clinical assessors. They soon became aware of my love for teaching and this led to me being invited to City as a guest lecturer and over the last 17 years I have lectured on obstetrics, gynaecology and subfertility ultrasound.

Wanting to develop further professionally, I arranged to work in a neighbouring tertiary fetal medicine department for one day per week. My time spent in a fetal medicine department was incredibly rewarding and I gained experience in fetal medicine scanning, fetal genetics, management of fetal anomalies and counselling skills. After a year, the fetal medicine consultants suggested that some of the fetal medicine patients could return to the West Middlesex University Hospital for their follow-up scans with me, as a specialist sonographer in fetal medicine. Alongside this, I wanted to improve clinical practice by increasing the antenatal detection rate of vasa praevia, heart anomalies and placental insufficiency. My team of sonographers enjoy aspiring to high detection rates, accurate diagnoses and high-quality patient care.

It was when I became a member of the SoR Ultrasound Advisory Group in 2015 that I began to review and comment on new national ultrasound guidelines and screening pathways. I also started to attend focus groups and workshops, which all involve improving the ultrasound profession and the patient experience.

In 2016, knowing that I met all four domains of consultant practice, I applied for and achieved Consultant Accreditation at the Society of Radiographers. There is an increasing expectation from the CoR for consultants to embark upon doctoral studies. Therefore, in 2019 I began a professional doctorate and I am now in my third year. So far it has been an incredible learning experience and despite the long hours, I am enjoying it a great deal.

It is important to maintain my consultant status by ensuring I continue to contribute to all four pillars of consultant practice and to the ultrasound profession as a whole. By doing so, a ripple effect tends to take hold and you are offered more and more opportunities, which allows you to keep contributing to the profession. For instance, I published a case study on the antenatal ultrasound detection of bilateral cataracts in the journal *Ultrasound*. The British Medical Ultrasound Society then asked me to present my case study at their annual scientific meeting. This led to further invites to speak at conferences on various obstetrics and gynaecology ultrasound topics and soon I was setting up study days on behalf of the SoR. Following publication, I was also invited to peer-review articles for potential publication in ultrasound journals. It wasn't long before I was asked to sit on the Professional Standards Board and the Education Board at the British Medical Ultrasound Society and this has also led to other projects.

My consultant status has given me the opportunity to work between the hospital, professional bodies and academic institutes, which allows me to network with many ultrasound professionals. This enables me to advise, educate, facilitate learning and develop sonographers locally and nationally, which gives me immense professional fulfilment.

- **What support did you have along the way or would have been helpful to have had?**

I had a very supportive manager who allowed me to attend the tertiary fetal medicine centre for one day a week, so that I could develop my clinical skills. My line manager could see the benefit of having a consultant sonographer within the department, especially as there was no medical input in the department at the time.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

I advise speaking to your line manager and expressing your goal to be a consultant sonographer in your annual appraisal. While it helps to have the support of your line manager, you must be prepared to take ownership of your personal development and put in many hours of your own time to achieve your goals. I definitely recommend applying for consultant accreditation with the SoR. Participating in the four pillars of consultant practice gives me a great sense of achievement and job satisfaction and makes me a better practitioner for my patients. I've always found the more you put into your work, the more you get out of it.

4.2.2 Case study 2: Ultrasound manager and clinical advisor for the antenatal and newborn screening

Sam Frater – Ultrasound Superintendent Radiographer
Northampton General Hospital (NGH)

- **Tell us a little about your role/area of expertise**

I manage the obstetric and non-obstetric ultrasound service at NGH but due to work-related musculoskeletal issues stopped scanning many years ago. When I scanned, I aimed to complete the examination to the best standard possible and when I stopped, I decided that I would aim to support my team to work to the best standard possible. The introduction of image review for NT scans started my interest in quality improvement and this has become my focus for many years and subsequently I am undertaking an MSc in quality improvement and patient safety at the University of Northampton.

- **What steps did you take to get to this role?**

I realised that I liked to be proactive and prepared for any changes so started to get involved with NHS FASP and DQASS, became a Clinical Advisor for the Antenatal and Newborn screening programme to review the obstetric ultrasound service provided at other sites and a Technical Advisor for the QSI for the non-obstetric service. By working with these people, you get to have your opinion heard when decisions are being made and get to prepare for changes to standards, such as the introduction of the three-vessel trachea view at the anomaly scan. We introduced this into our department on the date the guidance was released and then I participated in the training events to pass on our experience of the change on the service to other clinical colleagues.

Most recently I have voiced a concern about the effect of new machine technologies on the NT scan and have worked closely with NHS FASP and DQASS to evidence the issues and identify possible solutions. From this we are looking to publish in a SoR publication and create an e-learning resource on the DQASS portal.

- **What support did you have along the way or would have been helpful to have had?**

I was talked into becoming an ANNB screening advisor and was nervous about doing it, doubting whether I had the abilities to do so, but reviewing other Trusts allows you to learn from their service as well as them learning from you. I would recommend doing this as it is a mutually beneficial experience.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

Creating networks has been important. I co-created and chair the East Midlands Ultrasound Leads Group which allows people covering similar roles to compare notes, share best practice, support each other, and often moan to a group that really understand! It is the network of contacts in the various areas that is useful and comes about when you raise your opinions in meetings and volunteer for projects or reviews, so I recommend getting involved.

Trying to promote change and improvements can be difficult, so make sure that you have evidence to support your plans so it can be shared with those involved and have confidence in what it is you are trying to achieve in the long term.

4.2.3 Case study 3: Consultant sonographer and interventional sonographer including amniocentesis

Tracy Butcher – Consultant Sonographer
Lancashire Teaching Hospitals NHS Foundation Trust

- **Tell us a little about your role/area of expertise**

I am currently employed full time as a consultant sonographer and spend 70% of my time scanning. I attend two MDT meetings each week and undertake research and teaching as part of my role.

I undertake all aspects of obstetric, gynaecological and general medical scanning but have three specialist roles that I focus on.

1. High-risk obstetric scanning. Patients are specifically referred to my care if anomalies are suspected or confirmed on ultrasound. I undertake the role of the 'local' obstetric ultrasound specialist as specified by NHS FASP and this is a role that I would like to see more sonographers develop into.

In this role I scan, counsel (often for termination of pregnancy), consent and undertake interventional procedures such as amniocentesis as required. I also care for parents who have had previous complications in pregnancies or have other high-risk or medical factors. I work closely with the obstetric and neonatal teams but also with our tertiary referral centre, providing shared care during pregnancy to our more complex surgical patients.

I also provide an amniocentesis service for some of the surrounding smaller Trusts.

2. My second specialist role is undertaking gynaecological interventional procedures. I undertake hysterosalpingogram (HSG), hysterosalpingo contrast sonography (HyCoSy) and cyst/pelvic drainage. I work closely with the Gynaecology team and my role in this area reduces surgical intervention in many cases.

3. My final role is in Head and Neck ultrasound. I joined this team in 2014 and again undertake FNA, biopsy and drainage, working closely with the team providing this service.

- **What steps did you take to get to the obstetric part of the role?**

I qualified in Ultrasound in 1997 and completed my Master's degree in 1999. Since then I have continued to develop, learn and advance. My practice is underpinned by knowledge and many years' experience working full time in this field. I joined the team at Lancashire Teaching Hospitals initially as an ultrasound service manager and developed advanced clinical skills predominantly to meet the demands of an ever-growing and changing service.

With regard to advanced obstetrics, most of my training was provided by amazing fetal medicine specialists who I worked closely with for many years. As an experienced sonographer I had the clinical skills to detect fetal abnormalities but spent many years developing my skills further in counselling, intervention and managing complex cases.

- **What support did you have along the way or would have been helpful to have had?**

I have an amazing role in the Trust that is varied and never monotonous. The medical colleagues that have supported my training all very generously shared an exceptional level of both skill and knowledge and I don't think I could have asked for more support. I have continually attended relevant formal courses; however, most of my skills have been developed through clinical practice and audit. MDT follow-up is essential when undertaking these advanced roles. I believe this is the best way to develop in these specialist fields.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

My job involves an unusual combination of roles that developed due to my willingness to continually learn and ultimately service need. I would really like to see more sonographers working in advanced obstetric care. There are so many amazing sonographers that detect the most subtle abnormalities in pregnancy that would readily have the skills to develop further in this field. The advice I would give to anyone interested in this role is be confident and make your desire to develop and learn known to everyone who will listen! These skills can be developed with the right support.

4.2.4 Case study 4: Principle lecturer, lead radiographer for an ICS and independent sonographer expert witness

Dr Trudy Sevens – Principal Lecturer at Sheffield Hallam University, Lead Radiographer for South Yorkshire Integrated Care System and Independent Sonographer expert witness

- **Tell us a little about your role/area of expertise**

I am an HCPC registered diagnostic radiographer, specialising in ultrasound with an interest in obstetrics and early pregnancy and have experience of leading the diagnostic services in both of these areas. I have clinical competencies and expertise in a wide range of ultrasound, including obstetrics, gynaecology, fertility work, abdominal and cardiac ultrasound, and of working as an autonomous clinical practitioner, reporting independently in the clinical setting.

I have acted as a sonographer expert witness for six years in both obstetric and gynaecological legal cases on behalf of the Claimant and Defendant. I have undertaken Bond Solon training in report writing, data protection, court room skills and discussions between experts and am on the CoR expert witness list.

I am at the forefront of ultrasound education as a Principal Lecturer and the previous Professional Lead for Diagnostic Imaging within Higher Education at one of the biggest UK providers of Allied Health Professions education. I also have experience as a course leader for both the full-time and part-time MSc Medical Ultrasound routes as well as the obstetric ultrasound lead for the provision. I have a wide range of experience in all aspects of academia and business development and of managing and leading diverse and multiprofessional academic teams, cross-department collaboration and strategic leadership.

I was a key driver in the establishment of the national sonography trailblazer group for degree apprenticeships and am the deputy chair of this group. Through my commitment to developing innovations in teaching and education I led on the development of one of the first sonography degree apprenticeship courses to be established in England. It is anticipated that this work along with the national work will revolutionise the education of the sonographer workforce of the future.

I have led on responses to national tenders and development of new educational pathways, for example the development of a specific ultrasound short course for midwives and other health professionals to undertake third-trimester ultrasound scanning.

I have undertaken a clinical placement expansion project exploring a proof of concept study to increase the use of simulation and innovation to supplement health professions' student placements. This has led to significant investment to establish a dedicated sonography training centre within the South Yorkshire region which I am leading on in my lead radiographer role for the South Yorkshire Integrated Care System. In this role, I supported the obstetric ultrasound service leads with implementation of changes to practice throughout the COVID-19 pandemic and continue to support the elective recovery of services. Ultrasound is one of the key priority areas for the South Yorkshire ICS.

I am an active researcher with a workforce and leadership theme and I am currently leading on a project to establish a consensus on the practice of obstetric sonographers in the identification and reporting of fetal echogenic bowel. Additional roles include editorial board and previous associate editor for the journal *Ultrasound* up until 2021, secretary for the College of Radiographers Qualitative Research Special Interest Group and invited speaker at conferences and study days.

- **What steps did you take to get to this role?**

My interest in ultrasound was sparked while on placement as a student radiographer. I was fascinated by an obstetric dating scan that revealed five babies! This passion was further ignited as a newly qualified radiographer spending time in ultrasound, assisting the radiologists at a large teaching hospital. Training posts were rare, so I moved employers and was fortunate a few years later to successfully secure a sonographer training post. I really enjoyed the work but wanted to progress further and so secured a post to lead a new dedicated service in early pregnancy assessment. I also enrolled to complete my MSc and started to become more involved in student training, both clinically and at the university, eventually moving into a full-time senior lecturer and course leader post.

I held a strong desire to secure the sonography workforce as a profession in its own right and the start of a Doctorate in Professional Studies allowed me to focus on this. My doctoral journey took four and a half years to complete on a part-time basis while working as a full-time member of the academic team and maintaining my ultrasound clinical skills.

I actively pursued my post-doctoral development, leading on several research projects with a workforce transformation theme. My current secondment with the South Yorkshire ICS as the lead radiographer complements this further as I am responsible for the development and implementation of the imaging workforce strategy across the system. My unique position spanning clinical, strategic system working and academia is an asset to professional progression for radiography and sonography.

- **What support did you have along the way or would have been helpful to have had?**

My ultrasound training was in a relatively small, friendly and very supportive department. I enjoyed my role immensely. My practice educator inspired me to get involved in ultrasound teaching and to pursue my MSc.

Throughout my career I have been fortunate to have many supportive colleagues and managers; this has been invaluable for my professional career development.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

The best advice I can give is to use the support around you. Never let an opportunity pass you by and believe in yourself – you can and should do it. Be proactive and seek out those opportunities, network and offer to be involved even if time constraints appear to present major challenges.

Accept that we can never know everything and acknowledge your limitations. We are a team and if you don't know the answer, it's likely that one of your colleagues will.

4.2.5 Case study 5: Clinical specialist obstetric ultrasound

Helen Varley – Clinical Specialist Obstetric Ultrasound
United Lincolnshire Hospitals Trust (ULHT)

- **Tell us a little about your role/area of expertise**

My role is very varied. Part of my role involves working closely with our consultants who have a specialist interest in fetal medicine. I scan alongside them and undertake interim scanning on their behalf to ensure continuity of care for our rural parents. I still scan some routine screening lists and early pregnancy sessions as well as being responsible for all the obstetric audits, quality improvement projects and multidisciplinary teaching. I have an MSc in ultrasound and over 25 years' experience in obstetric ultrasound. I have previously been a specialist visiting lecturer at Derby University.

- **What steps did you take to get to this role?**

Getting the clinical specialist role took time and patience. I originally started as the SSS and along the way accumulated more responsibilities. I attended some study days in my own time and self-funded my MSc. The turning point came when our department had a new Ultrasound Services Manager. She understood the complexities and demands of the obstetric ultrasound service and acknowledged that a specialist role was required to fulfil our ongoing clinical commitments and for service improvement. We are now very fortunate within ULHT as there is an ongoing commitment to sonographer development at all levels and within all ultrasound specialities.

- **What support did you have along the way or would have been helpful to have had?**

I have been fortunate to have had the support of my Ultrasound Services Manager who has helped and guided me in the development of the new clinical specialist role. Inevitably, there have been times when I have suffered from 'imposter syndrome', but these days are now very few and far between. Perhaps anyone considering a clinical specialist role may benefit from an element of mentorship from someone already in the clinical role.

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- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

The best advice I can give is to allow other professionals to see the passion you have for obstetric ultrasound, volunteer for the unpopular jobs, invest in yourself (and not necessarily from a financial point of view). Interact with the wider obstetric team and if you have to, make a nuisance of yourself to ensure your voice is heard.

4.2.6 Case study 6: Lead research sonographer

Ellen Dyer – Lead Research Sonographer/Sonographer

Department of Obstetrics and Gynaecology, University of Cambridge, Rosie Hospital, Cambridge

- **Tell us a little about your role/area of expertise**

I currently combine NHS obstetric scanning with a research role within the Department of Obstetrics and Gynaecology at the University of Cambridge. My role as Lead Research Sonographer involves co-ordinating, performing research scans and managing a small team of research sonographers for [POPS2](#) (a [prospective cohort study and randomised control trial](#) looking at ways to improve the early detection of women and pregnant people likely to develop pre-eclampsia or fetal growth restriction).

- **What steps did you take to get to this role?**

As a radiographer by background I completed a postgraduate diploma in medical ultrasound in 2007. I then consolidated my scanning skills for six years in abdominal, gynae and obstetric ultrasound. During this period, I became involved in small projects and audits within the department that enabled me to gain experience of basic statistical analysis and preparing conference posters. It was at this point that I also started to get involved with ultrasound on a national level, with encouragement from my then manager, and served my first term as a member of the BMUS council. This was a brilliant opportunity as it gave me an awareness of ultrasound outside my immediate department.

I have always sought to take advantage of any opportunities that present themselves to me and in 2010 when I saw an advertisement for a radiology registrar to undertake elastography and extend field of view ultrasound research I applied as a sonographer. I was fortunate enough to get the job and this gave me my first taste of multidisciplinary research, working alongside senior engineers, PhD students and radiology consultants. In this role I was very much left to my own devices, which at the time I found challenging, but the work did result in my first co-authored publication on 3D extended field of view ultrasound. Simultaneously I also applied and was awarded a fellowship through the East of England Deanery to undertake an MSc project looking at the accuracy of cervical length measurements. Looking back, I think it was during this period that I realised that my passion was obstetric ultrasound.

When I returned to work after maternity leave in 2014, I made the decision to work part time and only perform obstetric and early pregnancy scans. This decision was pivotal to where I am now and allowed me to concentrate on my obstetric scanning skills.

In 2016 I helped to establish the Preterm Surveillance Clinic at the Rosie Hospital. This enabled me to start to extend my role in obstetrics and strengthen the links I had already started to develop with the wider maternity multidisciplinary team.

By showing myself to be an active member of the maternity department willing to take on extra responsibilities, I found myself in the ideal position when the opportunity arose to join the POPS2 team as Lead Research Sonographer in 2019.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

The best piece of advice I could give newly qualified sonographers is to create your own opportunities, seek out a good mentor and believe in your own abilities.

4.2.7 Case study 7: Practice educator and previous SSS

Sujata Patel – Practice Educator

The Ultrasound Academy, Central Middlesex Hospital, LNWUH Trust

- **Tell us a little about your role/area of expertise**

The US Academy was started in September 2017 with funding support from HEE, and collaboration with Samsung, which enabled us to start with two scanning rooms, a lead tutor post and Medaphor simulator. We expanded to three rooms in 2019, and in 2021, two (1.6 WTE) dedicated practice educators were appointed. Recently, we acquired a machine for a fourth training room, which will be utilised primarily for Radiology Registrar training.

The academy provides a dedicated training environment which is conducive to optimise training. In addition to longer examination times, the academy is able to provide tutorials, detailed review and reflection on scanning sessions, with an aim to set objectives for the next session. The simulator is available to practise any area of difficulty. We have students from radiography, midwifery and physiotherapy backgrounds who are studying towards a PgC, PgD or MSc in Medical Ultrasound. With appropriate supervision, the trainees undertake ultrasound examinations, interpret and analyse scan findings. Trainee sonographers are encouraged to develop critical thinking, communication and counselling skills, to enable them to deal with situations arising within their training lists.

- **What steps did you take to get to this role?**

In my previous role I had kept abreast of current developments, especially NHS FASP guidelines and fetal anomaly screening. I participated in data collection for fetal anomaly quarterly key performance indicators and contributed to the annual report, which helped to gauge the performance of the screening in our unit and highlighted any areas for improvement. My role as screening support sonographer involved review and dissemination of DQASS reports, to ensure that the majority of our sonographers had green flags.

I had established a monthly obstetric meeting to discuss cases in an MDT setting and emphasise the important role that sonographers played in fetal anomaly screening.

I also held a visiting lecturer post with City, University of London, which involved giving two lectures per annum and undertaking final assessments as an external assessor for the university. This role was a useful insight into different students' experiences in US training.

- **What support did you have along the way or would have been helpful to have had?**

Support from the line manager is essential in acquiring adequate resources, including funding for staffing and equipment.

There is a mismatch in obstetric scanning between the high standards required from sonographers, patients' perceptions and, often, a perceived lack of value from the referrers. Both an understanding and acknowledgement of the role of sonographers in obstetric screening is required. If 'champion roles' for first, second and third trimester scanning were to be established in departments, the recognition of sonographers' contribution in obstetric scanning could help to improve recruitment and retention issues in sonography.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

Obstetric ultrasound scanning is rewarding, but be prepared for hard work. You will need support from both your line manager and clinicians to secure the resources required for training. Participation in the MDT and working with your screening co-ordinator are important aspects of governance in obstetric scanning.

Academically, complete your MSc and continue with personal CPD, as well encouraging your team of sonographers to work towards advanced and consultant roles.

Networking and engagement with university course providers is also beneficial.

4.2.8 Case study 8: Programme projects co-ordinator for NHS FASP

Teresa Lardner – Programme Projects Co-ordinator
NHS FASP

- **Tell us a little about your role/area of expertise**

I am a sonographer working full time with the NHS FASP team based in NHSE. My role covers working on a wide variety of projects for NHS FASP. These include providing an ultrasound perspective to discussions and programme developments, working with DQASS and the SQAS team to support the SSSs and developing programme resources such as the NHS FASP handbook and e-learning resources. It is a very varied role and I have learnt so much and met many amazing, dedicated people.

- **What steps did you take to get to this role?**

I was an ultrasound lead at two different trusts and their SSS since the role was first introduced. The regional QA lead and my department head supported me to become one of the regional obstetric ultrasound co-ordinators (ROSCOs), working with the ultrasound departments in my region when nuchal translucency (NT) was first introduced. I was also a professional/clinical advisor (PCA) for the regional QA team attending QA visits to several providers. PCAs are a vital part of the QA visit process for the NHS population screening programmes. The SQAS relies on their insight, experience and support to ensure QA processes are fair, systematic and evidence-based. I also lectured at a local university on aspects of screening and assisted them with final student assessments.

- **What support did you have along the way or would have been helpful to have had?**

I was supported by my department to take part-time secondments with the NHS FASP team on two further occasions to work on specific projects with them. They saw the benefit to our department of having someone in this role.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

My advice would be to start as a deputy SSS and learn about the QA role in NHS FASP. Get involved with image review and finding ways to support your colleagues through lunchtime review meetings. Through that you should be able to attend quarterly programme meetings and meet the regional QA team. They are often looking for PCAs in ultrasound to help them with their QA visits. These are a great learning experience as you can gain so much from visiting other departments and sharing good practice.

Undertake audit/studies on aspects of your work and present to your department and at regional and national meetings.

Ask to attend your fetal medicine referral unit MDT meetings and feed back to your team.

Respond to national requests for ultrasound input: it is important our voice and views are heard at a national level.

Contact your local university providing ultrasound training to offer your support with providing lectures or conducting final assessments.

As a programme we sometimes have a need to ask for help and support from our ultrasound colleagues and getting involved in this would be beneficial to you, your department and the programme as a whole. If you are interested, please feel free to contact the NHS FASP team.

If you are interested in this role or aspects of it, speak to your department lead and take active steps to make it happen. Have confidence in your abilities and have a willingness to learn.

4.2.9 Case study 9: Associate professor, programme leader and obstetric ultrasound module lead

Jane Arezina – Associate Professor in Medical Ultrasound; programme leader for the Postgraduate Diagnostic Imaging programmes; module leader for Obstetric Ultrasound University of Leeds

- **Tell us a little about your role/area of expertise**

My role is as programme leader for the Diagnostic Imaging suite of programmes. At Leeds, the programme includes not only Medical Ultrasound but also Breast Imaging and Diagnostic Radiography pathways. I am also module leader for Obstetric Ultrasound, which is my specific area of interest. I am involved in research into delivering unexpected news in obstetric ultrasound and I am part of the INDIRA group, who developed the [ASCKS framework](#) as an aid to sonographers when delivering unexpected news in obstetric ultrasound practice.

- **What steps did you take to get to this role?**

Initially, I trained as a radiographer and then as a sonographer, qualifying with the College of Radiographers Diploma in Medical Ultrasound (DMU). After a several years as a sonographer and clinical mentor for a number of student sonographers, I returned to study and gained an MHS in Medical Ultrasound at the University of Leeds. During this period of study, I became a clinical specialist sonographer in clinical practice and also obtained a post as a lecturer at the University of Leeds. Once at Leeds as a lecturer, I gained a Higher Education Institution (HEI) teaching qualification, which has also been invaluable in furthering my career at the University of Leeds.

- **What support did you have along the way or would have been helpful to have had?**

Luckily, I was supported by my employers to do the ultrasound qualification, the Master's and the HEI teaching qualification. Without this support, I would not have been able to advance my career or to gain the skill and confidence to take on new roles.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

Take every opportunity to advance your knowledge and skills. In particular, gaining a Master's qualification enabled me to stand out from the crowd and allowed me to gain skills that I use every day in my role as an Associate Professor.

4.2.10 Case study 10: Research sonographer and lecturer

Emily Skelton – PhD student, Research Sonographer and Lecturer in Medical Imaging City, University of London and King's College London

- **Tell us a little about your role/area of expertise**

At King's, I work on a large-scale, multidisciplinary research project which is using advanced imaging techniques and deep learning to enhance fetal screening during pregnancy. My primary duties within the team are to perform research ultrasound scans, acquire image data and test software, but contribute to engagement and dissemination activities as well.

I hold two roles at City, University of London. I am currently in the third year of my doctoral research degree, where I am using a mixed-methods approach to explore the impact of imaging in pregnancy on parental experiences and parent–fetal bonding. This is an intensive training programme through which I can advance my knowledge and skills as a researcher while conducting my own research that will contribute new knowledge and help develop the evidence base. As a lecturer, I am involved with preparing and delivering teaching sessions, student assessments (academic and clinical) and programme development.

Although a lot to juggle at one time, these roles are complementary – I know that keeping up to date with research and advances within the profession ensures that my teaching reflects best clinical practice, and my students are equipped and empowered to thrive in their roles post-qualification.

- **What steps did you take to get to this role?**

Taking the leap from clinical practice into a full-time academic role was daunting, but I knew it was necessary so I could fully embrace the challenges and opportunities that come with it. Continued personal and professional development is essential and I am constantly learning and developing my skills through workshops, webinars and short training courses.

I also wanted to be more involved with the professional community, so volunteered for supporting and special interest roles within professional organisations like the Society of Radiographers and British Medical Ultrasound Society. As well as having the satisfaction of knowing I am contributing to the profession, these additional roles have been fantastic for my own learning and development and have helped me widen my network and connect with many wonderful colleagues.

- **What support did you have along the way or would have been helpful to have had?**

In my previous clinical role, I worked with a research-active consultant who encouraged and supported me to continue undertaking research after I completed my MSc. At this point, all the work was done in my spare time away from the hospital, so it would have been helpful to have some protected hours to work on my research as part of my clinical role. It is good to see this is more common in practice now, but at the time this was a factor in my decision to leave clinical.

In progressing my academic career and developing my professional identity, I have found the support offered by the radiographic community invaluable. Many senior and research-experienced colleagues have generously offered their guidance, insight and mentorship.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

It's never too early to start planning your journey! It is really important to think practically about what resources you need to support you in the role and get these in place as early as possible. Don't be afraid to reach out to colleagues to find out about their experiences. There is a wealth of knowledge within the professional community, and this can be helpful to inform your own pathway. You could even consider asking if they would be happy to act as a mentor for you. Finally, surround yourself with people who will encourage and motivate you – it's not an easy path, but nothing worth doing was ever easy!

4.2.11 Case study 11: Clinical specialist sonographer

Roxanne Sicklen – Clinical Specialist Sonographer

Royal Free London NHS Foundation Trust, Barnet Hospital

- **Tell us a little about your role/area of expertise**

I work within a large ultrasound department which spans Radiology and Women's Health. My role includes obstetric and general medical scanning but over the course of my career I have developed a special interest in early pregnancy and gynaecological ultrasound. This special interest is recognised by my peers, and I am frequently consulted by my colleagues to provide an opinion for challenging cases. In 2017, I was accredited by the CoR as an advanced practitioner within this area. This process required me to evidence my work towards the four pillars of

advanced practice. This process provided a focus and helped me to develop my professional self in a more holistic manner. It enabled me to understand how each pillar is inter-related and benefits our clinical role. My long-term goal is to achieve consultant practitioner status in this field, which I continue to strive towards.

- **What steps did you take to get to this role?**

Advanced practice requires additional development alongside of our clinical role. As well as advancing my theoretical knowledge, I have spent time voluntarily within other departments learning practical skills and insight from recognised experts.

In 2017 I submitted a poster to the Association of Early Pregnancy Units (AEPU) conference and was invited to present as an oral poster. This was my first proper experience of public speaking and I found it terrifying, but equally exhilarating. Following this, I was invited by a consultant colleague to speak about 'breaking bad news' at a study event that she organises. This led to further speaking and lecturing invitations, initially related to the delivery of difficult news but later branching into wider areas of early pregnancy/gynaecological ultrasound. Delivering unexpected/difficult news is a skill which is unique and difficult to teach but is so fundamental to the sonographer's role. Because of my visibility as a sonographer discussing this at educational events, I was invited to get involved with research projects in this field. The outcomes of this research have now become the basis of my teaching on this subject – a demonstration of the crossover between personal and practice development.

Due to my passion for improving the delivery of unexpected news, I was invited to participate in the work of the Improving News Delivery in Ultrasound (INDIRA) group responsible for developing the consensus guidelines on the communication of unexpected news via ultrasound.⁷⁵ In July 2022 I was invited to give a presentation and live demonstration of basic transabdominal gynaecological ultrasound technique. This enabled me to meet colleagues from around the world and share my knowledge and expertise to a wider audience.

- **What support did you have along the way or would have been helpful to have had?**

I consider myself incredibly lucky to have had the support and encouragement of many of my colleagues, but particularly the consultant who gave me that first opportunity and championed me along the way. Although much of what has come since has resulted from my own dedication and work, this opportunity was a vital first step for which I will always be extremely grateful. Colleagues who provide opportunities to others are true leaders, and one day soon I hope to be able to pay it forwards.

- **What advice can you give to others who might want to work towards this role or follow a similar pathway?**

My love for early pregnancy evolved naturally – this was the area of practice that I would go home and read about to extend my learning. I was then able to apply this extended theoretical knowledge to my clinical work, which subsequently improved. My advice to others would be to follow your heart and find an area of practice that you genuinely love. I have turned down opportunities to learn to scan other anatomical areas to develop my skills in my chosen field. I believe this to be one of the most crucial elements of becoming an expert; you cannot be expert in everything!

I have had to work extremely hard in my own time. The path has not been smooth, not least because there is not yet a recognised path for me to follow. I have not yet reached my intended destination but am committed to keep striving until I do.