

The long and winding road to achieving professional registration for sonographers

Abstract

The rapid growth in the use of ultrasound as a diagnostic imaging technology over the past forty years, has led to a demand for a workforce with the appropriate skills to perform and interpret the scans. In the UK, ultrasound investigations now comprise the largest group of all diagnostic imaging examinations (1). However, there remains no statutory regulation of the practice of sonography in the UK, and little recognition of the considerable training that many practitioners have undertaken to obtain the skills to become safe and competent sonographers. Many in the field consider that this should change, and are working to obtain professional status for the practice of sonography (2, 3, 4, 5). Although the Health Care Professions Council (HCPC) has recommended regulation of sonography practice, this is unlikely to happen in the near future. This paper discusses the evolution of sonography practice and explores some of the complex issues associated with the professionalisation of sonography.

Introduction

Sonography practice has evolved over the past forty years as technological advancements have extended the diagnostic capabilities of ultrasound. Despite the continuing success of diagnostic ultrasound, and the large numbers of scans performed each year, there remains a lack of regulation of those practising sonography. Many healthcare practitioners have extended their roles by undergoing training to obtain the qualifications and skills to become competent sonographers. However, the current lack of regulation of this specialised area of healthcare practice has led to a situation where there is currently no standardisation of training for all sonography practitioners (5), despite training and competency standards remaining key drivers of quality of patient care.

Sonography is a complex area of practice, encompassing a broad spectrum of applications and involving a number of different professional bodies. Not all those involved in sonography practice are in favour of regulation, for a number of reasons. Anecdotally, some consider that the very fact that such large numbers of scans are

undertaken each year without any major untoward incidents of poor practice having been exposed, may be taken as an indication that regulation is unnecessary.

The evolution of sonography practice

The use of ultrasound in medicine began during the Second World War in various centres around the world. The first published work demonstrating medical ultrasound images was that of Dr Karl Theodore Dussik in Austria (6). Professor Ian Donald and his colleagues in Glasgow in the mid 1950s, did much to facilitate the development of practical technology and diagnostic applications (7,8). This led to increasing use of ultrasound in medical practice in subsequent decades. From the mid-sixties onwards, the advent of commercially available systems allowed the wider dissemination of this diagnostic technique (9). Technological advances in electronics and piezoelectric materials provided further improvements, with images evolving from static bi-stable to real-time greyscale (10). These technical advances led to a rapid expansion in the diagnostic applications of ultrasound.

This growth in the use of ultrasound as a diagnostic imaging tool has led to a demand for a workforce with the appropriate skills to perform and interpret the scans. Prior to the 1970s, on the rare occasions when ultrasound examinations were performed in the United Kingdom (UK), these were generally carried out by medical doctors (11,12). Gradually the technique moved away from the preserve of medical practitioners, as other healthcare professionals from varying backgrounds began to perform the scans, and it became known as ‘sonography’ (13). This multidisciplinary development of sonography practice has been driven by clinical need and has resulted in a range of professionals now providing the service (2). Although there are many practitioners using ultrasound as a diagnostic tool to support their professional role, those individuals whose primary role is to produce and interpret ultrasound images are generally known as sonographers, to identify their specialist skills in the area (13).

By the early 1980s the largest group of professionals working with ultrasound was radiographers (14). The Society of Radiographers (SoR) introduced an ultrasound training programme in 1977 which led to a Diploma in Medical Ultrasound for radiographers, or a Certificate in Medical Ultrasound for practitioners from other

backgrounds. This continued to be offered until it was replaced in the early 1990s by a postgraduate higher education institution (HEI) based qualification open to all healthcare professionals (15). In 1993 an organisation was formed to oversee the provision of sonography education, known as the Consortium for the Accreditation of Sonographic Education (CASE). This consisted of representatives from a number of organisations whose members were working as sonographers, reflecting the multidisciplinary nature of sonography.

Initially radiographers were limited in the extent to which they could practise sonography, as professional constraints prevented them from communicating scan results (14). Witcombe and Radford (16) highlighted the particular problems this resulted in when trying to reassure patients during obstetric scanning, and a survey they performed at the time demonstrated that some employing authorities had agreed to allow radiographers to 'exceed their professional constraints'. In 1987 the constraint was removed from the Professional Statement of Conduct (15) by the regulating body at the time, the Council for Professions Supplementary to Medicine (CPSM), and this heralded a new approach for radiographers, which also extended into the the non-obstetric ultrasound services that radiographers had moved into.

As a radiography-allied specialty, sonography practice was the pioneer of role-extension, particularly in its reporting role (4,12,17). Although the SCoR and the RCR were still having problems as late as 1998 with independent reporting (18), widespread sonographer reporting was adopted despite this. The active and written support of the British Medical Ultrasound Society (BMUS) for non-medical practitioners, which went against the RCR at the time, undoubtedly helped to drive this change. An additional outcome of this pioneering stance was that it demonstrated that, rather than being blindly adhered to, professional guidelines could be changed as a result of popular pressure and published peer-reviewed audit (19,20,21).

In more recent times sonography has developed to include a broad spectrum of practice, including vascular and musculoskeletal investigations. Innovative service delivery developments have opened up opportunities for sonographers to further develop and extend their roles (12,22). Many departments are offering sonographer-led interventional practice, driven by the shortage of radiologist availability and growing demand for services (12). This

interventional work now encompasses a spectrum of both diagnostic and therapeutic procedures across a wide field of practice. Consultant sonographer posts, although slow to develop initially, are gradually being created, reflecting the levels of leadership, education and research that sonographers are engaging with (23).

By the beginning of this century, ultrasound had become the most widely used diagnostic imaging technique throughout the world (11). In the UK ultrasound investigations now comprise over twenty two percent of all diagnostic imaging examinations (1). Despite the large number of scans performed each year, there remains no statutory regulation of the practice of sonography in the UK, and although there are many practitioners who are regulated as professionals in their primary area of practice, there are others who are not (3,4,24). Many in the field consider that this should change, and are working to obtain professional status for the practice of sonography (2,3,4,5).

Professionalisation

Many trades and occupations have formed themselves into professions over the years, a process which many define as involving establishment of acceptable qualifications, a professional body to oversee the conduct of members, and a demarcation of qualified from unqualified practitioners (25). This process of professionalisation appears to date back to the Middle Ages when guilds were established to secure rights for various trades, which gave members an elevated status in society (26). More recently, the formation of an overseeing body to establish a register of members and codes of conduct has been an important part of professionalisation, to protect the users of professions' services. The concept of a profession encompasses the social control of expertise; the experts provide services for which recipients do not have adequate knowledge to evaluate. As a result, recipients need to be protected against incompetence, carelessness and exploitation (27). Hence, professions put much emphasis on codes of conduct and registers of appropriately trained members.

Professionalisation however, is not always straightforward, because although professions can usually be readily identified, Oberheumer (28) suggests that professionalism only exists as a 'situated concept' and that only certain trades and occupations have been successful in claiming professional status, whilst others have

not. Hevey (29) further argues that individuals or groups can often have the characteristics of professionalism without the formal recognition and identity of a profession. Some consider that sonography practice in the UK is in this position, particularly as in several countries such as the United States of America (USA), sonography practice is a regulated profession (3,4). This is a complex area with many issues involved, but arguably the reasons for this would appear to be, as Hevey discusses in relation to professionalisation generally, rooted more in historical, organisational and political contexts, rather than in any tangible defining characteristics (29).

Professionalisation of a sector, or the process through which occupational groups achieve professional status, is something that normally evolves over a period of time, but many groups have encountered hurdles when trying to achieve professional status (29). Professions are usually associated with power, prestige and privileges (30), and there will inevitably be resistance from existing professions or groups who feel their own area is under threat from the creation of a new profession. Eraut (27) discusses the specific situations arising from the process of professionalisation, where new areas of work can be picked up by a number of professional groups, and that those with the most political influence or entrepreneurial talent will succeed. Alternatively, new areas of competence may get defined in ways which best suit the expertise of the existing professions. There are particular problems associated with health care where newer specialist sections want basic entry qualifications to reflect their existence, while longer established groups oppose changes which threaten their own claims to competence (31). As a relatively new area of medical diagnosis, the practice of sonography falls into this specialist category, with unsuccessful attempts to obtain recognition as a profession in an area where a variety of groups of established professionals are already using the technique as a diagnostic tool. In addition to core imaging specialists, sonography is practised widely by clinicians and healthcare professionals with the skills to perform ultrasound examinations in order to provide answers to specific clinical questions and expedite patient treatment (4,32). These professionals would not perceive any advantages to limiting the practice of ultrasound to a defined group of registered sonographers, and may have concerns that their scanning could be curtailed (3). Edwards (4) however, argues that rather than limiting the use of ultrasound by other groups, recognition of sonography as a profession

would help to control practice, develop education, and maintain standards of competency in all areas of practice, without necessarily requiring all individuals to become part of the profession. Lee and Paterson (2) suggest that for the purposes of regulation, perhaps a distinction should be made between those practitioners engaged primarily in ultrasound scanning, and those who use the technique as only one of a range of diagnostic procedures.

Establishing competency

The development of professional knowledge depends on a continuing capacity and desire to learn from experience, but there are points on the continuum of professional learning at which the individual becomes professionally qualified (25). Establishing that an individual is competent is considered an important part of the professionalisation process to provide greater protection for the public (27). Currently there is no standardisation of training for all sonography practitioners, despite training and competency standards remaining key drivers of quality of patient care (33,34,35). The Chief Medical Officer in 1984 (36) expressed concern over the competence of the various healthcare practitioners working in the field of ultrasound diagnosis, when he stated that the professional regulating bodies relevant to these practitioners should set standards for adequate training (3). Nearly thirty years later, there is still no overarching education and training framework available for all individuals wanting to undertake ultrasound examinations. This raises concerns as to whether the public is appropriately protected (2). Whilst the person performing the scan may be registered as a professional in another field, and working within their own scope of practice, this registering body may not have confirmed the individual's level of training or competence to perform an ultrasound scan, because it is not necessarily part of the remit of that professional registering body (4,37). Alternatively, the person performing the scan may not be registered with any regulatory body, as is the case with many vascular technicians, echocardiographers, and science graduates who have directly entered their working life as a sonographer. These individuals may have undergone rigorous training and assessment, but are unable to register with a professional regulatory body, and therefore practice outside of the normal regulatory frameworks (2). An additional area of particular concern within sonography practice, is that the current lack of regulation of training results in unqualified technicians being employed to perform scans in some private clinics. The users of the service are

probably unaware that these individuals have often undergone minimal training and may not be registered with any professional body (24).

Despite the generally accepted role of professional regulating bodies in establishing competence, Eraut (27) has suggested that society has moved from a situation where professions control the concept of competence (by introducing qualifying examinations in order to exclude the non-qualified), to one where governments use the concept to limit professional autonomy in order to safeguard the public. Some consider that the involvement of governments in mandating accountability procedures can potentially weaken the moral accountability of individuals in their practice (27). Recent high profile examples of lack of moral rectitude within the medical profession, such as the Bristol Royal Infirmary children's cardiac surgery problems (38), Alder Hey organ retention (39), and the Harold Shipman case (40), suggest that perhaps current regulation does not have as significant a role in the protection of the public as is generally assumed. One of the conclusions of the Shipman Inquiry was that professional regulators often tend to protect their members rather than protecting the public, which should be their primary aim.

The way forward

In the UK, a process of lobbying the Health Professions Council (HPC) (forerunner of the current HCPC) for the regulation and registration of sonographers, began nearly a decade ago (2). Although there is broad support for regulation, the complexity of the issues involved has led to several setbacks (3). The lack of statutory regulation and registration of sonographers supports the widely held view that ultrasound is a tool that should be available for use by many, and few would disagree with this (4). A more pragmatic approach therefore may be to pursue a goal of achieving a compulsory minimum qualification to practise, rather than statutory regulation. However, many of the challenges currently facing the practice of sonography, such as the difficulties in developing a direct entry undergraduate training programme for ultrasound and the resulting shortages of staff, are potentially attributable to the lack of regulation, as individuals would be reluctant to embark on a degree programme in an area where no formal qualifications are required to practise.

Despite the seemingly intractable problems of enabling sonography to become a profession, other countries have found workable compromises. Australia, Canada and the USA for example, recognise sonography as a defined profession, with their own registers of competence. They continue to facilitate the use of ultrasound as a technique by specialists wishing to use it as a focused tool in their specialty area. In these countries, it is considered that ultrasound professionals are required to set and maintain standards, as well as provide guidance and support in the field (4).

In the UK, although the HPC recommended regulation for sonographers in 2009 (5) which would lead to professional recognition, the coalition government currently has all services and strategies under review. The recent Department of Health (DH) Command Paper (41) whilst acknowledging the public protection afforded by statutory professional regulation, identified the significant costs associated with the regulatory system and the lack of workforce flexibility which resulted from regulation. The Government's goal appears to be to reduce the costs of regulation, and to devolve decision-making and accountability to local levels (29). The Command Paper states that the expectation is for assured voluntary registers to be established, rather than statutory registration. This suggests that full regulation for sonographers is unlikely to be imminent, and within this context there is now considerable uncertainty over the professionalisation of sonography. However the SCoR are continuing to support and argue the case for statutory regulation of sonographers, and for 'sonographer' to become a protected title (42). They have established a newly upgraded voluntary register for sonographers, which was originally set up jointly between the SCoR and the United Kingdom Association of Sonographers (UKAS) in 2007 (2). This includes a code of conduct and ethics, standards of proficiency, and a declaration that all voluntary registrants will follow these good practice guidelines. This is intended to protect the public in an area where statutory regulation currently does not exist (42). It is possible that further work will take place to facilitate the development of this voluntary register to one with assured status. However, statutory regulation of sonographers remains the policy and ambition of SCoR and it has confirmed its continued support for this (42).

Conclusion

There has been rapidly increasing use of ultrasound in medicine in recent decades. Sonography practice has evolved as technological advancements have extended the diagnostic capabilities of ultrasound as an imaging technology. Despite this, there remains a lack of regulation of those practising sonography. Many healthcare practitioners have undergone rigorous training to obtain the skills to become safe and competent sonographers. However, the current lack of regulation of this area of healthcare practice has led to a situation where there is little recognition of these qualifications and skills, and where any individual can practise sonography. This is clearly at odds with the NHS emphasis on delivering high quality service and improving the patient experience. The SCoR initiative to establish a voluntary register is to be welcomed as a step towards achieving greater protection for the public in this area.

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