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THE SOCIETY & COLLEGE
OF RADIOGRAPHERS

BMUS

THE BRITISH MEDICAL ULTRASOUND SOCIETY

SCoR and BMUS position statement: The use of portable ultrasound equipment for at home pregnancy scanning

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SCoR and BMUS position statement: The use of portable ultrasound equipment for at home pregnancy scanning.

As ultrasound equipment develops and becomes more portable, it is much easier for members of the public to access either their own handheld ultrasound machine or probe that connects to a mobile phone/tablet, or to hire a machine for a limited period of time.

The British Medical Ultrasound Society (BMUS) *Statement for the General Public on the Safety of Medical Ultrasound Imaging*¹ highlights the importance of safeguarding against potential risks of ultrasound and minimising exposure. The document states that ultrasound equipment should only be used by properly trained professionals and only when an ultrasound examination is needed, either for clearly defined clinical reasons or for the training of healthcare professionals. In all circumstances, exposure to ultrasound and its associated potential bioeffects should be kept as low as reasonably achievable.

Similarly the World Federation for Ultrasound in Medicine and Biology (WFUMB) recommends that the “uncontrolled use of ultrasound without medical benefit should be avoided” and that ultrasound should only be used by health care professionals “trained and updated in ultrasound clinical usage and bioeffects.”²

It is natural and understandable for expectant parents to want to see their unborn baby. However, there are concerns that the use of ultrasound in inexperienced and untrained hands could provide false reassurance of fetal wellbeing or even cause harm if exposure is prolonged, in particular on sensitive organs, such as the eyes. Use of handheld fetal heart rate Doppler systems by parents in their own home, where the fetal heart was incorrectly identified, have previously been reported as a cause of delayed presentation to medical care in fetal compromise and stillbirth.^{3,4} There is also the potential to increase anxiety for the parents and for inappropriate presentation to healthcare service providers if normal images are misinterpreted during the scan undertaken by parents in their own home.

Safety guidelines recommend minimising exposure of the fetus to ultrasound, particularly for the more sensitive organs, such as the eyes and brain. It is anticipated that parents may wish to try to obtain clear images of their baby's face. In untrained hands, it is likely that these attempts will lead to prolonged and/or frequent exposure times for the eyes and brain. Clinically recommended scans last for the minimum time required to obtain clinically relevant information and are performed with attention to minimise the bioeffects of ultrasound by practitioners who have an understanding of these concerns. Home pregnancy scanning, even where time is limited by the device, can result in much longer exposures. Devices produced for home scans may not have the same level of control and compliance with regulations as devices approved for healthcare settings and the level of quality assurance and testing might be limited in unregulated environments.

Both the Society and College of Radiographers (SCoR) and the British Medical Ultrasound Society (BMUS) recommend that ultrasound examinations are only performed by appropriate healthcare professionals, who can interpret the ultrasound images accurately and use the equipment safely, to reduce any potential harm to the baby or anxiety for parents.



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