Commissioning echocardiography: opportunities and risks to patients

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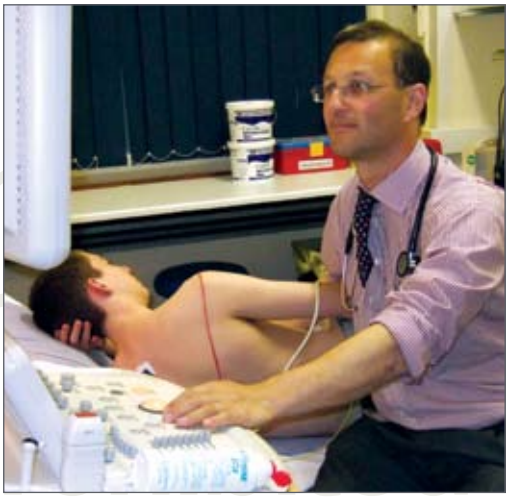
Patients are waiting too long for echocardiography. A British Society of Echocardiography (BSE) survey shows that 62% of patients are waiting longer than four weeks and 23% more than 18 weeks.[1] There is substantial under provision of services and those that do exist need to work more effectively. The government is focussing on diagnostic services, including echocardiography, with a number of programmes including the 18-week project and expanding commissioning of services beyond traditional providers.[2]

This focus on echocardiography is to be welcomed. But who is to perform these additional echocardiograms and what sort of studies will be performed?

The standard adult transthoracic echocardiogram (TTE) has stood the test of time. When performed by appropriately trained individuals, e.g. those holding BSE Accreditation,[1] it can reliably describe and quantitate left ventricular systolic and diastolic function, structure and function of all four valves, basic prosthetic valve function, common congenital abnormalities and cardiomyopathies, and the presence and significance of pericardial fluid. Importantly, it can provide an answer to the two most common clinical questions posed in referrals for echocardiography: 'Does the patient have echo abnormalities consistent with heart failure?' and 'Is the patient's murmur important now OR in the future'.[1]

A study may be abbreviated by focussing on one aspect of the heart, e.g. follow-up of valve disease or monitoring left ventricular function in patients receiving trastuzumab. These may be abbreviated studies but still require a high level of training and skill to provide reproducible, quantitative data suitable for longitudinal patient monitoring.

Are there scenarios where an echocardiogram, more limited than a standard adult TTE and performed by individuals trained less extensively can answer clinical questions and facilitate a patient's care? Yes, and the BSE is committed to identifying the content and place of such studies. There are times when predictive information is less relevant, such as in the emergency room or pre-operative setting. The identification of major abnormalities of ventricular systolic function, moderate or severe valve lesions and haemodynamically significant effusions will provide valuable clinical information. Handheld, limited or screening echocardiography can provide such information.[1,3,4] At present, however, there are no data to support the use of such studies as the mainstay of echocardiography services or to answer the two most common clinical questions. Up to 50% of heart failure patients have preserved systolic function and a limited study will not identify the abnormalities of heart structure and function in these cases.[5] Mild valve disease may still need follow-up and antibiotic prophylaxis, which is important to the referring clinician and patient.



Community echocardiography

Can echocardiography be provided outside of secondary and tertiary care? Yes, high-quality community-based echocardiography services, when linked to local hospital-based departments, could, and in some places already do, make an important contribution to the expansion of echocardiography services. The BSE Accreditation in Community Echocardiography has demonstrated that there are primary care practitioners prepared to undertake the training to provide these services.

In broadening and expanding echocardiography services, the workforce shortages become obvious. There may be a shortfall of 500 fully trained sonographers in the UK.[1,6] Many of the new non-NHS providers are appropriately promising to use only fully trained staff, but in the short and medium term this will only happen by drawing on the current already overstretched NHS workforce. Plans have been drawn up by the BSE and the Society for Cardiac Science and Technology (SCST), who together represent virtually all cardiac physiologists and echocardiographers in the UK, for accelerated but undiluted training of echocardiographers. Universities are willing to support expanded training programmes but, at present, government commitment to expand the workforce in this way has not been forthcoming. New providers may have a limited commitment to training as one means of reducing costs.

Regulated services

An expanded workforce working outside the NHS would need adequate regulation. Recent experience of an unregulated non-permanent echocardiographer producing unreliable results created substantial problems and distress to patients.[7] Progress on regulation remains painfully slow.

Overall there are clearly opportunities to expand and develop the umbrella of imaging services that constitute echocardiography. If this shortens patient journeys we welcome these developments. However, we would caution potential providers and commissioners that currently there is an absence of evidence for any study other than the standard adult TTE to provide a comprehensive service. Therefore, at present, the BSE advocates the standard adult TTE as the minimum standard to be offered to the majority of patients referred for a cardiac ultrasound examination to facilitate their clinical care

Conflict of interest

None declared.

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