

This guest editorial discusses the impact of the government's 18 week target initiative on UK ultrasound services, and suggests ways of meeting increasing demand.

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## Introduction

In the summer of 2004 this Government launched an ambitious project which stated that by the end of 2008 no patient will have to wait longer than 18 weeks from general practitioner referral to hospital treatment (DH 2004).<sup>1</sup> In fact, in most cases, it is anticipated the wait will be much shorter. Efficient diagnostic services are key to the implementation and success of this reform, and many imaging departments have been, and continue to be, under enormous pressure to avoid breaching waiting time targets. As of spring this year, and as we reach the final stages of implementation of the 18 week pathway, non-urgent referrals can expect an appointments for diagnostic tests in less than six weeks (DH 2006).<sup>2</sup> Those who have symptoms which may indicate cancer are seen much sooner. This paper looks at the impact that these initiatives have had on the provision of ultrasound services, and considers the future of this most essential of all imaging modalities.

## Where are we now?

Undoubtedly, the 18 week pathway is an initiative which is focused on the best interests of the patient, although cynics may also view the scheme as a vote catcher. It is laudable that the Government is committed to seeing an end to the unacceptable waits for some treatments and types of elective surgery witnessed during the final decade of the last century. In this modern era, why should one wait 24, 36 or even 52 weeks or more for an ultrasound scan of the gallbladder, let alone the cholecystectomy which may need to follow? However, the impact that this project has had on diagnostic services, and in particular ultrasound, has been enormous. Ultrasound has long been an overstretched, under-staffed service (Bates et al 2003),<sup>3</sup> and many departments now are struggling to meet their targets (DH 2008).<sup>4</sup>

For years ultrasound has been seen as the diagnostic equivalent of an Aspirin. Ultrasound is inexpensive, safe, readily available, well tolerated, and yields instant results. No wonder it is the investigation of choice for endless symptoms (Edwards 2006).<sup>5</sup> In addition, it is becoming an integral part of a growing number of clinical protocols and screening programmes. For example, in obstetrics, NICE<sup>6</sup> (2003) has recommended nuchal thickness screening for aneuploidy detection, although some

believe there is an absence of robust evidence to support its effectiveness (Meire 2007).<sup>7</sup> Since December last year it is recommended that stroke and transient ischemic attack patients have access to diagnostic services within 24 hours of clinical assessment (DH 2007a).<sup>8</sup> This will almost certainly increase the demand for carotid duplex ultrasound examinations. Furthermore, Gordon Brown, in his drive for prevention as much as cure, is supporting plans to introduce abdominal aortic aneurysm screening programmes for asymptomatic middle-aged men (Brown 2008; DH 2007b).<sup>9,10</sup>

In today's increasingly litigious culture, it is likely that more ultrasound is requested by clinicians and GPs practising defensive medicine, and to provide reassurance for the 'worried well'. Inevitably, in addition to the pressures described already, some GPs and clinicians will feel compelled to 'double investigate' by ordering multiple concurrent tests as a method of guaranteeing meeting targets. Double investigation is encouraged further since the '18 week clock' will not stop ticking if a patient is inadvertently referred to the wrong specialty clinic (DH 2006 p25).<sup>2</sup> Potentially, ultrasound departments may be compelled to process unnecessary requests, and patients may be subjected to unnecessary examinations. Previously, doctors may have had the clinical confidence to wait for one set of results to guide them towards the next test or the commencement of specific treatment. Instead, double investigating may get more answers sooner but arguably some questions may not have needed asking in the first place.

In the continual drive to eradicate waiting lists, the possibility that perhaps waiting lists are not all bad may have been overlooked. Whilst it is agreed that rational treatment is dependent on establishing first a diagnosis, it is postulated that a degree of waiting in some circumstances can be viewed as positive (Cowper 2006).<sup>11</sup> Some patients get better if left long enough. Others appreciate the chance to organise work commitments, personal study, family matters and child care. Another advantage of waiting lists is that they can be used to influence and strengthen bids for additional resources (Hobson 2007).<sup>12</sup> In today's NHS, once the patient wait is removed, managers are often left with little to bargain with. Therefore, whilst waiting lists, for a variety of factors, are unlikely to vanish completely, this is not necessarily a bad thing if kept under control. It may be wrong to assume that waiting lists automatically act as an indicator of a poorly performing service. Rather, they attach a certain value and quality to a service, and may signify a good reputation (Cowper 2006).<sup>11</sup>

But what can be done to keep waiting times to a minimum?

A lack of capacity is often blamed for long waits, and some have tried to address this by performing many extra sessions out of hours (Fillingham 2008).<sup>13</sup> Such dedication and commitment is commendable, but arguably, not sustainable in the long term. However, others believe insufficient capacity is not the primary cause (Cowper 2006; Hobson 2007; Foote et al 2004; Silvester et al 2004).<sup>11, 12, 14, 15</sup> Foote et al<sup>14</sup> (2004) suggest radiologists' resistance to delegation may protract unnecessarily ultrasound waiting lists. However, in most departments in this country sonographers manage their lists autonomously and impart their findings directly, <sup>16, 17</sup>(BMUS 2007; Stoyles & Harrison 2006) without the need for 'double scanning', as in New Zealand (Foote et al 2004).<sup>14</sup>

With double scanning, a radiologist will rescan some patients in order to confirm the accuracy of the sonographer's findings. Whilst all wise practitioners in ultrasound will understand the value of a second opinion from either a medical or non-medical colleague, it is not routine in this country to have findings endorsed by a radiologist before being released. Medical dominance may still be thriving in New Zealand, but staff shortages, support from the majority of radiologists and governing bodies, and radiographer enthusiasm ensure that UK sonographers have earned, and continue to enjoy, a level of autonomy envied by others (Hassall 2007).<sup>18</sup> However, there is emerging evidence that countries such as New Zealand and Australia are finally beginning to implement changes with respect to increasing radiographer reporting and reducing double scanning (Smith & Baird 2007; Foote et al 2004).<sup>14, 19</sup> Certainly, in the UK, diagnostic targets would be unachievable were it not for the input from radiographers performing and reporting ultrasound examinations.

Inefficient utilisation of available capacity is thought to contribute to backlogs in ultrasound (Lodge & Bamford 2007; Silvester et al 2004).<sup>15, 20</sup> Efforts to improve efficiency include applying to ultrasound services the popular 'Lean Management' method (Hobson 2007; Lodge & Bamford 2008).<sup>12, 21</sup> The origins of lean principles lie in the Toyota car manufacturing company (Ohno 1988),<sup>22</sup> but have been modified and deployed recently within the healthcare arena (Esain et al 2008; Hobson 2007; Lodge & Bamford 2007; Silvester et al 2004).<sup>12, 15, 20, 23</sup> Lean improvement programmes in healthcare aim to streamline services by making use of every available time space thus reducing bottlenecks in patient pathways and time when

equipment is not in use. Smaller processes, 'subsystems' are linked together to make for a more efficient 'whole system' (Esain et al 2008).<sup>23</sup> When applied to ultrasound, the lists comprise high volume low variety examinations which are conducted faster, leaving more time at the end for complex cases. The practice of reserving spaces in case of an event, 'carve-out', is not advocated (Hobson 2007).<sup>12</sup> The down side of 'lean' lists may be mentally fatigued sonographers at risk of repetitive strain injury (Brown & Baker 2004; Russo et al 2002).<sup>24, 25</sup>

Another effective strategy when trying to maximise capacity includes the careful vetting of request forms to minimise inappropriate requests (McCready 2007).<sup>26</sup> Detailed information from the referring clinician helps not only when compiling the report after the test has been performed, but also is essential when trying to assess and prioritise a request. The days of accepting forms with clinical histories comprising two words or less should be well and truly over. The impact of patients who fail to attend for their appointment can be minimised if office staff are available to provide a telephone prompt in advance, and in some cases the examination may no longer be required (McCready 2007).<sup>26</sup> Others suggest overbooking lists to compensate for the patients who do not arrive.

In the longer term, new training initiatives are needed in order to increase sonographer numbers. Recent figures reveal that postgraduate courses are under-subscribed and that there is a grave shortage of clinical training places (National Ultrasound Steering Group 2008).<sup>27</sup> In view of the now established alliance between the Independent Sector (IS) and the NHS it may be that the IS can help support the clinical training of NHS sonographers in the future. However, low numbers enrolling on current postgraduate courses may also indicate the need for change including, perhaps, modules developed specifically for GPs, midwives and assistant practitioners, and the introduction of direct entry degree programmes.

## Conclusion

Patients can now expect 'low wait' and 'no wait' ultrasound examinations, and departments must get leaner and meaner in order to keep the service flowing. Recruitment and training continues to be a problem, and new ways of obtaining clinical experience must be found to help address the shortfall. In the meantime, the announcement of new ultrasound-dependent screening programmes serves only to exacerbate this already difficult situation.

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