

Innovation needs competition

CIVITAS MEDIA BRIEFING

The NHS doesn't do innovation well

Lord Darzi is absolutely right to focus on the importance of innovation in health. There is a widespread consensus, which includes both the government and the DH, that 'the UK lags behind other countries in the use of technology in the health sector', which is particularly ironic given that the UK is a world leader in healthcare research – developing such things as penicillin, therapeutic monoclonal antibodies and MRI scanners.ⁱ

Of course, there are many cases of innovative practice in the NHS. Lord Darzi himself is recognised as a pioneer in minimal invasive surgery and in the development and use of allied technologies including surgical robots and image-guided surgery – work that was largely carried out in the NHS.ⁱⁱ A further example are the NHS Trusts breaking new ground in telemedicine. Queen Victoria Hospital NHS Foundation Trust in East Grinstead, have developed a system by which referring hospitals can electronically transmit images and clinical information to it. Surgeons can then view them while still in the operating theatre, saving patients from being transferred to QVH for an initial opinion and surgeons from leaving theatre.ⁱⁱⁱ

But innovation is far from as widespread as it could be – far too often it involves battling against the system, somewhat like the experience of John Petri, a consultant orthopaedic surgeon at James Paget NHS Foundation Trust. Despite producing sound feasibility studies highlighting the benefit of building a new operating theatre to enable him to perform a 'dual-surgery' technique to cut waiting times, he had to endure a year-long fight with the DH – despite having the backing of his CEO – to get this done. But when he had the new operating theatre, his waiting times subsequently fell to zero and he won the Medical Futures Innovation Award in 2005.^{iv}

His experience also highlights an even greater problem, which is the rate at which cost-effective and quality-enhancing innovative practice is diffused. Despite the obvious benefits of 'dual-surgery', and concerted efforts to spread the practice – including visits from the DH, other NHS trusts and a meeting with Tony Blair – no-one else has implemented it.^v

Again, there are exceptions to this; the dispensing of statins rocketed from the 9.4 million dispensed in 2000, to 39.7 million in 2006 after being pushed heavily by NICE and the DH;^{vi} and the use of percutaneous transluminal coronary angioplasty (PTCA), coronary stents and coronary artery bypass grafts (CABG) have also registered fairly rapid growth.^{vii} But too often best practice goes no further than its place of origin.

International evidence highlights this clearly. A cross-country study of technological change associated with heart attack care found uptake of new technologies in the UK, such as angioplasty, to be both 'slow' and 'late'.^{viii}

In a separate report, Dr Adam Fitzpatrick, a Consultant Cardiologist and Arrhythmologist at Manchester Heart Centre, pointed out how the UK only fits 430 new pacemakers per million of the population, compared with 900 per million in France, Germany, Belgium and Spain, despite cardiac arrhythmias being among the top 10 causes of unplanned hospital admissions.^{ix}

Treatment of diabetes shows the same pattern; in Germany, for example, over 40,000 patients use insulin pumps compared with less than 2,000 in the UK – yet type 1 diabetics, if not managed effectively, will more than likely cause both personal suffering and significant costs to the NHS later in someone's life.^x

The picture's no better when we look at pharmaceuticals. Evidence collated in 2001 showed the uptake of new drugs in the UK to be at best half that in Germany and a third that of France,^{xi} and a comprehensive report carried out recently by the respected Swedish research group, the Karolinska Institute, found this trend had not abated. The UK – along with the Czech Republic, Hungary, Norway and Poland – was 'consistently identified as a below-average adopter of new cancer drugs for the treatment of breast cancer, colorectal cancer, lung cancer, non Hodgkin's lymphoma and supportive care' out of 19 European countries.^{xii} For the uptake of certain drugs, such as trastuzumab for breast cancer and gemcitabine and vinorelbine for non-small-cell lung cancer, the UK is described as 'well below average' – in fact for trastuzumab, usage in the UK has consistently been as much as 100 per cent less than the average, and is currently 300 per cent less than the best performer, Spain.^{xiii}

Innovation saves lives

This should be of huge concern; the cost to patients of inadequate uptake of new medical technology and drugs is no laughing matter. To take a couple of examples: a low-cost monitoring device that assists GPs in early diagnosis of atrial fibrillation (AF) for stroke prevention and other life-threatening heart rhythm disturbances has been estimated to have saved over 150 patients' lives, despite having only been taken up by less than 1 per cent of GPs,^{xiv} and a SADS UK questionnaire sent to families with a member suffering from a cardiac condition showed 'the positive response from those living with an implantable cardio-defibrillator (ICD)...was quite staggering compared to those purely taking anti-arrhythmic medication'.^{xv}

Research highlighted by the Karolinska Institute also showed that an increase in the number of available cancer drugs is associated with an increase in both one-year and five-year cancer survival rates, by as much as 50-60 per cent.^{xvi}

Darzi's prognosis

All this supports Lord Darzi's case. But his recommendations are of questionable merit. The immediate step is to be the creation of a new Health Innovation Unit, together with a fund of up to £100m 'to help the NHS develop and deploy hi-tech health care such as medical devices and diagnostics'. The Health Innovation Unit is charged with 'specifically tackling the variable uptake of innovation and to drive forward cost-effective innovation in the NHS'.

This is somewhat mystifying given that there is already a body, the NHS Institute for Innovation and Improvement that describes its mission as doing almost exactly the same thing: 'to support the NHS to transform healthcare for patients and the public by rapidly developing and spreading new ways of working, new technology and world-class leadership'.^{xvii} More importantly it, and its predecessor, the Modernisation Agency, have had perilously little impact, as was acknowledged by the Cooksey review of health research funding for HM Treasury: 'the lack of widespread progress [by the NIIP in trying to spread best practice in health service management and delivery around the NHS] has led some commentators to conclude that it is not possible to drive such changes from the centre. Instead, they argue that there is a need to change the incentives applying to hospital Trusts and PCTs in order to have an impact in driving take-up'.^{xviii} To use the £100m effectively, this is exactly what the 'new' Health Innovation Unit should focus on.

It'll only work if there's competition

All too often in the NHS we hear reports describing 'a tendency by managers to see innovation as purely a cost pressure, without looking to the full potential for efficiency gains'^{xix} and health benefits for patients, which seems to fly in the face of reason, until we realise that they are less the result of individuals and more a direct result of the way the health care system is organised.

It is important to recognise that new technology and new ways of working can be expensive in the short-term, even if they are cost-saving in the long-run – it may take a few years for benefits, such as a reduced drugs budget, lower admissions/re-admissions to hospital and increased quality of life, to be realised. A long-term perspective is imperative. Yet this has been nigh on impossible in the NHS of late, where performance management, targets, constant re-organisation and financial insecurity has reigned.^{xx} As Rotherham PCT's boss, Andy Buck, said to the NHS Confederation: "I think we [are] encouraged to focus on this year's targets – get the finance right, deliver the targets and don't drop any clangers. That encourages a short-term perspective, a focus on in-year delivery and nothing else. It is very hard in that context to think and act strategically in the long term. But that is what we should be doing. We can try to rise above it, but it is very difficult."^{xxi}

Even semi-autonomous organisations such as Foundation Trusts – at least in theory free from performance management – are severely affected in such a climate. *Monitor* recently revealed that FTs are currently sitting on a huge £995 million in cash balances largely because 'in the absence of greater certainty about the long-term requirements of commissioners, FT boards continue to demonstrate a reluctance to invest in major capital projects [and develop new services]'.^{xxii}

Instead, the NHS must follow its own reform agenda and embrace diversity and competition; PCTs *must* be empowered as strong commissioners, providers *must* be autonomous and patients *must* have *real* choice. Central direction needs to end.

Innovation only works voluntarily and to its full potential in a system that is competitive. The root cause of the lack of innovation is skirted over far too often: nationalised monopolies, such as the NHS, whether intentionally or not, tend to stifle the rate of change by both reducing the pressure to innovate in the first place, as well as slowing down the diffusion of innovation.

In open markets the threat of entry by newcomers not only puts pressure on prices; it also acts as a pressure towards innovation because if, say, a hospital – or new provider – pioneered new techniques that provide higher quality, more cost-effective, care, it should both attract more patients and make greater profits.^{xxiii} This incentive structure simply doesn't exist in the NHS at present but it could do if the reforms are carried to their logical conclusion.

The Health Innovation Council must also be very careful in dealing with the Payment-by-Results tariff – this package of the reforms, ruling out price competition and leaving it up to the DH, not the market, to 'work out' the national tariff for each hospital episode, has difficulties in dealing with technological change. Some tariffs set under PbR '...appear to be so inadequate, they would fail to cover the cost of the technology alone'.^{xxiv} Revolutionary new technology is often expensive at first – think of flat-screen TVs, laptops or hi-fis – but as expertise develops, the price falls. Under PbR we have a potentially perverse situation where if the DH doesn't account for the initially higher price, it is very unlikely the technology will be brought in at all. The Council should be wise to this.

If they are not, and if the market reforms are not carried through, the procurement of technology across NHS trusts will continue to resemble a 'creeping mix' of equipment, rather than necessarily more clinically efficacious and cost-effective systems.^{xxv} Nowhere is this more evident than with District General Hospitals, many of which have overshot the level of care actually needed by the vast majority of patients – as has been identified by Lord Darzi himself. Some hospitals and PCTs are making such huge deficits because they are digging in and tightening controls on existing ways of doing things, rather than embracing change.

And for those who have implemented innovative practices and are providing better quality and more cost-effective care because of it, there is no competitive impulse to induce change in others – it is left to central bodies to try to force best practice on risk-averse actors that are inclined towards the status quo. As Andy Goldberg, who helped set up the Medical Futures Innovation Awards four years ago says: "The NHS is [like] the interfering mother-in-law who keeps ringing up to see what's going on. Risk is a swear word. This has to change.

Organisations are, in fact, lining up to challenge the old ways of doing things, but they are being stymied by the system, relying on a competition-shy 'patient choice' agenda being flexible and accommodating enough for them to treat NHS patients in the future.

In late 2006 Karol Sikora outlined how CancerPartnersUK, an organisation which aims to revolutionise cancer services across Britain by creating a unique partnership between private, public and voluntary sector organisations, is aiming to open a network of strategically placed centres providing the latest high quality treatment and diagnostics. Funded by private equity, they would provide a patient centred, integrated service – including chemotherapy, radiotherapy, complementary therapy and some diagnostics on an outpatient basis.^{xxvi} Further examples are the Bridgewater, a £13 million stand alone private hospital opened in Manchester in June 2006, and CCE, a private hospital co-ownership capital venture that is set to open its first unique new-build hospital by 2009^{xxvii}, both of which are co-owned by groups of consultants in a joint venture with private equity houses and banks. In fact, CCE looks specifically to back consultants who want to operate new or redeveloped hospital facilities in areas of strong local healthcare demand.

These are all exciting new developments, but both they, and innovative NHS organisations, will only achieve their true potential if the conditions are right: if the Health Innovation Council is working in an NHS that truly embraces competition and choice.

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ⁱ Wanless, D, *Securing our Future Health: Taking a Long-term View: An Interim Report*, London: HM Treasury, 2001, p.164.

See also: House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005; in her evidence, Dr Felicity Harvey, Head of Medicines, Pharmacy and Industry Group at the DH, acknowledged in addressing the House of Commons Health Committee that: “the NHS has not been good at getting new technology in”.

And; Cooksey, D, *A Review of UK Health Research Funding*, London: HM Treasury, 2006, p.35. The medical technology industry in the UK consists of approximately 4,800 companies, employing in excess of 55,000 people, with combined sales of £6 billion with £3 billion of this in export earnings. The industry spends £380 million per annum on R&D.

ⁱⁱ <http://www1.imperial.ac.uk/medicine/people/a.darzi/>

ⁱⁱⁱ House of Commons Health Select Committee, *The Use of Medical Technology within the NHS*, London: The Stationery Office, 2005, p.9

^{iv} Gubb, J, ‘We’re doing everything that is needed. Thanks for your interest. Goodbye.’, *Civitas blog*, 19/07/07. Commentary based on a seminar given by John Petri at Civitas on 18/07/07. See also:

<http://news.bbc.co.uk/1/hi/england/norfolk/4376870.stm>

^v Ibid.

^{vi} Information Centre, *Prescription Cost Analysis: England 2006*, Leeds: The Information Centre, 2007

^{vii} Information Centre, *Hospital Episode Statistics – Headline Figures Tables*, Leeds: The Information Centre, 2007. Available at: <http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=193>

^{viii} McClellan, M, Kessler, A, et al., Technological Change Around the World: Evidence from Heart Attack Care, *TECH, Health Affairs*, May/June 2001:25-42

^{ix} Fitzpatrick, A, ‘The Cutting Edge’, *Medical Technology and Innovation*, MTG, Issue 14, 2007

^x House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005, Health Committee: Evidence, Q3

^{xi} McKinsey & Co., *Patients expectations: A perspective on 2020*, in *Health Trends Review: Proceedings of a conference held at the Barbican Centre, London on 18, 19 October 2001*, HM Treasury, 2001. Cited in: Wanless, D, *Securing our Future Health: Taking a Long-term View: An Interim Report*, London: HM Treasury, 2001, p.164

^{xii} Wilking, N and Jönsson, B, *A pan-European comparison regarding patient access to cancer drugs*, Stockholm: Karolinska Institutet, 2007, p.2

^{xiii} Wilking, N and Jönsson, B, *A pan-European comparison regarding patient access to cancer drugs*, Stockholm: Karolinska Institutet, 2007, ch.4

^{xiv} *British Journal of Cardiology*, ‘Changes in referral patterns to cardiac out-patients clinics with AECG monitoring in general practice’, 2001: Vol 8-6; cited in: House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005, Health Committee: Evidence, Ev. 66

^{xv} House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005, Health Committee: Ev 62 (MTG); citing: Jolly, A, SADS UK Chair, speech to the Parliamentary launch of the “*Making the Case for Economic Technology*”, 2004

^{xvi} Wilking, N and Jönsson, B, *A pan-European comparison regarding patient access to cancer drugs*, Stockholm: Karolinska Institutet, 2007, ch.7

^{xvii} <http://www.institute.nhs.uk/>

^{xviii} Cooksey, D, *A Review of UK Health Research Funding*, London: HM Treasury, 2006, p.78

^{xix} Cooksey, D, *A Review of UK Health Research Funding*, London: HM Treasury, 2006, p.69

^{xx} House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005, Health Committee: Evidence, Ev. 72

^{xxi} NHS Confederation, *The Challenges of Leadership in the NHS*, London: NHS Confederation, 2007, p.5. This also helps explain apparently ludicrous decisions, such as that by the Dudley Group of Hospitals NHS Trust in 2004 not to take up a new medical device called CardioQ, despite the fact experimentation at the trust found that CardioQ patients saw an average reduction in length of stay of 3.75 days, or 26 per cent, and that the first NHS Trust that implemented the new technology had already announced savings of more than £1 million.

See: House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005, Health Committee: Evidence, Def. 32

^{xxii} Timmins, N, 'Health trusts sitting on £1bn cash mountain', *Financial Times*, 22/08/07.

^{xxiii} Christensen, C.M., Bohmer, R., and Kenagy, J., 'Will Disruptive Innovations Cure Health Care?' *Harvard Business Review*, September-October 2000, 102-111.

^{xxiv} House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005, Health Committee: Evidence, Ev. 7

^{xxv} House of Commons Health Committee, *The Use of New Medical Technologies within the NHS*, House of Commons London: The Stationery Office Limited, 2005, p.14

^{xxvi} Sikora, K., 'A better way to treat cancer', *Daily Telegraph*, 18/09/06. See also:

<http://www.cancerpartnersuk.org/index.html>

^{xxvii} See: <http://www.clinicalexcellence.org.uk/default1.htm>