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Thinking business technology

Can the government deliver hi-tech healthcare to millions?

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From large specialist hospitals to local GP surgeries, information technology (IT) has the potential to transform the process of delivering healthcare radically. The internet, wireless devices, electronic prescriptions and electronic patient records could mean better diagnosis and improved efficiency. Yet governments have a poor track record of delivering successful change projects. Find out how the public sector can move away from these past failures to deliver the benefits of hi-tech healthcare to the masses.

The attraction of using IT to support the processes of delivering healthcare is clear. Patients will no longer have to repeat their basic details, time after time, as they progress through the health system. Records, X-rays and other information will no longer go missing, and can be accessed more easily from more locations. Such solutions would put a stop to endless sources of frustration and wasted time for both doctors and patients.

Information systems should help doctors and nurses reduce the frequency of medical errors resulting from a whole range of sources: from the famous illegible handwriting of doctors and the incorrect re-keying of information to lack of knowledge that a medicine about to be prescribed interacts with one already being taken. According to the Audit Commission, about 1200 people die in the UK each year as a result of medical errors, and at least £500 million is spent treating patients who suffer adverse reactions to medicines. Many of these incidents could be avoided by providing better information through computerised prescribing systems.

Information systems can also save large amounts of time by allowing staff to order and report on tests electronically and by making records immediately available at the point where the patient is being treated. That can mean shorter stays in hospital for patients, while hospitals can both cut the cost of particular treatments and treat more patients by reducing the number of bed days required. In the meantime, doctors, nurses and other medical professionals can be helped to more easily follow agreed treatment protocols. Given the pace of innovation in medical knowledge, no doctor alone can keep up up-to-date with the latest research, while those paying for healthcare will know that the most effective treatments are being provided.

On top of that, medical records are typically more accurate when patients have access to them, and patients are more likely to comply with treatment. At the same time, data from electronic patient records, suitably anonymised, offers huge gains for medical research. Throw potential administrative savings into the mix, along with the ability of patients to choose the time of hospital appointments, the use of SMS messaging to remind patients when they are due for their next appointment, and the introduction of systems that allow remote monitoring of patients with chronic illness, and it is hardly surprising that healthcare technology is a high-growth business.

Track record of delivery is poor

While the case for greater use of IT in healthcare is easy to make, it has so far proved much more difficult to deliver the benefits (see *Taming the beast: containing spiralling IT infrastructure costs* by Pal and Fuller). Put the words healthcare and IT into the same sentence and the next thing most people expect to read is disaster. This is because the history of IT and healthcare in the UK has been a fraught one, in part because we have seen a series of false dawns in developing a technology strategy.

The public sector, in general, has struggled with large-scale and cross-organisational projects of the kind needed in the NHS. A proposed benefit swipe card was abandoned after £1 billion had been spent on it. In 1999, the Passport Agency introduced a new system on the same day that children were required to have to have their own passports to travel. The result was a rise in applications at the same time as a temporary decrease in productivity as staff got to grips with the new system – and extensive queues of people applying in person: many holidays and business trips had to be cancelled for lack of a passport. A new national insurance system led to a huge backlog in payments, and it has never produced some of the promised benefits. A project for a court system known as Libra is running five years late and costing at least twice its original budget, while the Child Support Agency (CSA) is struggling with a system that still does not help staff handle their caseloads. And the Inland Revenue's online self-assessment system went

down under the sheer weight of the number of users in April 2005, as taxpayers rushed to beat the tax deadline.

A study by Templeton College, Oxford, in 2003 of the views of project managers found that just 16% of UK public sector projects were judged successful. These failures grab headlines because people have nowhere else to turn to for services – and because it is our money, as taxpayers, that are being wasted. The successful projects – and they do exist – don't make the headlines because success is not newsworthy.

For example, benefits are being delivered from NHS Direct, the telephone and online health helpline, which has a sophisticated clinical decision support system behind it. At the DVLA, more than half of truck licences are processed online, and 40% of driving theory tests and 30% of practical tests are booked through the web. The Crown Prosecution Services (CPS) has a case management system that is a model of IT-enabled business change within the public sector, while direct payment into banks and building societies has successfully replaced millions of benefit order books. And projects that start out with big troubles can end up functioning effectively: the Passport Agency handled 5.9 million new and renewed passports in 2004 and turned around 99.9% of properly completed applications in 10 days.

Reasons for failure

Failures in public sector projects typically occur as a result of one or more of a small number of factors: a failure to engage and consult end users, shortages of key skills and competencies, and poor project leadership. The enormous scale of some public sector projects, the radical nature of many of the reform programmes they support, and the need to embrace all of the varied needs of many different stakeholders also makes successful execution of these projects extremely difficult.

Moreover, the public sector contracting process is inherently anti-competitive and systematically discriminates against small and innovative companies. Businesses which have been established only relatively recently cannot produce the run of accounts that public sector procurers often demand. Well-established companies with a successful track record can find themselves ruled out because they have no record of delivering public sector projects: this "Catch 22" means companies cannot win a fair share of the £117 billion central and local government spends annually on goods and a services because they have not won a public sector contract before.

And size matters in winning public sector contracts: the bigger a service provider, the more likely it will be to win a public sector contract (see Figure 1). Less than 45% of companies with a turnover of under £100,000 a year have any local authority business, and no more than a fifth have any central government contracts.

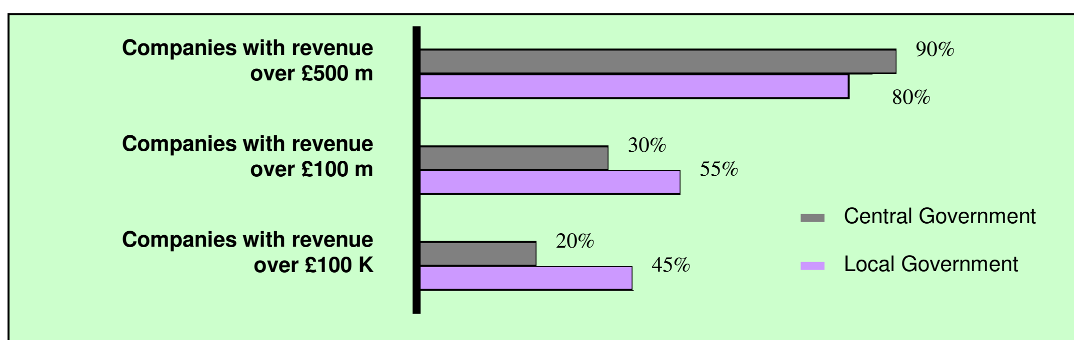

Figure 1: Size matters in doing business with the government

By contrast, 55% of companies with a turnover in excess of £100 million have at least some contracts with local authorities, and 30% do business with central government. Among, companies with a turnover of at least £500 million, 80% have some contracts with local authorities and 95% do business with central government. The Office of Government Commerce (OGC), the Small Business Service (SBS) and the Better Regulation Task Force have all issued reports saying that small businesses seem to be losing out – but little is changing. One of the reasons this culture and procurement process is difficult to change is

because many key personnel in leadership positions within the public sector are appointed from backgrounds in large service providers.

Actions are more important than rhetoric

Announcement in October 2005 by the minister in charge of e-government that suppliers of IT to the government (and here, we are talking about the government's preferred list of large suppliers who consistently failed to deliver projects on time and within budgets) will be held to account in future in nothing more than an empty promise. Many policy makers and ministers made such empty promises in past, yet the government continued to award contracts to companies with poor track-record of delivery. The sole reason for selecting these failed suppliers appears to be their size and scale, not necessarily their capabilities. In order to reclaim taxpayers' confidence, the policy makers need to take actions that include awarding contracts to small and innovative suppliers.

Revised approach, same culture: similar outcomes

There are hopeful signs that public sector managers are now beginning to understand that these projects are not "just IT projects" but large change projects enabled by IT. Yet, despite this better understanding within the public sector, there are worrying signs that past mistakes are being repeated in parts of the National Health Service IT programme.

In the NHS National Programme for IT, contracts worth £6.2 billion over ten years have been awarded to a number of companies, all of whom are large suppliers who have remained in the inner circles of public sector projects for years despite the failure of many of them to deliver value in past projects. In an attempt to keep most of this inner circle of suppliers happy, the programme has been broken up into five regional clusters. The theory is that if one supplier fails to perform, it can be replaced by another.

Already the programme is running nearly a year behind schedule, yet these suppliers continue to ride the gravy train. Although a revised approach to awarding contracts has been adopted, key technical and human risks remain. Technical risks include the effectiveness of the "spine" network that links different parts of the NHS together. If the spine is not delivered successfully, the whole programme will not work – and that gives other inner-circle suppliers a license to print money without delivering anything substantive. Yet the large telecommunication supplier responsible for the spine is struggling to deliver it. The risk has finally been acknowledged: over the last few months, the system has undergone a redesign so that if the central link fails, hospitals and GPs will at least still be able to go on using the scaled-down system.

These large-scale suppliers have also demonstrated an equal failure to work out how to engage the staff who are eventually going to use these systems, despite the fact they are meant to have expertise in delivering large scale projects. The programme managers' decision to choose systems for the clinical community before embarking on any detailed engagement with them has created much friction with representative bodies such as the British Medical Association (BMA). What's more, it has left most staff largely ignorant about what to expect in the way of solutions and support in the future. The NHS appears to have paid lip service to the lessons of past public sector IT failures, but hasn't put them into practice.

How can the NHS succeed?

Not only can the NHS not afford to waste more money on unsuccessful IT projects but it desperately needs the efficiency improvements that well-implemented change programmes supported by IT can bring. Around a quarter of all NHS trusts, and a third of acute hospitals, failed to balance their books in the financial year ending April 2005 according to figures released by the Healthcare Commission, the NHS inspectorate. Ten trusts recorded deficits of £10m and more, with the worst performers overspending their budgets by more than 15%. While the overall deficit for the NHS as a whole was around £140 million, some trusts under spent, and those that failed to balance their books overspent by a total of more than £650 million. It is not the overall deficit of £140 million that is important, but the greater number of trusts this year recording deficits – and bigger deficits – compared with previous years. The deficits are all the more striking because they have emerged before "payment by results" - a scheme under which hospitals will be expected to provide care for a fixed national tariff, with money following the patient - has been implemented fully.

The healthcare system is broken and taxpayers are paying the price. But there is a way out of this problem, if the government is willing to embrace a new operating model for healthcare: one that places control over costs and care directly in the hands of patients. The competitive forces that spur productivity and innovation need to be loosed upon the inefficient, tradition-bound healthcare system. When consumers apply pressure on an industry, whether it is retailing or banking, automotive or IT, it invariably produces a surge of innovations that increase productivity, reduce prices, improve quality, and expand choices. The essential problem with the NHS is that it has been shielded from patient control by the government. As a result, costs have exploded while choices have narrowed.

In a patient-centric model of healthcare, providers respond to patient demands by pursuing three fundamental operating imperatives (see Figure 2).

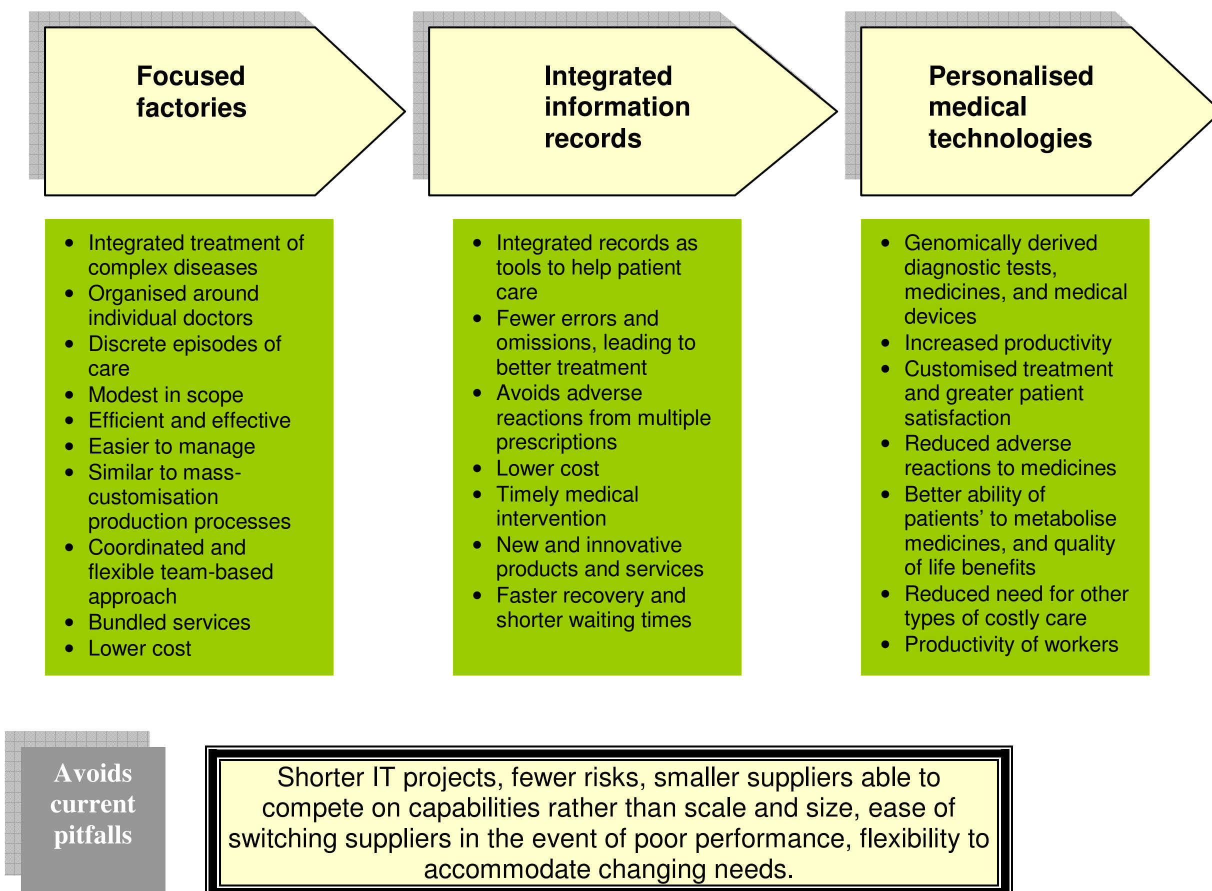

Figure 2: Patient-centric healthcare reduces the execution risks for large technology projects

Exploding the healthcare myths

Rather than imposing a top-down solution, patient-centric healthcare works from the bottom up, enabling NHS trusts and patients to join together to create better, cheaper ways to deliver care. Yet some critics assert that patient-centric healthcare will benefit only the rich, leaving the poor worse off than before. This argument is based on two flawed assumptions: that good quality healthcare is vastly more expensive than the average quality care provided by much of the NHS; and that healthcare providers are only interested in serving the rich and will not reach out to the broader population.

In fact, good quality healthcare – coordinated, personalised and taking advantage efficient IT-enabled processes – costs less than average quality care. Average quality care, after all, undermines health, leading to more illness, more procedures, more prescriptions, and more emergencies. And, as in any other market, suppliers will be vitally interested in serving the enormous number of patients who are not rich: no industry ignores the mass market. When consumers take the lead, companies offer a greater

variety of better, cheaper products and services, while the difference in quality between the best and average narrows and all products are of adequate quality, regardless of their price.

A second myth is that patient-centric healthcare will lead to fewer hospitals, as providers rationalise their networks to reduce costs. This canard is promulgated by those who are fixated on a bricks-and-mortar vision of healthcare, anchored in vast hospital "processing plants". In a patient-centric system, by contrast, tightly focused specialist units for chronic diseases will orchestrate and integrate care for each patient by drawing services from many different providers in many different locations. These will range delivering continuous support in the patient's own home, through check-ups in community facilities, and on to centralised regional care facilities for complex, high-end care. The idea that we cannot afford this decentralisation of healthcare is belied by the magnitude of the existing expenditure on centralised NHS services that are not currently delivering value for money.

Potential implication of not giving real choice to patients

Long waiting time to receive the necessary care has already forced patients in the UK to look elsewhere in Europe and in Asia. This has created medical tourism, and some Asian countries, notably India, are well placed to take advantage of the situation. This phenomenon is analogous to the outsourcing and offshoring trend of IT and business processes so common in the UK private sector (see *Offshoring: Saviour or Value Destroyer?* by Pal and Hammond). Like global offshoring trend, medical tourism holds promise for India. It is estimated that India's medical tourism industry could produce as much as £1.3 billion in annual revenue by 2012. The quality of care in top private hospitals in India is as good or better than that of big city hospitals in the US or the UK. Professionalism and expertise of Indian doctors has always been rated high, and complicated non-invasive procedures such as robotic surgeries are no longer alien to doctors in India.

As a result, there is a rush among top Indian hospitals to make themselves attractive to medical tourists from Europe and the US. Top private hospitals in India are wooing foreign patients offering services that are best associated with five-star hotels, such as airport pick-ups, plush internet-equipped private rooms, and package deals that combine convalescence with luxuries of tourist resorts. Some Indian hospitals are packing in extra perceived value propositions by augmenting treatment regimens to include yoga and other forms of traditional Indian healing that have always held in high regard for the people in the West. Some hospitals, like New Delhi based Escorts Heart Institute are looking at setting up fully furnished service apartments to be offered as part of the package to foreign patients. For example, at the Escorts Heart Institute, almost 40% foreign patients are from the UK, USA, Canada, and other European countries.

Understandably, initial efforts and representations from the Indian hospitals to the healthcare bodies in the UK and US to ease pressure and waiting queues in their country by diverting patients to India hasn't produced encouraging results so far. But, instead of dampening the sprit, it has sent most top hospital in India to put best possible infrastructure and services as an attraction. Most big private hospital chains have put greater emphasis on recruiting top quality people and designers from the hospitality industry. In addition, personalised nursing care, and the opportunity to learn about other holistic healing methods, from yoga, to ayurveda and more are part of the service bundles on offer. But that's not all. Many hospital-centric hotel projects are coming up in India as hospitals can offer a major catchments market for hotels with most patients prefer to travel with their families. Currently, Escorts Heart Institute have tie-ups with guest-houses and hotels for putting up accompanying family members, and they have put in place a dedicated in-house team to take care of all travel and stay related issues of each foreign guest.

In the meantime, the Indian government has set up a task force to promote India as a healthcare destination, as well as working on legislation for mandatory registration of all clinical establishments to ensure uniformity in services in a bid to standardise the healthcare services, a pre-requisite to attract foreign patients. The Indian government is also working on a Clinical Establishment Act, which will make registration of all hospitals and diagnostic facilities compulsory. To rationalise the flow of medical tourist traffic, the Indian Ministry of Home Affairs is also introducing a new category of visa called 'medical visa,' which can be given for specific purpose of medical treatment.

Within the Asian countries, Singapore has promoted medical tourism through its marketing network, Thailand has focused on patient experiences and South Africa specialises in medical safaris. But very few

countries in the world have a pool of top quality doctors like India, which gives India an unparalleled brand equity, together with the country's cultural heritage and places of scenic beauty and architectural interests, to attract medical tourists from the UK and elsewhere.

Patient-centric healthcare for 21st century

The idea of putting patients in charge of healthcare may rub many in the health establishment the wrong way. It goes against the grain of traditional ways of working and thinking, and it threatens to upset long establish practices and ideologies within the NHS. Some might argue that patient-centric healthcare will widen the divide between the haves and have-nots, or is “privatisation by the back door”. Others believe that the only way to control healthcare costs is to ration healthcare under a centralised NHS. Still others contend that people are not sophisticated enough to make their own decisions about coverage and healthcare.

Underestimating the intelligence of consumers is nothing new, of course. We heard many of the same fears when the idea of giving parents control over their children’s education was first raised. The fears were unfounded then – and they will prove unfounded with healthcare in this country. Individuals are highly motivated to act responsibly to educate themselves about their health and their care, and to seek the best value from suppliers of services. Providing that economic dynamic – the dynamic of patient markets everywhere – is the best way to enhance the NHS’s productivity and quality, and to limit large scale IT project disasters. It is time to put our trust in the good sense of the British people.

About the authors

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