

Knowledgeshare

Web alert: enabling and stimulating innovation in the delivery of health care

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Introduction

In June 2008, the Department of Health published the results of the National Health Service (NHS) Next Stage Review, led by Lord Ara Darzi.¹ This report, entitled *High Quality Care for All*, presented a vision for the future of the NHS that shifted the focus of attention away from increasing capacity and towards improving the quality of health care. Ensuring effectiveness, prioritising safety and enhancing patients' experience of health services were identified as the essential components of high-quality care, and among the measures proposed to tackle these challenges was an escalation in the support for 'innovation' across all NHS organisations.

Innovation occurs when individuals within the NHS invent a new technique, device or process (or adapt an idea from elsewhere), pilot it and test it out to show that it improves quality outcomes and successfully disseminate their idea to others within their organisation or beyond. *High Quality Care for All* gives strategic health authorities (SHAs) the legal responsibility to promote each of these elements of innovation within the organisations that they oversee, and to report back annually to the Department of Health on their progress.² In addition to this, 2009 saw the publication of the NHS Constitution, which promised a 'commitment to innovation',³ as well as the response to Lord Darzi's report by the NHS Chief Executive, who launched the Quality, Innovation, Productivity and Prevention (QIPP) challenge.⁴

So innovation is the name of the game, but what does it mean to support innovation? What are the barriers to innovation, and what should leaders do to engender an innovative workforce? The Health Services Management Centre (HSMC) at the University of Birmingham has produced an overview of evidence from around the world as to what approaches have worked to embed innovation within organisations.⁵ Their top ten recommendations for promotion of innovation include:

- supporting collaboratives and professional networks in order to build on previous experience of what does and doesn't work
- building time into the working weeks of leaders and clinical staff for them to attend training, to develop ideas, and to visit innovative colleagues
- using techniques from knowledge management that make it easier for staff to find and share knowledge
- explicitly valuing innovators through awards and incentives
- nurturing those individuals 'who can bridge different sectors and build new networks and communities'.

The HSMC report provides suggestions, with case studies, covering organisational structure and climate, resources for innovation, effective leadership and connectedness.

To make this work, NHS organisations will need to be innovative in the ways that they choose to encourage and enable innovation in their workforce, for example by devoting some resources to the emerging role of the clinical librarian. Clinical librarians are experts in knowledge sharing who work with health care teams to solve patient problems by finding evidence for what works, and providing ideas that can be adapted for local use. Professor Peter Hill's 2007 report for the NHS Institute for Innovation and Improvement⁶ recommended that clinical librarians should be introduced throughout all NHS trusts, initially in those areas where critical clinical decisions are being made most often. SHAs may wish to consider increased investment in these services, in order to satisfy their obligation to support the 'adoption and spread' component of innovation.

Previous KnowledgeShare 'Web alert' articles have covered a number of topics that overlap with the concept of innovation. Many of the ideas from the knowledge management field can be applied to encourage and

support NHS staff to think differently and spread good practice, and knowledge management websites were covered by KnowledgeShare in 2008.⁷ In 2007 the 'Web alert' series looked at tools for quality improvement, including a number of sites that focused on measuring the effectiveness of service innovation.⁸ This article will focus on resources that support NHS staff who wish to encourage innovation in their workforce, including websites from a range of national bodies that can advise in this area, forums for sharing innovative ideas and collections of evidence about how to meet this challenge.

Innovation in the NHS

Department of Health: innovation

Within the pages of *High Quality Care for All*, the Department of Health (DoH) includes a small selection of resources about innovation (www.dh.gov.uk/en/Healthcare/Highqualitycareforall/Innovation). This page talks about 'creating an environment within which innovation can flourish', and includes information about the 'Innovation Challenge Prizes', five £1 million awards that will go to the teams with the most inventive, easily reproducible ideas for tackling the biggest problems currently facing the NHS.

There is also a link to the website of the Innovation Expo, held in London in June 2009, which brought together leading speakers from around the world to discuss innovation's application to health care. Visitors to the website are able to view video of the presentations from Lord Darzi, David Nicholson, pioneers from the National Endowment for Science, Technology and the Arts, the medical devices industry, the UK Science Minister and many others.

Finally, the DoH's innovation page includes links to a number of key documents, including: *Creating an Innovative Culture: guidance for strategic health authorities*.²

High Quality Care for All

Progress on implementation of the goals set out in *High Quality Care for All* can be found at www.ournhs.nhs.uk. There is a blog on the site keeping users up-to-date with the way that health care in the NHS is being transformed, as well as opportunities for staff to get involved in the discussion. Many of the items posted to the blog cover innovation, including a piece by Lord Darzi about his vision for the NHS (www.ournhs.nhs.uk/?p=692). Here, Lord Darzi writes about the importance of empowering front-line staff to redesign services and spread their good ideas

beyond their own ward or practice, because 'it is front-line staff who are best placed to devise ways to obtain high quality care for each and every patient'.

After reading this statement of intent, visitors to the website can click on the 'Innovation' tag at the bottom of the screen to see a list of all the news items that relate to this topic. There is quite a range of information here, from links to the latest articles in the *Health Services Journal* on the topic, to discussions about the large sums of money being ring-fenced for innovation, to details of specific, leading-edge programmes from regions of the UK. What takes this resource beyond a simple news site is that staff with stories to tell about changes they are making locally, and patients with ideas about what would improve their experience of care, can and do respond to the postings, therefore enriching the discussion.

Technology Adoption Centre

The NHS Technology Adoption Centre (www.technologyadoptionhub.nhs.uk) was created in 2007 to identify new medical technologies that have been shown to improve patient outcomes in a cost-effective way, and work with NHS trusts to integrate these technologies into day-to-day practice. They have expertise in promoting the uptake of innovations and work through 'Technology Implementation Projects', which begin with a call for potential projects that are then assessed to ensure that they represent a significant change in practice, and are supported by convincing research evidence but not widely embraced by clinical staff. The Adoption Centre then works with specific NHS trusts or GP practices to help write business cases, redesign pathways and identify which members of staff need to be involved in implementation.

Current projects include technologies to reduce healthcare associated infections, virtual reality clinical skills training systems and 12-lead ECG in primary care using telemedicine. The results of these projects are written up as *How to Why to* guides, although only one of these (about how to implement an innovative suprapubic catheter insertion kit) is available at the time of writing. The number of these projects is set to grow to cover around 200 technological innovations over the next few years, and as each *How to Why to* guide is published this website will become more and more useful.

National Innovation Centre

In order to provide a way of connecting clinical staff with innovators (both within and outside the NHS), the National Innovation Centre (NIC) website (www.nic.nhs.uk) allows users to register a clinical need that

they feel should be addressed for the benefit of their clinical practice. This allows companies to be better informed about what front-line staff are looking for, and to take up the challenge and develop something new. Visitors to the site need to log in to access this functionality, but creating an account is free and very easy to do. It is also possible to search for clinical needs that have been registered by others within a particular disease area or patient group, and then vote on the importance and potential for change that should be attributed to the idea.

The 'Competition' section of the website takes this a stage further, with a selection of innovation challenges that have funding attached, for those organisations that wish to tender. The topics selected are those that have been rated as important by healthcare professionals visiting the site. There is also a 'Scorecard' tool that allows staff to self-assess their new idea in terms of its likely success and impact. Depending on how well the innovation scores, the NIC may be able to lend support in terms of making suggestions for fine-tuning the idea and making links with organisations to develop or fund it.

For those staff or organisations wishing to develop an idea for eventual widespread adoption, the 'Navigator' pages from NIC provide guidance on managing this process. There are large numbers of documents, organisations and helpful people to assist with defining the need, designing the solution, developing the opportunity (e.g. attracting funding and testing performance), demonstrating the benefits and distributing the product. Finally, the site also allows you to showcase your own local innovations, although this aspect seems to be under-used at the time of writing.

NHS Institute for Innovation and Improvement

The NHS Institute for Innovation and Improvement (NHS III) was created to focus on transforming good ideas into workable solutions for the NHS, and aims to coordinate at a national level work that will benefit organisations at a local level. The section of its website that is devoted to innovation (www.institute.nhs.uk/innovation) makes clear that the subject should not be thought of as only relating to new drugs or devices (which may be focused on by the Technology Adoption Centre and National Innovation Centre), but includes any new way of working or process of care that brings improvement and can be spread to the wider NHS.

Visitors to the website can read about the Institute's innovation process, which is collaborative and rapid, aiming not to become bogged down in large-scale testing, but focusing instead on trying things out, deciding quickly if they work well and moving on to

the next idea. A number of case studies are provided showing how the Institute's work process has been implemented in specific NHS teams and has led to improvements, for example in designing services for people with multiple sclerosis at Ealing Primary Care Trust (see 'How we work' in the 'Innovation' section of the site for details).

The NHS III has recently set up an Innovation Practitioner Programme for clinical and managerial leaders in the NHS, which teaches staff about the resources and toolkits that will help them to transform their services. Examples of these resource packs are 'Thinking differently' and 'Making a bigger difference' (both of which can be found under 'Our work quick links' in the right-hand contents list of the 'Innovation' section). These packs contain guides on assessing innovation (e.g. how much potential does a new idea have?), and ideas for stimulating new thinking. There is a document aimed at commissioners, and others with illustrations and examples of how local NHS staff members have been thinking 'outside the box'. Other projects from the Institute include: experience-based design, putting patient experience at the heart of service development; creating a culture for innovation, by focusing on risk-taking, targets, tools, rewards and so on; and understanding how to use the power of observation to be better aware of current challenges.

Innovation in Government

Public Sector Reform Innovators Council

The Public Sector Reform Innovators Council (www.hmg.gov.uk/innovation.aspx) is looking for practical suggestions for improvements to public services from those who deliver or use them. The Council, which is made up of senior figures from UK Government as well as representatives from industry, champions innovation and aims to see new ideas through to implementation and adoption. It will meet quarterly to draw up a shortlist of the ideas submitted by staff and the public and decide how to take these forward. The Innovators Council is still in its early days, but information about its membership and current work can be found online.

Department for Business, Innovation and Skills

Looking at innovation more from the point of view of income generation and competitive advantage is the UK Government's Department for Business, Innovation and Skills (BIS; www.dius.gov.uk/innovation). The

Department's Office for Life Sciences looks at how we foster innovation in the pharmaceutical and biotechnology sectors, and the Intellectual Property Office can give advice on patents and trademarks.

The Public Sector Innovation Unit works to support departments to cultivate innovative ways of working by drawing on a wide network of experts in the field. The BIS website provides further information and contact details related to each of its divisions, and makes available relevant publications such as the White Paper, *Innovation Nation*,⁹ which outlines the Government's goal of making the UK a leader in public sector innovation.

Evidence for innovation

Innovation and Improvement Specialist Collection

In addition to the organisations listed above, which devote themselves to the promotion of innovation, there are large numbers of others chipping in with their own ideas and publications on the subject. The NHS Evidence Specialist Collection for Innovation and Improvement (www.library.nhs.uk/improvement) is managed by a team of information professionals who gather together links to the best evidence, tools and documents on these subjects, together with techniques and case studies from the world of healthcare innovation. The menu on the left allows users to select 'Innovation', and then look more specifically at 'Creative thinking' or 'Technology' if they wish.

The Specialist Collection includes links to publications from an incredibly diverse selection of organisations, including guidance from the Department of Health and articles from the Harvard Business Review and academic journals (such as the *Journal of Nursing Management* and the *Journal of the American Medical Association*), through to briefings from the US Institute for Healthcare Improvement, the National Institute for Health and Clinical Excellence (NICE) and the King's Fund. There is evidence on implementing innovations in specific areas, such as rehabilitation, acute services in the community and end-of-life care. Finally, there are a number of summaries written by the Specialist Collection, bringing together the key sources in various fields of innovation and improvement. When looking for ideas about supporting staff to think differently, there is no better place to begin a search.

Quality and Productivity Specialist Collection

Another Specialist Collection from NHS Evidence is one focused on Quality and Productivity (www.library.nhs.uk/qualityandproductivity).

This is one of the newest specialist collections and the content is provided by NHS professionals from across the UK. Small-scale and large-scale changes and improvements that have been developed and tested within working NHS teams are showcased here, in reports written by staff from the trusts and gathered under headings such as 'Staying healthy', 'Maternity and newborn', 'Long-term conditions' etc. Each case study follows a standard format, with information about the purpose and type of change, related guidance and evidence of the effect on safety, effectiveness, patient experience and productivity. The most impressive changes are highlighted by the Specialist Collection under the heading of 'Recommended examples'.

Innovation in academic and professional journals

There are a number of journals and trade publications that regularly include pieces on innovation; some are freely available online, and others can be obtained via local health libraries (see www.hlisd.org for details). Publications that are worth investigating include the *Harvard Business Review* (hbr.org/search/Innovation), *Implementation Science* (www.implementationscience.com), the *Innovation Journal* (www.innovation.cc) and the *British Journal of Healthcare Computing and Information Management* (www.bjhcim.co.uk).

Conclusion

Quality and innovation go hand in hand, because no sooner have we improved the quality of services than we need to be thinking: 'What next?'. The NHS Information Centre is currently at work on the first set of 'innovation metrics' (www.ic.nhs.uk/services/in-development/clinical-innovation-metrics) that will measure how well new technologies are being adopted, and hopefully will be able to shed light on why some new ideas are rapidly implemented across the NHS, while others take years to become common practice.

The outcomes of innovation are improved quality and productivity, as well as potential income generation through the creation of world-class technologies and products. Everett Rogers, writing about diffusion of innovation in the 1960s,¹⁰ illustrated the hurdles that a new idea must overcome before it can be considered as an innovation. It must be better than what has gone before, compatible with existing processes, as simple as possible to adopt, easy to try out without committing and have visible, tangible outcomes. Many new ideas will not meet these criteria, and embracing innovation means accepting failure

more often than not. However, it is essential that healthcare providers take up this challenge if they hope to continue providing better services and saving money in the years to come.

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