CONSULTATION RESPONSE

wellcome trust

Department of Health: NHS Chief Executive Innovation Review

Response by the Wellcome Trust

September 2011

Summary

1. Developing an innovative culture in the National Health Service (NHS) is essential for improving patient outcomes and achieving greater efficiencies. Failure to do so will result in an NHS that is incapable of embracing the advances being made through medical research. It will also fall short in realising £20 billion efficiency savings, over four years, which have been agreed with government.
2. Worldwide, countries are faced with increasing healthcare costs as a proportion of gross domestic product (GDP).[1] In the UK, the Government has committed to maintain spending on healthcare despite implementing wide reaching austerity measures in other parts of the public sector. However, the NHS will have to meet an annual 4 per cent increase in demand solely through increased efficiency savings - innovation is key to achieving this goal.
3. This consultation response makes recommendations to create an NHS which is better placed to capitalise on UK and global biomedical innovations to:

    - improve the health of the nation;
    - increase the cost effectiveness of the NHS; and
    - contribute to the growth of the UK economy.

4. To realise this vision we have identified four interrelated themes which require urgent action and significant cultural change within the NHS:

    - creating a vision, transformational leadership and greater accountability for innovation;
    - harnessing the immense purchasing power of the NHS to drive innovation through procurement;
    - developing the NHS's informatics and integrated electronic record systems to improve patient care, provide greater health management information, and empower the patient to make informed choices;
    - placing research centres of excellence at the heart of an innovation strategy to provide a focus for establishing and sharing best practice.

5. We also provide a number of observations relating to the need for:

    - smarter evaluation of new practices to ensure evidence-based decision making;
    - a redesign of the tariff structure to incentivise the generation, adoption and diffusion of innovative new practices and products;
    - focused effort to equip the healthcare workforce with the skills and expertise needed for an innovative health service.

[1] http://www.bcg.com/documents/file64538.pdf

Developing an NHS strategy with a clear vision, leadership and accountability

6. The call for evidence acknowledges that the culture of the NHS needs to change. Strong leadership is essential. In *Developing the NHS Commissioning Board*, it is noted that the NHS Commissioning Board will have a duty to promote innovation and research to support quality improvement. The Government has recently put forward amendments to the Health and Social Care Bill to place similar duties on clinical commissioning groups. These measures attempt to embed research within NHS governance structures. By itself, this will not be enough to create an innovative NHS culture.
7. We are very concerned by the lack of clarity as to how the NHS Commissioning Board will execute its responsibilities for research and innovation. A conflict is likely to arise between the short-term objective of the Commissioning Board to secure better value for money, and the required investment in healthcare research and innovation to realise benefits in the medium to long-term. This conflict will need to be recognised and managed by the Commissioning Board.
8. The NHS landscape of organisations that claim responsibility for innovation is crowded and confusing. Examples include: NHS National Innovation Centre; NHS Innovation Hubs; NHS Institute for Innovation and Improvement; NHS Technology Adoption Centre; NHS Information Centre. This has resulted in overlapping responsibilities: the NHS National Innovation Centre and the NHS Institute for Innovation and Improvement both aim to support innovators, clinicians and commissioners to develop and deliver innovations to improve healthcare provision in the NHS.[2,3] There appears to be a strong case in favour of rationalising and streamlining the number of NHS organisations responsible for innovation.
9. A vision and strategy for an innovative NHS needs to be developed and communicated within the NHS and externally. NESTA's 2011 report, *Innovation in Public Sector Organisations – a pilot survey for measuring innovation across the public sector,* found that organisations with strong leaders and innovation strategies, consistently have higher innovation indices. The NHS Commissioning Board should work with the NHS Life Sciences Innovation Delivery Board to develop the vision and strategy.
10. Strong leadership is required to drive change within the NHS. This needs to start with the most senior levels of management within the NHS. Without such leadership, the NHS is unlikely to achieve the transformations needed to make it a truly innovative public service.

Strengthening procurement to drive innovation

11. The NHS must leverage its purchasing power to drive innovation.
12. Procurement practices must form part of the innovation architecture in the NHS as highlighted by the House of Lords Science and Technology Committee[4] and the Council for Science and Technology[5]. Strengthening collaborations with industry is one way of harnessing this purchasing power.
13. The *Developing the NHS Commissioning Board* report recognises that the Commissioning Board will need to "develop a relationship with suppliers which supports its strategic approach to innovation and development". Early and open engagement with industry is essential if the NHS is to drive innovation.

[2] http://www.nic.nhs.uk/
[3] http://www.institute.nhs.uk/organisation/about_nhsi/about_the_nhs_institute.html
[4] http://www.publications.parliament.uk/pa/ld201012/ldselect/ldsctech/148/14802.htm
[5] Innovation and wealth creation – services sector and public procurement (2006) http://www.bis.gov.uk/cst/cst-reports#Health

14. Providing advance notice of the types of technologies and large-scale equipment and services that the NHS is considering purchasing will help to drive innovation in the private sector. Developing a mechanism, by which the NHS outlines, in broad terms, its future requirements on a rolling 5 to 10 year time horizon will engage industry and potential suppliers at a much earlier stage.

15. Expert procurement knowledge and skills will be required at both the national (NHS Commissioning Board) and local (clinical commissioning groups) level.

Utilising eHealth and IT to empower patients and stimulate innovation

16. eHealth systems can provide the 'pull' from patients for greater innovation by enabling patients to make informed choices about which interventions they would like to receive and can empower patients to take responsibility in managing their own treatment. For example, at the Vanderbilt University Medical Centre in the USA, a secure web-enabled access allows patients to view their medical records, access laboratory results, send and receive secure messages with their doctor's office, and access patient and treatment information tailored to the individual's needs – currently over 100,000 patients use the system.[6] The Veterans Affairs (VA Health) in the USA, and other organisations, offer similar innovative services to their patients. VA Health's eHealth system is open source.

17. Where eHealth systems have been found to deliver most benefit to patients, is where these systems are integrated across the healthcare system – linking primary, secondary and tertiary records. Integrative care models improve patient care and provide long-term cost savings.

18. Patient databases also provide a valuable resource for health research and on-going evaluation of patient outcomes. Specifically, such databases facilitate recruitment of participants to clinical trials, improve pharmacovigilance, and support surveillance and evaluation of new interventions to monitor their effectiveness. Integrated databases, across the NHS, to support these activities would make England unique, globally, for such research.

Placing research centres of excellence at the heart of an NHS innovation strategy

19. Through the National Institute for Health Research (NIHR), England has developed a number of research centres of excellence that bring together the strengths of academia and the clinical expertise of the NHS for patient benefit.

20. Research centres of excellence, including the Biomedical Research Centres, the Biomedical Research Units, and the Academic Health Science Centres should have a core role to play in generating and accelerating the adoption of innovations within the NHS. These centres are well placed to drive innovation, and develop and share best practice.

21. At local levels, individual champions will be key in driving the adoption of innovation in the NHS. Appointment of individuals at local levels to identify best practice and encourage use of new practice can accelerate adoption. For example, a report by the King's Fund highlighted the importance of individual champions in the success of a new service model of integrated care.[7] The champions, known as health and social care co-ordinators, harnessed the efforts of team members to establish an innovative integrated care system which resulted in improved outcomes for elderly people.

[6] http://www.vanderbilthealth.com/main/28542
[7] http://www.kingsfund.org.uk/publications/integrating_health_1.html

Smarter evaluation for evidence-based decision making

22. Evaluation is fundamental if the NHS is to assess new innovations, determine best practice, and provide evidence-based decision-making.

23. On-going evaluation can drive adoption of innovative practice because it highlights areas where there is room for improvement and identifies those innovations in use which result in improved patient outcomes. The move to value-based health care would allow the NHS to assess more effectively its impact and cost effectiveness, by considering both patient outcomes as well as costs. In countries where value-based health care exists, providers and commissioners must identify, codify and promote treatment protocols that are proven to yield better, more cost-effective care. By taking this approach, incentives exist to ensure that innovative practices that yield improved outcomes are adopted quickly, and replace less effective practices. In Sweden, disease registries track patients through diagnosis, treatment and outcome, providing a mechanism for continual evaluation. The registries have been used to identify best-practice protocols and guide changes in the use of incentives to ensure their widespread use. Adoption and use of Sweden's National Cataract Register has decreased the risk of astigmatism as a side-effect of surgery.[8] The UK already has a system of audits, however their use is varied and they are not required across all areas.

24. The National Institute for Health and Clinical Excellence (NICE) provides guidance and sets quality standards to improve people's health. It makes recommendations on clinical practice and conducts drug cost-benefit assessments. It is a driver of innovation. However, the implementation of NICE guidelines and NICE recommendations following cost-benefit assessments is not uniform. NICE recommendations are re-assessed at local levels where variations in local funding and affordability may influence, if, and how, guidance is implemented. This means that patients in different geographic locations may experience different access to care, even when it is recommended national practice. The devolution of power to local clinical commissioning groups in the Health and Social Care Bill may exacerbate these problems of inequity.

25. Availability of information relating to services and patient outcomes from different healthcare organisations allows patients to make informed decisions about where and how they are treated. In turn, this can drive innovation. In Valencia, Spain, enabling patient choice has been shown to drive improvements in service delivery because health service providers must compete to attract patients.[9]

26. Commissioners, the NHS workforce and the public should have access to the evidence on best, and recommended practice. Currently, both NHS Evidence and the NHS Information Centre provide information on best practice. There needs to be a central portal where NHS staff and the public can access information on the quality of health care provision and adoption of best practice.

Redesigning the tariff system to incentivise innovation

27. The call for evidence highlights that existing NHS financial levers often do not reward innovation.

28. The NHS tariff structure can act as a barrier to the adoption of innovation by failing to adequately promote or encourage the adoption of new practices, or incentivising the cessation of redundant or bad practices.

29. Reforming the tariff structure was a critical step in implementing a successful model of integrated care in Valencia, Spain. In Valencia, a public-private investment partnership model

[8] http://www.bcg.com/documents/file64538.pdf
[9] http://www.reform.co.uk/Portals/0/documents/Alotmoreforalotless.pdf

pays a fixed tariff per patient per year and has led to decreased healthcare costs per capita by 25%.[10] As well as decreasing costs, waiting times have decreased and patient and workforce satisfaction has been maintained. Integration of patient care with local practices, is taking place, to reduce the number of unnecessary hospital referrals. This model of tariff structure promotes the adoption of innovations in service provision and encourages lower cost preventative measures over more expensive care in hospitals. We understand that this model of tariff is currently being trialled by the Derby NHS Foundation Trust for diabetes patients' care.

30. Robust measures of evaluation are fundamental to assess the outcomes and cost-effectiveness of therapies. Current re-imbursement models do not encourage uptake of interventions with high short-term costs but long-term savings and will need to be redesigned to encourage uptake of new innovative therapies. For example, regenerative medicine therapies may have high initial costs compared to traditional treatments, but are likely to generate large savings in the long-term if they reduce chronic conditions, such as diabetes.[11]

Equipping the Healthcare workforce

31. The capacity to generate and adopt innovations needs to be embedded throughout career pathways of the NHS workforce. To do this, research and innovation need to be consistently supported and prioritised in careers across the NHS.

32. National training programmes are an important route through which to promote adoption and diffusion of new innovations. For example, in 2006 there were only 45 surgeons who could perform laparoscopic colorectal surgery; this was preventing the widespread uptake of the new NICE guidelines regarding laparoscopic bowel surgery. LAPCO – the national training programme in laparoscopic colorectal surgery – was launched in 2007. Currently it is estimated that there are 200 surgeons trained or are training in this technique.[12]

33. Training is not only integral to rolling out new practices but it is also fundamental in creating capacity in the healthcare workforce to adopt completely new approaches to healthcare. For example, genetics and genomics have an opportunity to completely revolutionise healthcare. Sir John Bell, Chairman of the Government's advisory Human Genomics Strategy Group, recently warned that the NHS is not ready to adopt the emerging innovations in this area, despite mounting evidence that the improvements in diagnosis and treatment they offer could ultimately save money. The NHS must position itself to grasp the opportunities presented by genomics and other developments in technology and service design. This will require leadership - workers throughout the NHS need to be educated and informed of the potential benefits of these revolutionary technologies to be able to promote their adoption throughout the patient pathway.

34. Individual efforts to promote the adoption and diffusion of innovations should be recognised as part of meeting career progression targets. For example, the Royal Colleges should consider whether individuals have promoted uptake of NICE guidance in their local area or been involved in clinical trial recruitment. Currently, the system is biased towards whether an individual has conducted independent medical research, but does not take into account broader activities involved in the adoption or diffusion of innovations.

[10] http://www.reform.co.uk/Portals/0/documents/Alotmoreforalotless.pdf
[11] http://www.bis.gov.uk/assets/biscore/innovation/docs/t/11-1056-taking-stock-of-regenerative-medicine
[12] http://www.rcseng.ac.uk/news/docs/theory_to_theatre_2011_web.pdf

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