Response to NHS Chief Executive’s Open Call for Evidence and Ideas

Respondent ID: 178

Organisation name: Clinical Advisors who are on the National Physiology Diagnostics Board and the SHA Lead Scientists’ Network

Type of response: Document
INNOVATION IN THE NHS: call for evidence and ideas

Background:
This response collates the individual responses which have been received from the Clinical Advisors who are on the National Physiology Diagnostics Board and the SHA Lead Scientists’ Network. These respondents represent healthcare scientists working across the physics and engineering, life sciences and physiological sciences divisions.

Healthcare scientists have a unique role in the NHS which is not currently systematically exploited by the NHS to make innovation work for better patient outcomes and greater system efficiency. Working at the interface of science and clinical practice (increasingly in patient facing roles) they have well developed skills in translating scientific research into improvements in clinical interventions across care pathways.

Examples:
The healthcare science workforce represents a significant resource to the NHS and NHS Commissioning Board:

- to use the scientific and analytical skills of scientists to scan for innovations; recognise their potential for service transformation and for patient benefits; contribute to innovation evaluation and the development of an evidence base for the roll out of innovation; and drive adoption of innovation into service delivery.

- to understand how innovations translate into healthcare treatment and care benefits for patients. Recognising and implementing NHS health applications of novel technologies, which may have been created for non health related purposes, can be facilitated by NHS healthcare scientists

- to act as innovation adoption specialists, mobilising other clinicians to adopt innovation and actively introduce and implement innovation into clinical practice.

Proposal: Healthcare scientists should lead on innovation in toto for NHS Foundation Trusts, Clinical Senates and other NHS organisations. Healthcare scientists will be informed by their strong networks and should be responsible to the Medical Director, who should have the remit as board member for innovation

1. Learning from elsewhere about adoption and spread

What can the NHS and NHS Commissioning Board learn from national and international best practice to accelerate the pace and scale of adoption of innovations throughout the NHS?

Examples

**Recognising cost effective innovations**

- Optimising the use of information technology to drive business development and the management of business processes has been achieved in other national services and across developed economies. This has been achieved in some clinical areas such as Audiology and in some national screening programmes (cancer and non cancer). The efficient management and transfer of information (which relies on
system compatibility and wireless integration within and across organisations) is key and respondents consider that a national strategy is needed to ensure enabling technologies are in place to build an effective information management infrastructure for the NHS.

Showcasing and communicating effective innovations

- East Midlands SHA has an annual Innovation Expo for all staff which showcases successful innovation projects to encourage and accelerate the adoption of changes in practice – this could be adopted as a national template.
- Creating high visibility communication portals/tools for innovation with high recognition and engagement from staff. National and international companies invest in tools to communicate to their staff about innovation and the business advantages of process and service improvement. Respondents consider there are still many areas and departments within the NHS where staff are unaware of the need for innovation. The CSO Scientific Services programme has worked with NHS Improvement to create a blueprint for service improvement which can be rolled out across all physiology diagnostics services. Information about these programmes to deliver innovation across care pathways can be found below:

  Shaping the future: strengthening the evidence to transform audiology services
  http://www.improvement.nhs.uk/audiology/documents/Shaping_the_Future.pdf?fileticket=zRsxjLXTeCw=&tabid=56

  Pushing the boundaries: evidence to support the delivery of good practice in audiology
  http://www.improvement.nhs.uk/LinkClick.aspx?fileticket=zRsxjLXTeCw%3d&tabid=56

- The NHS Supply Chain (PR contact jayesha.mistry@supplychain.nhs.uk) worked in partnership with DH, the professions, patient groups and Local Authority stakeholders to procure new digital hearing aids delivering improved quality, improved patient choice and innovation at an average saving of 13% for the NHS. A range of health care scientists contributed to establishing an evidence base, specifying standards for the NHS and evaluating products against these standards. Implementing this team approach to procurement across other areas of NHS activities would systematise innovative procurement on an industrial scale.

Promoting a culture of innovation

- Emphasis on an innovation pathway should be strongly encouraged and managed so that scanning for and introducing innovation becomes a core part of NHS business at all levels across the organisation.

- As a core business process, innovation management should be promoted at an operational and service delivery level and protected from ‘squeeze’ by insistent service demand. This should include suitable use of NHS resources and facilities to
generate and manage intellectual property to drive up the quality of patient care and reduce costs.

- As part of the culture of innovation, evaluation of implementation should also be considered as a core intelligence activity.

**Promoting workforce reprofiling**

- The full benefits of the introduction of innovative technology are evident when the introduction of new equipment triggers an accompanying reassessment of workforce requirements. As an example, the US has an ophthalmic technical workforce of approximately 30,000 with an effective national accreditation programme releasing ophthalmologists to see many more patients than is possible in the UK. Ophthalmology is a very technology dependant specialism with rapid development in new technologies but our failure to train staff in these technologies means they are not used effectively and we do not deliver the patient benefits which are readily available. The NHS is not making the best use of optical coherence tomography to diagnose and manage major blinding diseases such as glaucoma, macular degeneration and diabetic retinopathy. Across the UK, people continue to go blind who need not have lost their sight.

Proposal to improve NHS innovation: The terms of reference for those who lead innovation should include an appraisal of workforce issues, pathway mapping and the levers for spread of a culture innovation including evaluating outcomes

2. **Actions at national level in the NHS**

What specific actions do you think local NHS bodies, such as providers and Clinical Commissioning Groups, need to take to encourage and stimulate the successful and rapid adoption and spread of innovations throughout the NHS?

- Studies suggest there are four stages to the successful implementation of evidence based innovation:
  - Recognition of emerging and available innovations
  - Agreement across the clinical community of the potential benefit to transform clinical practice and a need for piloting and evaluation
  - Establishing an evidence base for adoption
  - Spread and adoption across the clinical community and their networks. This may need incentivising and require active clinical management by enthusiastic technology adoption specialists with mentoring.

- At a national level it is clear healthcare scientists express great frustration and indicate huge inefficiency for the NHS at the way science and technology are use. In particular there is a lack of evidence based procurement and absence of systematic implementation.

- At a local level, Clinical Commissioning Groups should work with healthcare scientists to drive the adoption of existing evidence based innovation across all providers through commissioning specifications and contracts. The variation across the NHS in the adoption of existing innovation does not deliver optimum patient benefits.
• Introducing an innovation culture will need providers and Clinical Commissioning Groups to:

**Support equipment innovation**
The treatment and management of many conditions has changed dramatically with the introduction of new technologies. For example, the use of endovenous treatments with foam and laser in the treatment of varicose veins; or the use of impedance/PH technology in GI physiology diagnostics to investigate patients who are suspected of having reflux but where standard investigations have been equivocal. Clinical Commissioning Groups and providers could establish cooperatives of healthcare scientists to evaluate new technology to approve its introduction and also to explore innovations in applications. Supporting standardised processes for the acquisition of new kit will support service managers to justify the cost of technology.

**Support workforce innovations**
Local NHS bodies can give explicit support to clinical innovation and challenge the assumption that role rather than competence should drive workforce development. One vascular technology service (whilst using new equipment) is innovative in that the service is delivered by healthcare scientists who have the first patient contact; conduct investigations; decide on treatments and carry out any treatment regime. Surgical involvement comes at a multidisciplinary team meeting to confirm the treatment plan.

**Incentivise the adoption and spread of innovation through financial mechanisms**
Clinical Commissioning Groups should frame the commissioning process to incentivise innovation and change. This could include:
- explicit funding within contracts to support innovation
- specifying cooperation and collaboration to share innovation across contractors
- unbundling tariff and other payment mechanisms so perverse incentives supporting inefficient clinical practices are removed
- supporting the acquisition of new technology and equipment through tariff/contracting processes.

A central programme to develop clear financial models for the delivery of care pathways, especially where the introduction of innovation is an essential part of service delivery, would be helpful. The health service still struggles to understand its costs and therefore to have a real understanding of the value of change. A widening of the scope of commissioning to include R and D is needed here; with some ring fenced resource for provider units to provide innovation capability.

**Communicate innovation**
Communication tools could include:
- establishing a catalogue of innovations, and spread and adoption practice and disseminating widely to all NHS staff. The North West Innovation Centre does not seem to be well known outside the region
- incorporating the role of innovation into mandatory training and staff induction programmes.
Proposals to improve NHS innovation: At a local level - The CCG should work in partnership with healthcare scientists to promote and implement innovation. At national level there is a need to address the procurement and evaluation of equipment and other technologies used for diagnosis, treatment and care in a TIMELY and efficient manner. This could be achieved by directing funding for innovation to healthcare science networks rather than other system based funding mechanisms.

3. Actions by NHS Partners
What specific actions do you believe others, such as industry, academia, patient groups or local authorities, could take to accelerate adoption and spread, and what might encourage them to do so?

Promoting collaboration between HE and the NHS
- Respondents would welcome much closer collaboration between research departments in higher education institutions and the NHS to promote effective translational research and the adoption of new technologies. This needs practical, enthusiastic support to achieve realistic – if challenging – goals. There is support to extend the system of creating joint appointments between Universities and the NHS to promote this collaborative approach. Healthcare scientists are a valuable resource here to assess and manage adoption trials with their attendant R and D and ethical processes. This could be achieved by considering extending current discipline based NIHR / NHS research and development support to more generic translational healthcare science.

Promoting the contribution of healthcare scientists
- All NHS partners would benefit from working closely with healthcare science networks and using the skills and expertise of scientists and technology adoption specialists. This resource is particularly valuable for Local Authorities and within primary care where high quality scientific and technical advice is not always available to support change programmes. A Local or Regional Health Economy steering group for NHS partners chaired by a Lead Scientist could provide the governance structure to drive the spread and adoption of innovations.

Collaboration with patients
- Patients demand new technologies and are aware of them through communication media such as the internet. NHS organisations could make the evaluation of new technology a focus of their collaboration with patient groups and encourage patients to test new technology to give a unique patient focus.

Proposals: consider creating NIHR / NHS research and development support units for more generic translational healthcare sciences in order to strengthen evidence, network support and patient involvement for innovation across all areas of diagnostics, treatment and care.

Professor Adrian Davis and Lesley Burn on behalf of the SHA lead scientist network and the National Physiology Diagnostics Board
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