# Galvanising the NHS to adopt innovation

The feasibility and practicality of recommendations from the interim report of the Accelerated Access Review

Stuart Parris, Gavin Cochrane, Sonja Marjanovic, Tom Ling, Joanna Chataway

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# Preface

The Department of Health and the Wellcome Trust, in cooperation with NHS England, asked RAND Europe to conduct a limited consultation with key stakeholders about the practicality of measures and incentives proposed as part of the Accelerated Access Review (AAR). In particular, the AAR interim report suggests a number of propositions with specific roles for Academic Health Science Networks (AHSNs), teaching and specialist hospitals and other secondary care providers.

This project aimed to explore the implications of the propositions outlined in the interim AAR report, in particular related to the feasibility of implementation by AHSNs and teaching/specialist hospitals. The key propositions of interest were:

- A new earmarked fund to encourage AHSNs and other key innovation actors to lead system redesign to embrace innovation and the adoption of evidence-based, high-impact innovations.
- Mobilising the influence of clinical system leaders to champion change.
- Encouraging secondary care organisations to take on 'innovation champion' roles linked to financial incentives and a new emphasis on accountable care organisations.

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# Acknowledgements

# Abbreviations

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| AAR | Accelerated Access Review |
| ACO | Accountable Care Organisation |
| AHSN | Academic Health Science Network |
| CCG | Clinical Commissioning Group |
| CLAHRC | Collaboration for Leadership in Applied Health Research and Care |
| LCRN | Local Clinical Research Network |

# Galvanising the NHS to adopt innovation: Summary

## Introduction

The Department of Health and the Wellcome Trust, in cooperation with NHS England, asked RAND Europe to conduct a focused engagement with key stakeholders, about the practicality of measures and incentives proposed as part of the Accelerated Access Review (AAR). The work was conducted in December 2015 and January 2016.

The AAR interim report suggests a number of propositions that have the potential to accelerate access to high-impact innovations, with specific roles outlined for Academic Health Science Networks (AHSNs) and secondary care organisations (spanning specialist hospitals, teaching hospitals, district general hospitals and other secondary care providers).

This work explores the implications of a subset of propositions outlined in the interim AAR report relating to Proposition Four: Galvanising the NHS. Specifically, the project investigates the feasibility of implementation by AHSNs and the role of secondary care organisations for three specific propositions:

- A new earmarked fund to encourage AHSNs and other key innovation actors to lead system redesign to embrace innovation and the adoption of evidence-based, high-impact innovations.
- Mobilising the influence of clinical system leaders to champion change.
- Encouraging secondary care organisations to take on 'innovation champion' roles linked to financial incentives and a new emphasis on accountable care organisations (ACO).

This report provides a high-level summary of views from a range of stakeholders, including AHSNs, teaching hospitals, primary care organisations, commissioners and academia on the feasibility of these recommendations, and the associated critical factors that are important for enabling implementation. The detailed method and analysis related to this report is provided in the supporting slide-deck: '*The feasibility and practicality of AAR recommendations: analysis*', which can be found in Appendix A.

## Methodology

Our approach involved a targeted set of discussions, using interviews and workshops, with representatives of key stakeholder groups across the healthcare pathway on the

AAR interim report. The engagement was used to explore the implications of selected AAR propositions and feasibility of implementation for AHSNs and other key actors, such as specialist and teaching hospitals, district general hospitals, primary care organisations, commissioners and academia. Data collection included:

- A document review to highlight challenges for innovation adoption and diffusion in the NHS related to the recommendations and help to focus and refine the design of data collection activities.

- A workshop with AHSN CEOs/Commercial Directors (December 2015) to explore the implications of the propositions in the interim AAR report with senior AHSN leadership.

- 23 interviews with senior NHS staff in three AHSN regions (South West, UCL Partners,[1] and North East, North Cumbria), to provide coverage of perceptions on the AAR propositions across different regions and explore how the roles assigned to NHS providers in the interim review are understood and viewed by the stakeholders. Interviews included representatives from across the NHS organisations, including senior executives of hospital trusts, and senior representatives of CCGs, CLAHRCs, GPs, social care, senior clinicians and academics from medical schools. We are confident that the diversity of individuals within an AHSN region has led to a multifaceted account of key issues to consider.

Thus the work provides a perceptions audit of stakeholder responses to the propositions highlighted above. References to 'participants' are used to indicate agreement in responses from both interviewees and those attending the AHSN workshop.

## The feasibility and practicality of AAR recommendations: stakeholder perspectives

### A new earmarked fund for system redesign

The aim of this recommendation would be to encourage AHSNs and other key innovation actors (such as secondary care organisations, vanguards of new models of care or test beds) to lead system redesign and embrace the adoption of evidence-based, high impact innovations.

### Is the recommendation viewed as feasible?

Proposed funding for system redesign to support innovation adoption was generally well received, with funding identified as an important incentive for changing behaviour, system redesign and reorganisation of processes. The overall view was that provision of earmarked innovation funding would encourage and concentrate collaboration of different health and social care actors to work on innovation adoption. The majority of participants felt this type of funding would:

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1    UCL Partners AHSN cover the population in north east and north central London, south and west Hertfordshire, south Bedfordshire and south west and mid Essex.

- Help promote local initiatives to bring together the necessary actors to help support the adoption of innovations, and their wider diffusion.

- Support take-up of projects that are currently challenged by budget silos.

- Provide 'headroom' for innovation and risk-taking. This is particularly important in regions with budget deficits, where only limited resources can be dedicated towards innovation because the risk of innovation projects failing to deliver anticipated efficiencies has real implications for the budgeted spending on frontline services.[2]

A small number of participants felt the funding might be better allocated to support those working in frontline service delivery, with some concerns that an additional earmarked fund would risk supporting too many innovation projects. This also relates to a concern raised in several interviews and at the AHSN workshop, that any fund would require appropriate fund management and coordination mechanisms to identify appropriate opportunities for investment. In particular, these participants highlighted that funding must be used to deliver innovation through the full healthcare pathway to increase the likelihood of innovation being widely adopted and diffused once the initial funding had been spent.

**What are the critical factors for enabling implementation?**

A high proportion of interview and workshop participants felt the recommendation had promise but thought a key enabler of the fund would be to put in place a clear, open and transparent *governance* process, to demonstrate how the fund would be managed, in terms of: identifying investment priorities, making use of evidence for a clear decisionmaking process, monitoring investments and demonstrating the impact of funding for patients and/or cost efficiencies.[3] This will also help to build the evidence base on 'what works'. A key element of the governance of the fund, as identified at the AHSN workshop, would be to have clearly identified purpose to help rationalise decisionmaking.[4]

The nature of the *financial model* adopted for the operation of the fund was another critical success factor viewed as important by participants. Closely related to governance issues, proposed financial models included that the fund could be run as a competitive challenge grant, or that savings generated from successfully funded innovations might be reused in the local economy.[5] Other issues raised included the need for a potential fund to operate over multiple budget periods to provide consistency, stability, reduce search costs[6] and improve budgeting efficiency.

The extent of *competition* for funding was also viewed as an important critical success factor, although a range of perspectives were provided. Some participants felt funding

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2    Pressures to meet immediate needs and austerity act as barriers to innovation (Bienkowska-Gibbs et al. 2016).

3    A lack of transparency and accountability for innovation was identified as an issue for innovation projects within the NHS (Bienkowska-Gibbs et al. 2016).

4    In particular AHSN workshop attendees noted the need to identify whether the fund would target adoption or diffusion, be focused on pump-priming new innovation, or identifying and supporting the wider diffusion of innovation already within the NHS system, as this would influence the operational and governance requirements required for the fund.

5    A matched funding model, however, was ruled out due to the difficulties in obtaining funding independently.

6    This would help to tackle the fragmentation of funding and related frictions such as search costs identified as a barrier for innovation in the NHS (Quilter-Pinner & Muir 2015).

should be ring-fenced at a local level to ensure all regions had a dedicated pot of funding to support innovation adoption and diffusion activities. In contrast, a small number of interviewees felt the fund should be fully competitive and hosted at a national level. To enable the fund to work successfully, a clear remit and objectives would be required to clarify the purpose, i.e. whether to encourage a wide distribution of funds to support the adoption of local innovation across England or to fund the most promising investment opportunities on a national level.[7]

Another key factor expected to enable the successful operation of the fund was day-to-day *management.* A number of different organisations were proposed as potential managers to help channel resources locally, including AHSNs, local clinical research networks (LCRNs), clinical senates, as well as clinical commissioning groups (CCGs). AHSNs were the most commonly identified organisation to help channel funding. Some concern was noted in both interviews and the AHSN workshop regarding the existing capacity of AHSNs to conduct all the activities required to manage a fund, as well as potential competence gaps related to the ongoing management and evaluation of the financial investment. For example, depending on the operation of the fund, AHSNs may need to bring in further experience of implementing innovation, or increase their capacity to engage with commissioners.

A key factor reported by many participants was that if AHSNs are used as the lead organisation for manging a fund, there would be a need for continued development of *strong local relationships* between AHSNs, CCGs and LCRNs. The fund should be one mechanism for helping to strengthen ties to support innovation in local health economies.

From a system perspective, a common concern from participants was to *integrate the earmarked fund within existing innovation architecture* to avoid the inefficiency of fragmentation in funding channels or increasing the search cost of obtaining funding. Further synergies could be generated from combining any new funding with existing funding infrastructure for clinical projects to ensure the funding provided support for other recommendations such as mobilising clinical leadership.[8]

## Mobilising the influence of clinical system leaders to champion change

The aim of this recommendation is to improve capacity, skills and clinical leadership within the NHS, which is seen as a critical component to accelerating the adoption of innovation. In particular, the AAR interim report notes that articulating the benefits of innovation in terms of patient care, outcomes and system productivity through education and training as important features of clinical leadership.[9]

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7    With regard to identifying the right balance between supporting innovation at a national versus local level, Bienkowska-Gibbs et al. (2016) evaluation of The Department of Health's Innovation, Health and Wealth (IHW) strategy highlighted the importance of adapting interventions to a local context, and supporting demand-driven innovation to be responsive to patient needs (p. 26). IHW aimed to introduce a more strategic approach to the spread of innovation across the NHS.

8    Ensuring new strategies for innovation link with other health innovation policies and initiatives within the NHS was a weakness observed in previous research on IHW (Bienkowska-Gibbs et al. 2016).

9    AAR. 2015. Accelerated Access Review: Interim report. Review of innovative medicines and medical technologies, supported by Wellcome Trust. October 2015. As of 17 February, 2016: https://www.gov.uk/government/publications/accelerated-access-review-interim-report

**Is the recommendation viewed as feasible?**

Most interviewees felt that clinical leadership is a crucial component of innovation that ultimately can be used to drive change and foster a culture of innovation across the system. There was broad agreement that leaders need to be equipped with the right mix of clinical experience and expertise, understanding of innovation and implementation in the NHS as well as leadership skills. To be effective, however, clinical leaders need to be supported by resources and streamlined management and governance processes, and crucially need to be allocated time for innovation projects.

A small number of interviewees felt that innovation leadership skills were already in place. These interviewees felt the focus should be on ensuring that resources and processes were in place to help clinicians capitalise on these skills. This contrasts with the majority of interviewees, who felt that there was a severe lack of leadership skills, particularly for innovation, across the NHS.

**What are the critical factors for enabling implementation?**

The specific approaches that are currently being adopted to mobilise clinical leadership were noted by most interviewees, in particular AHSNs employing acclaimed clinical leaders to champion innovation and supporting front-line innovation, for example through the Innovation Scouts programme.

Employing clinical leaders to work on innovation projects, or formally including innovation within a clinical leader role, were commonly suggested as a means of overcoming the barriers to finding time to support innovation adoption and diffusion. It could also allow for the recruitment of 'star' clinicians/academics, or *innovation champions*, who are world renowned and able to act as convincing leaders to champion specific technologies or other types of innovations. Workshop participants noted that innovation champions are necessary but not sufficient to ensure the successful adoption and diffusion of innovation, as it is a long-term endeavour and therefore requires leaders across different hierarchies, professions and regions in the healthcare system to champion change.[10] A different approach is used in the Innovation Scouts programme adopted by some AHSNs, which engages a network of individuals who have an interest in innovation to identify and promote innovation opportunities, gain experience of innovation in the private sector and develop best practice for innovation adoption and diffusion in the NHS. Interviewees involved in the Innovation Scouts programme felt that this could be a potential mechanism for mobilising clinical leadership and praised its inclusion of front-line clinicians as helping to foster a culture of innovation in the NHS. Of those interviewees involved with the Innovation Scouts programme, most were supportive of it being expanded and supported with additional resources through time-in-kind, highlighting the potential application of earmarked funding to support this.

One required enabler with strong consensus across participants was to create a clear *career pathway* for innovation leaders in the NHS. It was felt by some interviewees that

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10    This corresponds closely with The King's Fund (2011, 2014) definition of system leadership, that the NHS needs to move beyond the outdated model of heroic leadership to recognise the value of leadership that is shared, distributed and adaptive. In the new model, leaders must focus on systems of care and not just institutions and on engaging staff in delivering results. (The King's Fund 2011, p. 22).

not enough support was being provided to clinicians to take on innovation roles. These observations on the career pathway were often coupled with reflections on the multi-faceted role clinicians now have to play.

Related to career pathways, additional *innovation training and mentoring* for clinicians was also identified by some as a potential enabler. Innovation training was identified, particularly as something that could be targeted at trainee clinicians as current medical students do not focus on innovation and leadership. Some interviewees mentioned the opportunity for training junior staff and embedding not only leadership skills but a mindset around innovation early in clinical careers.[11]

More generally, it was suggested that the emphasis should be on more *informal training*, through coaching and mentoring, which would require the time and resources to be available. Many other interviewees noted existing opportunities for leadership training, often through clinical research networks, and that such training may provide some support to innovation activity. Likewise, interviewees also noted the importance of factors needed alongside clinical leadership, such as *management* and the support of *clinical networks*, which were considered along with clinical leadership as prerequisites to the adoption and diffusion of innovation.

Finally, interviewees recognised the ability of clinical leaders to help bring coherence to the system, but some emphasised the need to consider both the variety in clinical leadership and more general *system leadership and appropriate governance processes* required to support clinical innovation activities. Depending on the disease areas and type of technology, there are considerably different pathways and leadership, both clinical and at the system-level, and these will need to vary accordingly.

## Innovation champion organisations

The final recommendation from the Galvanising the NHS section of the AAR interim report that we reviewed proposes to encourage a subset of secondary care organisations, such as specialist and teaching hospitals, to take on 'innovation champion' roles. The AAR also indicates the potential for financial incentives to support this role, such as specialised services tariffs for adopting innovation, or alternatively models such as ACOs.

### Is the innovation champions approach feasible?

While a relatively small number of participants supported identifying a single organisational type or provider as an innovation champion in a particular region, the majority of participants were less supportive of the proposition. It was clear from discussions with representatives of different providers, that factors subject to both the design of local healthcare systems and the specific nature of the innovation would influence the most appropriate organisational level approach, usually requiring extensive collaboration.

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11    Ensuring that clinical leaders recognise their own potential to make change has been identified as a potential barrier to innovation (Stanley 2011). This also links with the recommendation of the HSJ (2015) to support mentoring of clinicians by more experienced colleagues.

A number of interviewees raised collaboration as an element of the Vanguard Programme[12] to help create linkages across different providers, particularly for innovation requiring collaboration across secondary and primary settings, or when attempting to encourage the spread of innovative best practice from one provider to another to facilitate wider diffusion. Vanguards were also acknowledged as creating the conditions to support the development of innovative new models of care, particularly when supporting funding was made available. However, some concerns were also raised in interviews, that vanguards risked spreading innovation activity too thinly, creating too much experimentation without central guidance and adding additional political and bureaucratic complexity to the NHS system.

The role of 'championing' as an activity was regarded as a crucial process to help drive innovation though the system. Championing was viewed as a way to mitigate common challenges and obstacles in the NHS system and to support the significant effort required to deliver change in the system. However, champions acting alone without the support of those working across the system would likely struggle with challenges such as the 'not invented here' syndrome. To overcome such challenges, many participants thought that significant collaboration throughout the health and care system - including across different providers and at different points in the innovation process - would be required for the successful championing of innovation and to provide the necessary 'buy-in' to support the uptake of innovation. Examples of good practice included establishing partnerships between hospitals and primary care providers to help trial innovations and avoid barriers to adoption and diffusion.

Participants were also concerned whether identifying individual providers as 'champions' would ensure clear channels of communication and decisionmaking with commissioners. The expertise of commissioners was expected to ensure that appropriate trade-offs between the experience and outcomes of the targeted patient group were weighed up against those of the wider population. Interviewees and workshop participants felt that commissioners should be involved at an early stage in the innovation process to help identify the financial viability of adopting the new treatments and services that would be championed.

**A single organisational innovation champion: issues to consider**

A single regional provider as innovation champion may be beneficial for innovations related to *specialist treatments*, or innovative new 'game changing' drugs. In this instance, participants regarded specialist hospitals as an appropriate champion to lead, although their leadership would likely involve significant collaboration with providers and commissioners across the pathway to achieve successful adoption and diffusion.[13] The development of productive and collaborative relationships through the life cycle of an innovation remained

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12    The Vanguard new model of care programme invited individual NHS organisations and partnerships to apply to become 'vanguard' sites for the delivery of new care models to help improve and integrate services. Vanguard sites have been selected under three categories: integrated, primary and acute care systems; enhanced health in care homes; and, multispecialty community providers. The first sites were announced in March 2015 (NHS England 2015).

13    The Federation of Specialist Hospitals (2015) identified specialist hospitals as routinely developing treatments and interventions that are generalised as standard practice by working in partnership with other providers. Participants in this engagement generally thought that specialist hospitals were appropriate to act as champions for specialist treatments and game changing drugs.

crucial to success and was highlighted as a key role that should be played by the AHSNs.

Active *collaboration and partnership* between primary and secondary settings was also one way to avoid perceptions that one provider's requirements dominated the regional innovation agenda, over another.[14] Collaboration allowed for an open approach to innovation, and was considered as less likely to create barriers such as the 'not invented here' problem, where a lack of ownership over innovation and innovation projects could increase the likelihood of rejection or poor adoption.[15]

Early *interaction with commissioning groups* was also seen as an essential enabler for effective championing activity, to ensure that the merits of supporting an individual innovation are reinforced when assessed against the needs of the local population and budget limitations.

The structure of related *funding to support championing* was also viewed as an important enabler. For example, developing a shared pot of funding for selected innovations was expected to help encourage the wider diffusion of innovation through the healthcare system, and tackle issues around financial silos in the NHS.[16] In relation to this, ACO structures for funding innovation were viewed as potentially favourable. ACOs are formed around a 'group of providers that agree to take responsibility for providing all care for a given population for a defined period of time under a contractual arrangement with a commissioner'.[17] Interviewees felt this could be one way to help align payment systems and incentives and encourage collaboration between different organisations to help improve the uptake of innovations and also prioritise those innovations to target an improvement in the health of the population. However, several interviewees also felt that ACOs would be a possible solution to budget silos in the long term, rather than a model that could be implemented now.[18] Financial support for organisations taking on innovation champion roles could also generate capacity in the system for engaging with innovation, in providing time for clinical and other system leaders to work together to understand the pathway for an innovation and develop a business case that could be used to help galvanise other stakeholders to support its adoption, particularly with CCGs. Without financial support, it is particularly challenging to accept the financial risk of innovation, as innovation has uncertain outcomes. The opportunity cost of spending time and resources on innovation without guaranteed outcomes can seem particularly high.

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14    This can be particularly important for disruptive innovations that often create new networks, involve new actors and require organisational restructuring. Such innovation is likely to change the distribution of value across stakeholders compared with the status quo (EXPH 2015).

15    The 'not invented here' challenge in the NHS has been identified as a particularly difficult challenge of working across organisations (Department of Health 2008). A number of participants in this project comment that ways of working through the 'not invented here' issue had been identified, including being careful to adopt collaborative or partnership-based models for implementing innovation.

16    On challenges of financial incentives, particularly between primary and secondary care see Bienkowska-Gibbs et al. (2016).

17    Shortell, S., R. Addicott, N. Walsh & C. Ham, 2014. Accountable care organisations in the United States and England: Testing, evaluating and learning what works. The King's Fund. As of 17 February, 2016: http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/accountable-care-organisations-united-states-england-shortell-mar14.pdf, p. 1.

18    Shortell et al. (2014) also note that lessons from previous integrated care initiatives in England are applicable to the development of ACOs. They highlight the need to be cautious about the potential for ACOs that have a mixed performance history in terms of rates of health care spending and improvements to quality of care.

# Cross-cutting factors

Despite the potential of innovation to contribute to the productivity, quality of care and cost-effectiveness of the NHS, there are a range of widely perceived challenges that need to be overcome. Insights from work to date suggest that the key barriers to establishing an NHS that 'wants and rewards' innovation revolve around four core categories of issues: incentives and accountabilities; network-related bottlenecks to the exchange of information, evidence and good practice; capacities, skills and leadership; policy, environment, process and pathway.[19]

In the process of conducting this work, a number of cross-cutting factors were identified that would help to enable adoption and diffusion of innovation more generally and target well known barriers to uptake. We have grouped these cross-cutting factors and matched them to the four general types of barriers to innovation identified above.

## Incentives and accountabilities

- Collaboration and stakeholder engagement are key to avoiding the 'not invented here' culture, which can have a significant impact on diffusion.
- Individuals should be rewarded for innovation and, critically, innovation activities should be recognised in their job plans and career pathways.
- Incentives and priorities for drugs, devices and medical technologies need to be considered separately.

## Network-related bottlenecks to the exchange of information, evidence and good practice

- Methods for clinicians to share best practice in innovation adoption are required at the regional, local and national levels.
- There is a large body of work on implementation science relevant to the adoption and diffusion of innovation in the NHS that is underutilised,[20] but there is also a lack of knowledge around how best to fund innovation.
- There is a great need for people to share data to make big national studies possible.

## Capacities, skills and leadership

- There is a lack of implementation expertise in the NHS and the skillset required for promoting adoption is different from that needed for promoting diffusion.
- The resources needed to improve the adoption of innovation in the NHS require time to be released for clinicians to engage and for the bureaucracy associated with financial incentives to be reduced.

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19    Bienkowska-Gibbs et al. (2016); Marjanovic et al. (2015); Quilter-Pinner & Muir (2015); Wooding et al. (2015).

20    A consistent finding is that the transfer of research findings into practice is unpredictable and can be a slow and haphazard process. The relative inattention to implementing what we know is costing lives. There is an imbalance between investment in the development of new drugs and technologies versus improving the fidelity with which care is delivered' (Eccles et al. 2009).

**Policy, environment, process and pathway**

- Clear and transparent criteria are needed for awarding funds, both cost saving and patient benefit criteria.

- Do the proposed incentives target the critical stakeholders, especially those holding the purse strings?

- Provide economic assessment of the benefits of innovation along the full pathway to reflect a real business case for local health economies.[21]

## Limitations and caveats

Our findings need to be interpreted with the following caveats in mind:

- We engaged with stakeholders in three different AHSN regions to provide a range of geographical contexts, but it is possible that additional views would have emerged from other regions.

- The interim report recommendations were intentionally set at a high level in order to engage with providers and other members of the wider healthcare community in a way that would allow us to explore the different interpretations of the recommendations and issues that were particularly important to specific respondents. We have captured the diversity of opinion in this report and in the supporting appendices.

- The primary aim of this work was to examine perspectives on the feasibility of each recommendation and potential opportunities to support enabling factors. We have also identified those cross-cutting barriers, challenges and related enablers that apply across recommendations and may have a broader impact on innovation adoption and diffusion in the NHS. However, the relatively focused nature of this work means a full assessment of the potential interactions of recommendations, or a complete assessment of the wider system implications, was out of scope.

- The topic of innovation adoption and diffusion within the NHS includes a vast array of activities, processes, products and services, cutting across significant issues challenging the operation of the NHS. Improving the adoption and diffusion of innovation in the NHS is anticipated to impact positively on key challenges such as raising productivity, quality of care and cost-effectiveness. However, attempts to innovate, under acute financial pressures, will naturally result in a series of operational trade-offs to decide how to target innovative activity, and strike the appropriate balance of focus in terms of treatment, disease prevention and patient experience; the balance of product versus service-based innovation; and balancing the merit of specific innovations versus the wider implications for equity and health of the population. In our analysis we highlight where these trade-offs appear relevant, but a full analysis of their implications falls outside the remit of this project.

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21   More generally, a common concern was the lack of information available to support innovation uptake in line with other studies of innovation in the NHS. See for example Bienkowska-Gibbs et al. (2016).

# Concluding remarks

Our reflections on the feasibility of each recommendation and the enabling factors that would facilitate their success can be summarised by a number of implications, which we identify below:

**A new earmarked fund:** AHSNs are generally trusted by participants to play a leading role in channelling an earmarked fund, provided they are appropriately resourced, have clear governance structures in place for such a dedicated innovation fund, and can ensure appropriate relationships with commissioning groups. Aligning the earmarked fund with existing funding mechanisms may help improve system level take up and minimise bureaucracy.

**Mobilising clinical leadership:** The different models in use by AHSNs (such as innovation scouts and innovation champions) represent examples of the types of innovation roles needed from clinicians to facilitate the adoption and diffusion of innovation in the NHS. They highlight the need for both individual and network leadership through a connected community of scouts and champions.

**Organisational innovation champions:** For any given region it is likely that a number of innovation champions will be required to satisfy innovation needs and realise benefits across full healthcare pathways. Decisions about the organisation of innovation champions will need to be made on a collaborative basis to ensure the widest possible buy in, and therefore diffusion of subsequent innovation produced.

# References

AAR. 2015. Accelerated Access Review: Interim report. Review of innovative medicines and medical technologies, supported by Wellcome Trust. October 2015. As of 17 February 2016:
https://www.gov.uk/government/publications/accelerated-access-review-interim-report.

Bienkowska-Gibbs, Teresa, Josephine Exley, Catherine L. Saunders, Sonja Marjanovic, Joanna Chataway, Calum MacLure, Ruth McDonald and Tom Ling. Evaluating the role and contribution of innovation to health and wealth in the UK: A review of Innovation, Health and Wealth: Phase 1 Final Report, *Santa Monica, Calif.: RAND Corporation*, RR-1143-DH, 2016. As of 17 February 2016:
http://www.rand.org/pubs/research_reports/RR1143.html

Department of Health. 2008. High Quality Care for All. NHS Next Stage Review Final Report. June 2009. As of 17 February 2016:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228836/7432.pdf

Department of Health. 2011. Innovation, Health and Wealth. Accelerating adoption and diffusion in the NHS. *London: Department of Health*.

Eccles, Martin. P., David Armstrong, Richard Baker, Kevin Cleary, Huw Davies, Stephen Davies, Paul Glasziou, Irene Ilott, Ann-Louise Kinmonth, Gillian Leng, Stuart Logan, Theresa Marteau, Susan Michie, Hugh Rogers, Jo Rycroft-Malone and Bonnie Sibbald. 2009. An implementation research agenda. *Implementation Science* 4(18). As of 17 February 2016: http://doi.org/10.1186/1748-5908-4-18

EXPH. 2015. 'Disruptive Innovation – Considerations for health and health care in Europe.' Expert panel on effective ways of investing in health. Public consultation by written procedure on 29 October 2015. European Commission. As of 17 February 2016: http://ec.europa.eu/health/expert_panel/opinions/docs/011_disruptive_innovation_en.pdf

Federation of Specialist Hospitals. 2015. Driving innovation in the NHS: The future of specialist provision in England. November 2015.

HM Treasury. 2011. The plan for growth. *London: HM Treasury*. (2) DH. 2011. Innovation, Health and Wealth. Accelerating adoption and diffusion in the NHS. *London: Department of Health*.

HSJ. 2015. Future of NHS leadership inquiry report. For Healthcare Leaders. June 2015.

Marjanovic Sonja, Joachim Krapels, Sonia Sousa, Sophie Castle-Clarke, Veronika Horvath & Joanna Chataway. 2015. 'The NIHR Invention for Innovation (i4i) programme: A review of progress and contributions to innovation in healthcare technologies.' *Santa Monica, Calif.: RAND Corporation.* As of 10 November 2015:
http://www.rand.org/pubs/research_reports/RR1101.html

Marjanovic Sonja, Gavin Cochrane, Catriona Manville, Emma Harte, Joanna Chataway & Molly Morgan Jones. 2015a. 'Leadership as a health research policy intervention: An evaluation of the NIHR Leadership programme (Phase 2).' *Santa Monica, Calif.: RAND Corporation.* As of 17 February 2016:
http://www.rand.org/pubs/research_reports/RR934.html

Miani Céline, Enora Robin, Veronika Horvath, Catriona Manville, Jonathan Cave & Joanna Chataway. 2014. 'Health and Healthcare: Assessing the Real World Data Policy Landscape in Europe.' *Santa Monica, Calif.: RAND Corporation*. As of 17 February 2016:
http://www.rand.org/pubs/research_reports/RR544.

NHS England. 2014. '*The NHS Five Year Forward View*.' October 2014. NHS England. As of 17 February 2016:
http://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf

NHS England. 2015, 'New Care Models: Vanguards – developing a blueprint for the future of NHS and care services.' November 2015. As of 17 February 2016:
http://www.england.nhs.uk/futureNHS.

OECD. 2010. 'The OECD Innovation Strategy: Getting a head start on tomorrow.' *OECD*, Paris.

Quilter-Pinner, Harry & Rick Muir. 2015. 'Improved circulation: Unleashing innovation across the NHS.' Institute for Public Policy Research, June 2015. As of 17 February 2016:
http://www.ippr.org/publications/improved-circulation-unleashing-innovation-across-the-nhs

Shortell, Stephen M., Rachel Addicott, Nicola Walsh & Chris Ham. 2014. Accountable care organisations in the United States and England: Testing, evaluating and learning what works. The King's Fund. As of 17 February 2016:
http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/accountable-care-organisations-united-states-england-shortell-mar14.pdf

Stanley, David John. 2012. Clinical leadership and innovation. *Journal of Nursing Education and Practice* 2(2). As of 17 February 2016:
http://dx.doi.org/10.5430/jnep.v2n2p119

The Health Foundation and The King's Fund. 2015. Making change possible: a Transformation Fund for the NHS. Research report. July 2015. As of 17 February 2016:
http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/making-change-possible-a-transformation-fund-for-the-nhs-kingsfund-healthfdn-jul15.pdf

The King's Fund. 2011. The future of leadership and management in the NHS: no more heroes. Report from The King's Fund Commission on Leadership and Management in the NHS. London: The King's Fund. As of 17 February 2016:
http://www.kingsfund.org.uk/publications/future-leadership-and-management-nhs

The King's Fund. 2015. The practice of system leadership: Being comfortable with chaos. The King's Fund. As of 17 February 2016:
http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/System-leadership-Kings-Fund-May-2015.pdf

Wooding, Steven, Gavin Cochrane, Jirka Taylor, Adam Kamenetzky, Sonia Sousa & Sarah Parks. 2015. 'Insights on early adoption of medical innovations: An international review of emerging and effective practice in improving access to medicines and medical technologies.' *Santa Monica, Calif.: RAND Corporation*. As of 17 February 2016:
http://www.rand.org/pubs/research_reports/RR1163.html