GETTING BETTER AT GETTING BETTER?

How Can We Embed Innovation In NHS Trusts?

Introduction

Every NHS Trust and PCT executive aspires to lead a successful, innovative and self-improving organisation. They are urged on from many quarters. Not least the Darzi Next Stage Review ‘High Quality Care for All’ focuses on the need for the NHS to adopt new products, procedures and processes. The hope is that innovation will contribute to a ‘self-sustaining, self-improving’ NHS.

The talk of innovation isn’t confined to the NHS. In March 2008, the Government published Innovation Nation, which states the aim "to make Britain the best country in the world to run an innovative business or public service."

But what can NHS leaders do to meet this aspiration? In this paper I will briefly lay out some key issues and concepts around innovation, before focusing on what I think is the core challenge. How do leaders build and sustain organisations with a high capacity to identify, lead and absorb innovation?

What is innovation?

A simple definition is “The generation and adoption of something new [ideas, processes, products, services, models or management approaches etc] resulting in improved outcomes.” Although many words have been written on this!

The innovation process is commonly talked of as having three stages: invention, innovation and diffusion - the so-called Schumpeterian trilogy.

- Invention is the initial conception of an idea.
- Innovation is the first application of the idea to actual practice.
- Diffusion is the process by which additional organisations and consumers adopt the innovation.

In reality for NHS trusts the process is often complex and not linear. NESTA describe it as “a complex and interactive process involving multiple feedbacks between different services and functions as well as manifold interactions with customers and suppliers.” Medical device innovation in particular exhibits a high degree of repeated iteration after the first products enter the market, often driven by continued technological development combined with consumer feedback.
Innovations also vary in their type. ‘Fundamental innovations’ are conceived as single disruptive innovations. Schumpeter (and much of the literature) concentrates on these. More recently greater attention has been paid to the importance of the cumulative effect of ‘incremental innovations.’ In clinical practice these can arise as new drugs, devices and approaches combine. An example would be the development of surgical ‘enhanced recovery programmes.’ We can also distinguish between innovations in product [new goods or services] and process [new production or delivery methods].

**Adopting innovation?**

It is known that adoption processes are also often non-linear and complex. The processes involved are affected by complex ‘whole system’ interactions between individual champions, organisational culture, clinical and work processes, and unclear decision-making within an underdeveloped strategic context. The box below summarises many of the blocks to adoption encountered in the NHS based on interviews with a wide range of stakeholders.

<table>
<thead>
<tr>
<th>Summary of Common Adoption Blockers</th>
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<tr>
<td>• Not invented here – Not evaluated here</td>
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<tr>
<td>• Sensitivity over professional independence</td>
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<tr>
<td>• Separation of those with needs, authority and money</td>
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<tr>
<td>• Overstated business cases [promise savings not be easily realised]</td>
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<tr>
<td>• Benefits realised in other locations/budgets</td>
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<td>• Cross professional boundaries e.g. cross radiology &amp; surgery</td>
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<tr>
<td>• Lack of training and time for training</td>
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<td>• Money is not available or can not be vired</td>
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<td>• Need to consider all adoption issues including process changes, role changes, training, technology etc.</td>
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<tr>
<td>• Lack of management capacity</td>
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<td>• Poor support systems for management decision-making and monitoring</td>
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<td>• Importantly there is a lack of leadership:</td>
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<td>• Lack of leaders? Or structures preclude leaders being able to lead?</td>
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<tr>
<td>• NHS has generally risk averse non-innovative culture</td>
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For most NHS organisations most innovation will come from identifying, adapting and adopting externally generated innovations. Although there are many good examples of locally generated innovation in most NHS organisations - especially in teaching hospitals with extensive research capability. A key concept which has been developed over recent years in considering this process is that of ‘Absorptive Capacity.’ Cohen and Levinthal explain that absorptive capacity implies the ability to value, assimilate and exploit external knowledge. This concept can be considered in 3 dimensions for NHS organisations:

- Know what - *What is the clinical, scientific, technological or academic knowledge/innovation and does it fit into our organisation?*
- Know how –*Will we be able to assimilate and make use of the new knowledge/innovation?*
- Know why – *Does the new knowledge/innovation ‘add value’ and support our mission and strategic priorities?*
We will now consider what NHS leaders can do to develop the absorptive capacity of their organisations, drawing on organisational design thinking.

**Designing for Absorption?**

One of the most useful metaphors for considering organisation design is that of ‘Architecture’ as described by Nadler, Gerstein and Shaw. Architecture has been described as ‘the art of shaping space to human needs and aspirations’ whereas organisational architecture might be defined as shaping organisational [or ‘behavioural’] space to meet human needs and aspirations.

How can we design our organisations to empower people for action, in this case identifying, adapt and adopt innovations? How can we also create the right constraints to action so that inappropriate innovations are not adopted or that appropriate innovations are not ineffectively or unhelpfully adopted?

In thinking through the design of organisational space there are many dimensions and issues to consider (e.g. purpose, strategy, systems and culture). Whole systems thinking helps us think through how to work with and align these dimensions. Designing a healthy organisation is primarily driven by the need to deliver a required purpose, just as an architect is driven by the purpose of any physical space being designed. This focuses the organization to be the team it is there to be; to be sure of its reason and purpose.

A model for thinking about healthy organisational design, the Tricord, is shown below. In keeping with similar models this emphasises the need to consider both ‘hard’ aspects e.g. structures, processes and systems as well as ‘soft’ aspects such as identity, culture and ethos. The Tricord model highlights the central importance of identity and purpose in system design and health.

Innovation (particularly that based on drugs, medical devices and diagnostic technologies) will often initially ‘show up’ in the organisation in the systems domain – affecting technology,
Getting Better at Getting Better?

Juggling balls?

Clearly the adoption of innovation is not the only, or even main, purpose for which our organisations need to be designed. Historically for most NHS organisations it does not appear to have been a consideration except in exceptional situations. A number of Teaching Hospitals, Trusts and PCTs have explicitly articulated teaching and research [and even increasingly innovation] as part of their core purpose alongside service delivery [the ‘tripartite mission’]. Recently this has led to the development of new organisational forms for ‘academic health science centres.’xvi The focus of these bodies needs to be not just on the generation and promulgation of new knowledge and innovation but also its translation and adoption into routine practice. Similarly we have seen a rise over the last 10 years in clinical networks – part of whose purpose can be to more effectively link innovative knowledge to service deliverers.

In considering adoption of innovation as a key organisational design principle, we also need to be aware of what Marc Gersteinxvii calls ‘fat tails’. The majority of an organisations work is within the main part of the bell (1 – business as usual) – here we need ‘standard operating practices’ with planning and review cycles around routine, consistent and (relatively) standardised processes driving continuous improvement in quality and productivity. Adopting best practice shouldn't be seen as innovation – it really should be a core part of business as usual.

At the innovation end of the bell tail (3), we want to promote new and different practices and processes – by definition outside of the standardization of the routine. At the same time we need to guard against the other end of the bell (2) – where safety breaches and disaster lurks. Experience shows that these tails are inevitable – and larger than we might think.
The challenge is to manage each of these three domains simultaneously in an organisation. How do we spot accidents and innovations waiting to happen, and how do we ensure the right services or patients or circumstances are considered as ‘routine’ or ‘special’? Dr Richard Bohmer\(^{xviii}\) cites this as one of the major challenges of healthcare management.

Linked to this is the key question around identity; is there a tension between the professional identity that clinicians especially doctors might have or desire and the identity that healthcare providers have or the overall healthcare system encourages? The system wants our clinicians to learn but within a framework of guaranteed, cost controlled repeatable outcomes. But clinicians might need and certainly want a little more freedom than that to be innovative?

So what could we do to design an increase in absorptive capacity without compromising on safety or effectiveness and efficiency in routine operations? The concept of designing ‘organisational ambidexterity’ has recently been propounded by Tushman et al.\(^{xix}\) Ambidextrous organisations are designed to improve existing products and services [‘exploit’] as well as developing new offerings by innovating [‘explore’]. This ability to both ‘explore and exploit’ is associated with improved innovation. However it requires careful organisation design and ongoing management.

**Growing capacity**

The literature shows that organisations have a greater absorptive capacity, particularly for technological innovations, if they are “able to systematically identify, capture, interpret, share, reframe and re-codify new knowledge; to link it with its existing knowledge base; and to put it to appropriate use”\(^{xx}\).

NESTA\(^{xxi}\) has identified that the prerequisites for developing this are:

- An existing organisational knowledge and skills base
- A “learning organisation” culture
- Proactive leadership directed towards evidence sharing

Obviously individual NHS bodies do not exist in isolation. An extensive ‘knowledge ecosystem’ has developed over many years and continues to grow. It is not mechanistic but better considered as more organic, self-organising complex system. This links for knowledge:

- Generators e.g. academics
- analysers and evaluators e.g. NICE
- synthesisers and collators e.g. NELH
- promulgators e.g. NHS clinical networks
- users e.g. clinical teams
An equivalent ‘innovation ecosystem’ is now developing across the NHS. Such complex systems can not really be completely managed given their complexity but can be influenced especially through system leadership and culture.

**So what can we do?**

Drawing from above what might a Trust senior leader do to make their organisation ‘get better at getting better’? It all starts with the Chief Executive and their senior team. I would argue they need to reflect and resolve to lead an innovative organisation and grow their ‘absorptive capacity.’ This commitment is the beginning of the development process. The list below maps some potential ‘whole system’ actions using the Tricord model introduced previously to begin this process. This is a long journey not a short sprint! However significant progress can be made quite quickly particularly if leaders are able to articulate and then demonstrate their commitment. Stories can have a powerful effect on culture – many that currently circulate in a Trust may highlight the blocked ideas, missed opportunities and ‘if onlys’. Positive stories of the Trust promoting and supporting the identification and absorption of innovation can help to change the organisational culture.

**IDENTITY**

- **Clarifying and Communicating Corporate Purpose** - place of innovation in organisation’s mission and impact on patient services. This has been encouraged by the NSRxii and indeed the incorporation of innovation in PCT’s world class commissioning competences.xxiii
- **Creating Compelling Stories** – finding and celebrating innovation exemplars.

**STRATEGY**

- **Synergistic Strategy** – developing organisational strategies that support and join up research, innovation and improvement. These strategies might include developing ‘organisational ambidexterity’ – the ability to continuously both exploit current capabilities whilst exploring future opportunities. Within the overall innovation strategy differentiate approaches between continuous improvement (‘Kaizen’), with its many little steps making a big difference and step-changes through planned larger scale innovation.
- **Horizon scanning** – finding, identifying and developing cases to ‘pull’ in new technologies, processes and management systems which have proven clinical and cost effectiveness – especially where they improve organisational productivity. A recent survey of international business and public sector leadersxxiv identified the need for organisations to collaborate – as widely as possible – to seek out and find innovation. Customers and partners were often seen as a richer source of new knowledge than internal R&D functions. NHS Trusts also have the support of national sources such as NICExxv and the NHS Institute for Innovation and Improvementxxvi.
- **Integrated Business Planning** – ensure processes for business plans and cases encourage and support innovation especially for larger scale ‘projects’ whilst managing wider impacts, cost, benefits and risks. National exemplar business cases are being made available by the National Technology Adoption Centre.xxvii
• **Articulate Needs to Drive Innovation** – identify major clinical and business needs where new approaches could deliver significant benefits and share with innovation partners. The Statement Of Clinical Need [SOCN] project\(^{xxviii}\) is demonstrating the value of this approach.

**SYSTEMS**

• **Reward and Award Innovators** – consider awards for individuals and teams with innovation ideas and for adoption of externally generated innovations (‘stealing with pride’).

• **Effective Knowledge Management** – ensure joined up and effective library, intranet, IS etc. Model use of evidence and knowledge in board and management reports.

• **Build Innovation Bridges** – develop and champion partnerships with academics, industry, RDA, Regional Innovation Hub, etc to facilitate identifying valuable knowledge & technologies across the ‘innovation interface.’ Manchester’s MIMET\(^{xxix}\), based on Boston’s CIMET\(^{xxx}\), with its use of ‘site miners’ is a particular example of explicit bridging.

• **Slick Innovation Pathways** – develop clear procedures and routes, with support, to identify, explore, exploit and embed innovation. These need to be overseen and ‘governed’ – perhaps by Trust (Research and) Innovation Committees akin to or indeed as part of clinical governance arrangements. This approach has already been adopted by a number of Trusts.

• **Align the Support** – ensure corporate function’s processes and culture support innovation pathways.

**CULTURE**

• **Leading Innovatively** – leaders as entrepreneurial role models and innovation story tellers. Not everyone can match Antanas Mockus\(^{xix}\) who as mayor of Bogota used theatre and spectacle – such as mime artists to control traffic by mocking bad drivers and illegal pedestrians! When there was a water shortage, Mockus appeared on TV taking a shower and turning off the water as he soaped, asking his fellow citizens to do the same. With a combination of example and economic incentives water usage reduced by 40%. He sometimes even wore superman costumes – but if all that sounds a bit flaky, he also persuaded 63000 to pay 10% extra in ‘voluntary’ taxes! And his approach was grounded in noble prize winning theory. Nearer the NHS, Trust Chief Executives like Stephen Ramsden are using story telling powerfully to lead patient safety\(^{xxx}\).

• **Everybody’s Business** – shared training for clinicians and managers on as many issues as practicable including innovation and improvement.
• **Culture of Curiosity** – encourage and support all staff to ask questions and engage in continuous improvement.

• **Evaluating What Matters** – ensure the performance management process encourages innovation and research, perhaps with a true balanced scorecard.

**Up for the challenge?**

This paper has sought to outline some of the key challenges to developing more innovative NHS Trusts with a greater ‘absorptive capacity.’ Using the concept of organisational architecture and a ‘whole systems’ model, I have sought to identify some key opportunities for starting the journey.

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