THE YOUNG FOUNDATION

Innovations in Health: Approaches from the Regional Innovation Funds

Geoff Mulgan with the Regional Innovation Fund Advisory Services (RIFAS)

Why Innovate?

Public services face an unprecedented set of challenges. Three main factors in combination define a new era.

Firstly, ever-increasing demands from the public about what public services should deliver, for example continually-rising expectations around health services (for new drugs, greater accessibility of services etc). Secondly, long-term challenges are becoming more pressing and public services are bearing the burden. Thirdly, given the state of the public finances, we are at the end of a period of significant investment in public services. Increased spending on public services over the past 10 years has responded to increasing demand, as well as supporting some new types of services. This will no longer be the case in the future.

These pressures are nowhere more keenly felt than in the NHS where saving money is going to be critical as a result of increasing costs and rising demand. However, the NHS has been geared towards growth. Now it must be radically refocused on doing more for less. It is being charged to save £15 - £20 billion over the next few years, yet initial projections suggest that cost efficiency and productivity gains (all in the face of maintaining quality) cannot achieve this magnitude of savings without significantly different practice.

The NHS has already recognised that alternative approaches and solutions are therefore necessary – radically different and innovative ways of identifying, creating and scaling solutions, delivering services and involving patients and users are needed.

Kinds of innovation

In health, the drive to find new solutions to old problems has typically been dominated by commercial providers from pharmacology and technology – effective new kit and new medicines typically create their own commissioning markets, ensuring innovators invest in both the culture and creation of new solutions. However, in delivery this process (and the way in which it can be funded and risks managed) has been less clear.

To shift towards radical innovation means focusing on services and initiatives which address the root causes of challenges, identify new solutions and access new resources. This is the only route to significantly better outcomes at significantly lower cost.

In the private sector, radical innovation has been concerned with exploring new technology – this is fundamentally different from incremental innovation that is concerned with exploitation of existing technology. However, while the need for radical new solutions resonates across public services, the application of technological solutions and efficiency drives borrowed from the commercial world are imperfect. Radical innovation in a service delivery based sector like health is much more likely to be based on people power – in which clinicians, users, patients and other stakeholders – take a bigger and more active role in developing and delivering new solutions.

The priority for healthcare in the nineteenth century was public health. The priority in the twentieth century was universal access to medical care for infectious and acute diseases. The priority in the twenty-first century is increasingly the management of chronic diseases, in an emerging partnership between individual, social networks and medical services. This implies some radical changes to how health is organised.

The key drivers for this include public expectations and values, but also new knowledge about the social determinants of health and very powerful evidence on life expectancy and link to status, stress and social support.

Creating effective supply and demand

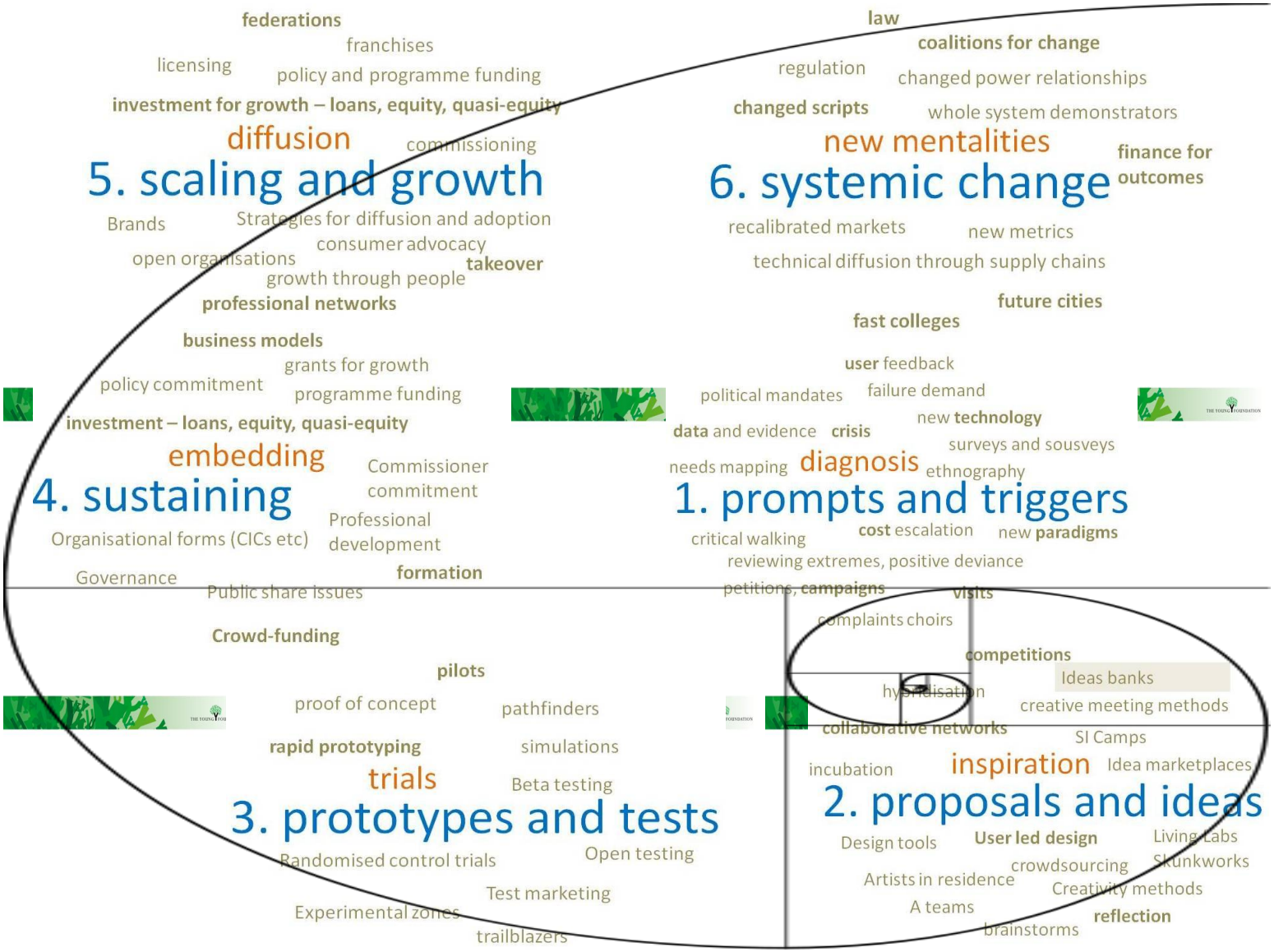
However, radically innovative ideas, pilots and isolated examples are not and can not be transformative in and of themselves. Innovations spread and grow when they combine effective supply and effective demand.

Effective supply means that the model has become sufficiently developed that it's easy to define and codify and therefore diffuse, with proof that it works and is cost-effective.

Effective demand means that someone is willing to pay for it – most likely commissioners with the NHS or local government.

Ideas and models don't spread when they just depend on one individual or local circumstances; they turn out to be too costly (many great projects become brilliant at winning grants – but it's never going to be possible for lots of replicated versions to do as well in raising money). Some are just too complicated. And many don't spread because the holders of power and money don't support them.

This virtuous cycle of scalable and lasting change can be recognised in the stages of innovation illustrated in the "map" or path below. Moving from initial prompts and triggers, through proposals and ideas (in many ways, where the RIFs currently are) to prototyping and testing before being able to sustain, scale and embed systemic change.


federations
franchises
licensing
policy and programme funding
investment for growth – loans, equity, quasi-equity
diffusion
commissioning
5. scaling and growth
Brands
Strategies for diffusion and adoption
consumer advocacy
open organisations
takeover
growth through people
professional networks
business models
grants for growth
policy commitment
programme funding
investment – loans, equity, quasi-equity
embedding
Commissioner commitment
4. sustaining
Professional development
Organisational forms (CICs etc)
Governance
formation
Public share issues
Crowd-funding
pilots
proof of concept
pathfinders
rapid prototyping
simulations
trials
Beta testing
3. prototypes and tests
Randomised control trials
Open testing
Test marketing
Experimental zones
trailblazers
law
coalitions for change
regulation
changed power relationships
changed scripts
whole system demonstrators
new mentalities
finance for outcomes
6. systemic change
recalibrated markets
new metrics
technical diffusion through supply chains
future cities
fast colleges
user feedback
political mandates
failure demand
new technology
data and evidence
crisis
surveys and sousveys
needs mapping
diagnosis
ethnography
1. prompts and triggers
critical walking
cost escalation
new paradigms
reviewing extremes, positive deviance
petitions, campaigns
visits
complaints choirs
competitions
Ideas banks
hybridisation
creative meeting methods
collaborative networks
SI Camps
incubation
inspiration
Idea marketplaces
2. proposals and ideas
Design tools
User led design
Living Labs
crowdsourcing
Skunkworks
Artists in residence
Creativity methods
A teams
reflection
brainstorms

Where are we now?

In the NHS, Lord Darzi recognised the need for this kind of shift and in the 2008 Next Stage Review he set out a strategy for improvement. In order to ensure that there is both sufficient innovation and sufficient adoption of innovations to meet the challenges ahead, the government has committed to action on three fronts:

1. To improve the supply of innovations new funds and prizes are being established to ensure comprehensive investment in promising ideas across all fields, from clinical procedures and new treatments to new models of care. In addition to existing funding for research and development, SHAs have a new legal duty to promote innovation, and every region now has a Regional Innovation Fund.

2. To improve the demand for innovations and their effective adoption comprehensive steps are being taken to ensure that PCTs and others commission innovations directly, and adopt innovations from elsewhere.

3. To bring supply and demand together new institutions are being created to ensure that new ideas are implemented quickly.

It is the translation of these intentions into practices which is now underway. Its aim is to help the NHS serve the public better by ensuring that the best available treatments and services are brought to patients faster. That requires the NHS to become much more effective at mobilising ideas and knowledge from all sources, including universities and social entrepreneurs, and doctors and nurses as well as patients themselves. Innovation has always driven quality and productivity in healthcare – but with these new measures it is being funded, managed and supported in a more energetic and comprehensive way than ever before.

What are the Regional Innovation Funds?

The purpose of Regional Innovation Funds (or RIFs) is to identify, grow and diffuse tomorrow's best practice in the NHS. Their focus is on service innovation, healthcare delivery, health improvement, and patient empowerment/engagement.

Funds totalling £19.4m were allocated to the RIFs in 2009/10, its first year of operation (£1.94m per SHA). A further £50 million was budgeted for 10/11, of which £20 million has been budgeted for release immediately.

While the 10 SHAs have taken different approaches to operationalising their RIFs, they share a common remit to:

1. Build a culture of innovation

2. Invest in a portfolio of innovative ideas

3. Support, scale and diffuse innovation.

The Young Foundation and NESTA are working together with the SHAs, delivering advisory services. Our role is to provide both one to one support for SHAs and to

provide group services to the SHA community and their stakeholders. Each SHA is free to draw on our services to the extent they wish, subject to our overall capacity. The level of current engagement varies by SHA. Our work with SHAs to date has included:

- Developing strategy for and the design of Regional Innovation Fund
- Advising on governance
- Identifying way to spot and attract submissions
- Assisting in application handling processes and developing investment criteria and assessment
- Developing approaches to impact measurement of its Regional Innovation Fund
- Advising on specific investments
- Identifying and developing pre- and post-investment support for applicants to investees
- Marketing and communications strategy for innovation
- Reviewing and contributing to papers on the above for the SHA's board, executive teams, investment committees and relevant steering or working groups

We do not, however, manage the funds on behalf of the SHAs.

Case studies from the RIF portfolio

A broad overview of the size, clinical pathways and stages of innovation of the innovations being backed by the SHAs has been slower to emerge. Although its clear that – to date – the approaches adopted by the SHAs have tended to attract applications that will lead to incremental, rather than radical innovations. A position that is exacerbated by the consensual decision making and governance structures the SHAs have put in place.

However, a selection of case studies drawn from SHA open application programmes gives a flavour of the types of solutions SHAs are currently seeing.

Tele-Wound Management

Chronic wounds are poorly diagnosed, managed and treated across a variety of health settings due to a lack of dedicated tissue viability nurses. The application of mobile phone functionalities (camera, mobile, e-mail) and electronic pen technology will allow improved diagnosis, management and treatment of patients in the community who suffer from chronic wounds.

The proposed innovation is combining the use of Electronic Pen technology and mobile phone functionality (camera, Bluetooth, mobile e-mail) to enable community nurses to take photographs of wounds and easily record an electronic written

summary. The photograph(s) of the wound, along with the written summary of a patient's symptoms can then be transmitted from the mobile phone to an experienced tissue viability nurse based in either a hospital or primary care organisation so that they can help determine how best a patient is treated. This individual can then telephone or e-mail back instructions for how best to treat that patient.

Innovation type: Service transformation or re-design & product or technology innovation.
Innovation stage: Invention (early stage)
Clinical pathway: Acute
Funding: £131,993 over a 2-year period.

Intelligent Pharmaceutical Systems

Support for a 3-month study of the clinical utility and patient acceptability of an innovative "intelligent pharmaceutical" system which provides actionable information to doctors, nurses, patients, and family members on the medication adherence and physiologic responses of patients with heart failure, enabling increased NHS productivity and decreased utilization.

The scheme has the potential for significant reduction in heart failure rehospitalisations and unscheduled clinic visits through improved adherence and wellness information; improved provider productivity based on information that allows improved patient triage; improved patient and family productivity.

Innovation Stage: Early (but is implementing an existing technology successful abroad)
Funding total: The project is seeking £100,000 and if successful could release up to 500,000 in savings per annum.
Pathway: Long term conditions

Implementing Care Planning in LTCs

One of the SHAs has focused on developing a consortium based approach to developing and implementing care planning for long term conditions in its region. The SHA is working proactively with service providers and proposes a two stage approach to developing care plans based on piloting, re-evaluation, training and capacity building. The stated aims of the programme are to improve care and produce savings. Current proposals are based on costing and implementing the first phase of this work.

Innovation Stage: Early
Funding total: £200 000, over 1 year.
Pathway: Long term conditions

Progress to date

It is clear that tackling barriers to innovation and finding radically new delivery solutions that can operate at scale is challenging both practically and culturally for

the NHS. Setting up funds that can respond to these challenges is both difficult and complicated and there is not a well established body of knowledge to draw on. Overall, the SHAs have moved fast in response to the duty to innovate. Given the timescales and the broader need for cultural and systemic changes as well as practical measures, it is only feasible – at this stage - for the SHAs to have developed simple responses.

Since announcement of the RIFs, all SHAs have linked their funds to their strategic priorities. Over the relatively short lead in from announcement of funds (in April '09); through development of regional priorities and processes; to launching of open calls for innovative ideas in the autumn of 2009, the majority of SHAs have focused on developing and delivering comparatively simple, familiar funding and support packages for organisations and individuals in their regions. The majority of SHAs have focused in 09/10 in developing transparent application processes to "harvest" the ideas already available in the region while simultaneously raising the profile of the innovation agenda. For these SHAs the focus has been on selecting the strongest applications with the greatest potential for delivering new solutions and cash releasing savings that are currently available in their regions.

Five of the SHAs (including one simultaneously running an open process) have prioritised their funds further; ring fencing the resources for particular clinical priorities and/or delivery challenges isolated in their strategic plans or to develop less familiar forms of support and financing.

A number have also experimented with creative approaches to attracting, selecting or refining innovations. For instance, a couple of regions have adopted a Dragon's Den approach to the selection procedure. Another has worked proactively with their HIEC to develop and support a consortium of organisations to refine and develop more comprehensive plans to particular challenges – such as long term conditions. A third has channelled resources through the SBRI (Small Business Research Initiative) to attract ideas.

In the last six months, the SHA innovation leads have also recognised the needs for more structured approaches to the RIFs going forward. A number have invested heavily in developing a series of modules (or options) with the advisory service team. Of particular interest have been approaches to rapid prototyping, understanding and using staged funding approaches and developing health impact partnerships that incentivise local authorities adn PCTs to work together on shared delivery challenges.

In the first quarter of 2010 the SHAs have been considering in far greater depth how they might ensure the funds work their hardest by finding opportunities for greater collaboration and fitting the RIFs priorities to their most intransigent issues. As SHAs move from inviting to selecting applicants, they are also beginning to think about more structured approaches to support for the projects and ideas they back and more systemic approach to delivering this type of support in cost effective ways.

Future priorities and recommendations

Reflecting on the first 10 months of RIFs operations provides a number of recommendations.

Locating and growing successful health innovations is about more than just money

While resourcing innovation – at all stages – is a vital part of success, it is not enough alone to create lasting, transformative change. In environments – such as those in which the SHAs find themselves – where systematically finding, funding and supporting innovation in health is new, capacity building and developing lasting infrastructures are vital.

The right type of support matters - providing hands-on support to innovators in the form of funding and intensive non-financial support (mentoring, contacts, market intelligence, and business development) is vital. Technical and practical advice, peer networks, introductions to new networks, the right infrastructure, and recognition are all crucial elements in getting new ideas to flow and ensuring they are sustained. This part of the RIFs work is powerful, but currently significantly underdeveloped.

Build the capacity and infrastructure for innovation – The network or organisations and skills to support and grow innovation is currently patchy – greater investment both within and outside SHAs (such as the Hubs, HIECs, innovation intermediaries, academic and third sector partners) is also necessary to support the effort to innovate.

More structured approaches to growing and spreading innovations are needed that focus on ambition and scale

Innovators attempt to take ideas or local initiatives to scale before they are ready - public services lack disciplined approaches to developing and market testing ideas and building the right business model for scale. But roll out is a slow process, it takes time to define the right service to deliver a new idea, find the right team, understand the revenue streams that might enable it to grow, and how it may deliver superior gains in quality, impact and cost effectiveness. Time to learn and reflect is important. Finding the best ways of engaging users in service development and delivery is crucial for the health sector.

Backing innovations with sufficient scale and ambition. Arguably the "harvesting" approach to date has meant that the quality and ambition of the ideas emerging could be better. The effort going forward should be about not just finding but actively stimulating the right solutions to the largest and most intractable problems facing SHAs.

Focus on interrogating and developing applications to strengthen approaches and manage risk **-** SHAs are learning to engage with proposals in new ways – attempting to actively drive ambition and increase the chances of scale and diffusion through the application stages and multiple funding cycles. Simple grant making processes, where there is little engagement with an innovator before the decision to invest, are not very effective in funding innovation.

Move from "harvesting" to "hunting" – To date, approaches have relied upon harvesting what is coming forward from open calls for ideas. This has led towards a focus on areas where knowledge management and/or proposal writing is strongest and away from delivery and community and primary care. A more proactive approach to setting challenges and supporting responses from particular areas is needed.

Commissioners and managers need to be involved at the right time to enable scale and diffusion – There are challenges in trying to innovate in the context of a large and complex bureaucracy - getting the buy-in of commissioners and senior managers is crucial. SHAs need to maximise the benefits they derive from being both fund managers and overseeing commissioning.

Broad commitment to investing in infrastructure

Since SHAs adopted this new innovation agenda they have come a long way. It is clear that innovation has the potential to realise cash value in health services, but greater commitment across SHAs is needed to create significant shifts.

Innovation leads and the projects and programmes they back require support and encouragement. SHAs innovation leads require support and buy in from across SHAs. Senior recognition and prioritisation is needed to drive change and raise the profile of the innovation agenda.

Share what works – the Regional Innovation Funds will be important for their ability to improve the flow of information among SHAs, since every SHA will be able to benefit from the pipeline knowledge of the other nine – all for the ultimate benefit of patients. Developing metrics, data libraries and effective ways of interrogating them are a core part of this work. The Young Foundation developed a health innovation evaluation framework for the DoH with SHA input but engaging with this information and ensuring it is adequately supported is key. This is less about IT solutions and more about use and analysis of data.

A firmer focus on developing differentiated strategies is required. To date, the management of the RIFs has tended to support incremental innovations from the frontline. A different strategy, approach and inputs are necessary to prompt, stimulate and support more radical innovations.

Commitment to consistent managerial and funding levels is required – Doubt about funding levels and broader commitment to the innovation agenda has led to an understandable softening of strategic plans and a scaling back in ambition – whether it be a reduction in new investments, a softening in commitments to multi-year approaches or appetites for investment in new funding methods. To maximise the chances of success the RIFs require flexible, multi year funding that rewards outputs rather than inputs. Despite the on-going commitment to reduction in management costs, innovation strategies will also require adequate capacity in order to succeed.

Summary recommendations/actions for CSM

The Regional Innovation Funds are faced with a significant – but not insurmountable task – the challenge to appreciate and understand the magnitude of the problem and

respond to it. A diverse ecosystem of health innovation is not currently at hand in the UK, but it could emerge. In 2010/11, we suggest that the priorities are to encourage SHAs and the RIF teams to;

1. Continue to give a high priority to innovation as a means to achieve quality and productivity enhancements

2. Continue to invest in the capacity to innovate, not just individual innovations

3. Stimulate/incubate to improve the quality and ambition of the pipeline of innovations

4. Invest in rapid learning and accelerate progress across SHAs, not just in innovation silos and not just within regions.

5. Increase the focus on services and community and primary care, including collaboration with local government.