Spread and adoption of national priority innovations

Insight review with University Hospital Southampton NHS Foundation Trust

Case Study Report

This is a short version of the project report produced for and approved by UHS for wider circulation.

1. Introduction

The NHS doesn't have a good track record of adopting innovations and delivering them at scale. There are many examples of innovations that have successfully demonstrated their advantage in parts of the NHS, but do not become widespread. This isn't new and reflects a growing recognition that the process of adoption is not straight forward, and that approaches based on central direction haven't worked[1].

Wessex Academic Health Science Network (AHSN) has been undertaking Insight reviews with a series of its member NHS Trusts to build regional understanding of spread and adoption in practice and support them to identify areas where this could be improved. This is part of wider work to develop a best practice model for spread that is being adopted nationally by the AHSN Network.

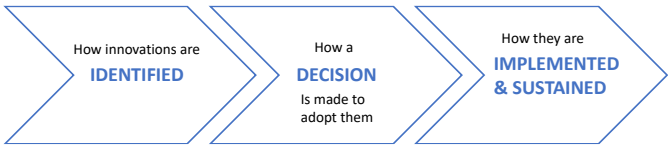
The review had **two aims**:

i) To give UHS the opportunity to review their current roles and processes in support of innovation, and to identify areas of best practice and improvement

ii) For WAHSN to increase its understanding of the identification, decision making and implementation roles and processes for innovation at UHS, and for this to inform the best practice model it is developing

The review has taken a wide view of what an innovation could be – including medical devices or products, digital products, processes, pathways or new care models.

This review has explored **three key stages** in the adoption of an innovation in UHS:



28 Semi-structured interviews were held with a cross section of people in the Trust and focused on Divisions A (Surgery) and B (Medicine). The following postholders were interviewed to explore the Identify, Decide and Implement pathway and looked for case studies of recent innovations in UHS:

Acute Kidney Injury Lead Advanced Practitioner	Deputy Director of Research and Development
Associate Medical Director for Safety	Director of Research and Development
Care Group Clinical Lead – Emergency Medicine	Director of Improvement and Partnerships
Care Group Manager – Anaesthetics, Theatres and Critical Care	Director of Transformation and Improvement
Care Group Manager – Emergency Medicine	Division A Clinical Director
Chief Executive	Division B Clinical Director
Chief Financial Officer & Deputy Chief Executive	Division A Director of Operations
Chief Information Officer	Division A Director of Operations
Clinical Lead digiRounds	Division B Head of Nursing and Health Professions

[1] For example, 'Spread and adoption of innovation in the NHS', King's Fund, January 2018

Clinical Lead Laboratory Medicine	Head of Business Intelligence
Clinical Lead Proactive Safety Culture	Lead Critical Care Physiotherapist
Clinical Lead Quality Improvement	Medical Director
Consultant Neurosurgeon & Deputy Medical Director	Pathology Operations Director
Deputy Director of Nursing	Perioperative Medicine Project Manager

2. Findings

There is already lot of innovation happening at UHS, a mixture of local invention and finding things that are working elsewhere. Everyone interviewed had good examples, coming from nurses, therapists, doctors and informatics. However, the sense from the conversations with participants was that **there is potential be more innovative**. The Trust currently has a difficult financial and operational context and innovation can help respond to this.

It is widely recognised that innovation is **happening in pockets** and that working to address this should be a priority. A simple mapping exercise to understand where innovation and improvement is and isn't happening and the reasons why would be a good place to start.

The evidence is that **organisations that are outward looking adopt more innovations** and UHS demonstrates this – continuing to support and prioritise networking will be important for future innovation. There is recognition that networking within the Wessex region isn't as developed or strong as it could be, and the AHSN has heard this from the other Trusts where adoption reviews have been completed. **Internal networking** was described as being important to the Trust and the need to encourage and expect Away Days as part of how the Trust is run.

People's time to network, innovate and improve is a scarce resource. Many innovations free-up staff time and this benefit is often called 'releasing time to care', but this could equally be called **'releasing time to improve/ innovate'**. The case studies identified (Appendix 1) demonstrate the importance of front-line staff in identifying and implementing innovations. Some people also described a virtuous circle for teams and individuals, where one innovation leads to others and increasing this would be a good ambition.

The annual Care Group Transformation meetings with the Executive team are a good example of the Trust prioritising time for improvement and development. Care Groups described that much of the benefit from these meetings is by taking time out together to prepare.

There is a wide-spread concern that **it can be too hard for staff who have a potential innovation** to navigate the organisation to have it considered and a decision made. This can put people off from trying or encourage them to circumvent approval processes.

It would be helpful for the Trust to **clarify and signal the benefits it wants innovations to deliver**. There were a lot of comments about how the benefits of a potential innovation are judged by the organisation when deciding whether to adopt, with a current concern that only cash releasing benefits will be supported.

The review found **three themes that could drive more innovation across the organisation**.

(i) **Developing a narrative that supports and encourages staff to identify innovations** that could improve how care and services are currently delivered. It could describe and frame the benefits

that the Trust needs innovations to deliver (such as financial savings, safety improvements, shorter lengths of stay, time savings for staff) and the things to avoid (such as high levels of capital investment, long lead in times for benefits etc.).

(ii) **Developing a supportive and streamlined 'Innovation Adoption Process'**. This could build on the narrative and be designed with front-line staff in mind. It could start with describing where staff should go when they have identified a potential innovation and the people who can support them navigate (such as Care Groups, QI champions, Service Improvement Team). Decision making could begin with a short concept description rather than a business case which could be used to provide an early decision by the Care Group/ Division about whether it is worth pursuing. It would be worth reviewing whether a simpler business case template could be developed as an alternative to the Trust's generic one. The implementation plan should include measuring and reporting the impact that the innovation has. This will help with producing more case studies to feed into an ongoing narrative of innovation and improvement.

(iii) **Widespread support for the idea of developing a pump-priming fund to drive more innovation**. This was particularly seen as a good way of responding to innovation happening in pockets by encouraging and targeting the areas that aren't innovating. To achieve this, there are advantages of the Division's leading the process locally.

3. Case studies

The interviews identified many examples of innovations adopted by the Trust. These are a mixture of local invention and identification from elsewhere and demonstrate many of the findings identified in the interviews. Example case studies are listed below and are described further in Appendix 1.

Early mobilisation in Intensive Care	Awake craniotomy
Improved hydration to reduce acute kidney injury (AKI)	Safety PODs for physical restraint
	DigiRounds
Digital cabinets	Doctors Administrators role

4. Next steps

The report was well received by the Director of Transformation and Improvement and it has been circulated ahead of a planned discussed at a Trust Executive Committee. There is the potential to arrange a joint workshop with a wider group of staff, including those that participated in the review, to explore responses to the review's findings.

There is a recognised need to develop the networking across the Wessex acute Trusts to share intelligence about innovation and improvement. The AHSN and UHS both have network leadership roles that could support this. Further discussion will take place about how this could be taken forward.

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Appendix 1 – Case Studies

Early mobilisation in Intensive Care

The lead critical care physiotherapist, band 7 critical care nurse and two ICU consultants were successful in a bid to the Trust Invest to Save fund in 2012 to pilot early mobilisation on General ICU. Research in the USA was showing that mobilising ICU patients earlier reduced their length of stay. With £60,000 funding, the UHS team were one of the first to implement these findings in the NHS. The team set this up as a QI project and used the funding to appoint two band 4 therapy assistants, bed-side equipment and staff training. Between April 2012 and March 2016 there was a reduction in time of first mobilisation for intensive survivors from 16.3 days to 4.3 days and a reduction in mean length of stay from 20.8 days to 11.2 days. An article describing the project was published in BMJ Quality in 2017.

The team have developed the innovation beyond ICU - they have worked with Division B to appoint additional therapy assistants to support patients discharged from GICU and respiratory HDU and audit has found similar length of stay and qualitative outcome benefits. However, this hasn't been prioritised for funding by the other Divisions. They are now working on a rehabilitation and peer support model for patients once they've been discharged home, similar to the cardiac community rehabilitation model

Improved hydration to reduce acute kidney injury (AKI)

The AKI Lead Advanced Practitioner described how her external networks are a good source of innovations that are contributing to the hydration of vulnerable inpatients to reduce their risk of acute kidney injury. The Medicine for Older People wards had heard of an innovation to encourage patients with dementia to drink by freezing fruit juice into lollies. She was able to use her network with Wessex AHSN to bid for funding for five 'lolly freezers' to cover the whole hospital.

The quality of fluid balance charts is a major issue in the management of hydration. The Royal Liverpool have been working with a company to develop electronic recording of how much patients drink, using digital cups, which could be an important breakthrough for a long-standing problem. Through the national AKI nurses network, UHS are set to be the second pilot site. The Global Digital Exemplar (GDE) and Commercial Teams have been involved in agreeing this. Another clinical issue is how well hydration assessments are carried out. Bedford Hospital have developed an effective assessment tool, which has been amended for adoption at UHS. This has been successfully rolled out across all of the care groups over a 3 month period and there is evidence of reduced AKI and improved completion of assessments.

Digital cabinets

A member of the AMU ward team (band 5) approached the care group management with an idea to improve drugs cupboards on AMU. These were in a poor physical condition and this was contributing to poor stock control, a lot of ward staff time to manage, security issues and potentially to medicine errors. The member of staff's idea was to replace the two controlled drug cupboards with better designed and more secure ones and to take re-organise its management to improve stock control and monitoring. The care group invested £25,000 in the project and supported the member of staff to lead the project, including reporting progress to the care group board.

The project worked well and has provided the platform for the ward to work with the GDE programme to trial Digital Cabinets, as part of the Trust's strategic move to closed loop medicines management. A

business case has been produced for three digital cabinets with the aim of delivering reduced medicine errors, cash releasing cost savings and staff time savings.

Awake craniotomy

UHS is an early NHS adopter of awake craniotomy – a preferred technique to remove tumours close to and/or involving functionally eloquent regions of the brain. It allows regions of the brain to be tested before they are incised or removed. The innovation was identified through the neurosurgeons knowledge of the latest evidence base and their wish to challenge existing clinical practice where it can be improved. The care group management team were supportive of the desire to innovate and a pilot was approved by the Divisional Board. Sign off was given by the Trust's New Procedure Group. The procedure continues to be used and the team have worked hard to audit and validate the approach to increase its availability.

Safety PODs

The Trust invited a senior nurse from Southern Health NHS FT to come in and give a talk on innovations and latest best practice in caring for mental health and learning disability patients. This included an innovative approach to improving the experience and safety of physical restraint, a recognised high-risk activity. Safety PODs are large purpose-built bean bags that are used to sit the restrained patient in, in a way that minimises the risk of injury to them and the number of staff and degree of physical restraint required. The supplier has now visited the Trust and demonstrated it to a range of staff in Division B and security. Twenty PODs would cover the whole Trust at a total cost of c.£8,000. There isn't a central source of funding so each Division is being approached to ask for their support.

Digirounds

Digirounds is an innovative UHS developed app that enables clinical staff to access the key clinical information they require on a ward round on their tablet – including observations, drug charts, laboratory tests and handover notes. It was first developed in critical care by a Neurosciences ICU consultant and the division's system analyst. It quickly proved popular amongst staff and was adopted across all of the critical care areas. The Chief Operating Officer recognised its benefits of improving the effectiveness and productivity of ward rounds and supported its further development and spread across all inpatient wards. The Trust's Information Team responded quickly and brought their powerful programming ability to the clinicians that were driving its development. Digirounds was successfully rolled out to all wards as part of the Trust's winter preparations and is described by clinicians as transformational. The critical care consultant that started the innovation has a session a week to support its continued development.

Doctor Administrators

The Emergency Care Group Manager explained how a poor junior doctor survey in 2014 on AMU led them to sit down with them and map their non-clinical tasks. A new 'doctor administrator' role was developed, the first of its kind in the UK. The Care Group funded £80,000 cost of appointing three band 3 staff to provide a seven day service from 8am to 6pm to provide administrative support to the junior doctors on AMU to increase the amount of time they spend with patients. The benefits of this new role were a saving of potentially over 16 hours of medical time per week and supported a greater proportion of patients being discharged directly from AMU. This new role has spread to other Care Groups, albeit slowly. It has been presented nationally and published in the HSJ.