

Perfect Patient Pathway Test Bed Update

Governing Body

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1 December 2016

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Sponsor	Maddy Ruff, Accountable Officer
Is your report for Approval / Consideration / Noting	
Noting	
Are there any Resource Implications (including Financial, Staffing etc)?	
Not currently identified. The Test Bed Programme will require funding decisions from commissioners and/ or providers depending where the benefits apply and once initial areas of testing have been evaluated.	
Audit Requirement	
Principal Objective: To ensure there is a sustainable, affordable healthcare system in Sheffield. Principal Risk: 4.6 Provider development required to deliver new models of care and achieve CCG stated outcomes does not happen	
<u>Equality impact assessment</u>	
Equality Impact Assessment and Privacy Impact Assessment will be undertaken with each area of testing prior to commencement.	
<u>PPE Activity</u>	
A series of engagement opportunities with our wider community has been undertaken since December 2015 involving more than 250 stakeholders across commissioner, provider, patient/citizen, commercial and third sector organisations and representatives. Healthwatch are a key partner to the programme and have been commissioned to lead on public engagement. A Technology Advisory Group has been established to identify expert patient/ citizens to work with each project area. Further engagement events are planned for the autumn with a specific focus on mental health.	

Recommendations

Governing Body is asked to:

- Note the progress with the programme to date, including the risks and challenges
- Receive a further update on progress in Spring 2017

Update on the Perfect Patient Pathway Test Bed Programme

Governing Body meeting

1 December 2016

1. Introduction

As part of its intention to drive interoperability and innovation across health and social care communities NHSE launched a 'Test Bed' programme in March 2015. This programme was established to accelerate commercial/public partnerships which both promoted innovation in technology and accelerated implementation at pace and scale to meet the government's digital ambitions. Further information can be found here: <https://www.england.nhs.uk/ourwork/innovation/test-beds/>

Sheffield City Region was successful in its application for Test Bed status. As well as an investment fund of £1.8m, the 2 year Sheffield City Region Test Bed Programme has subsequently attracted national attention through the senior sponsorship by the Chairman of NHSE (Sir Malcolm Grant). The Test Bed Programme Executive lead sponsor is Sir Andrew Cash (STH).

2. Programme Aims and Objectives

The Perfect Patient Pathway Test Bed aims to create the **perfect patient pathway** and to bring substantial benefits for patients suffering from long term health conditions, such as diabetes, mental health problems, respiratory disease, hypertension and other chronic conditions.

The aim is to keep patients with long term conditions well, independent and avoiding crisis points which often result in hospital admission, intensive rehabilitation and a high level of social care support.

The main objectives of the Test Bed are to:

- Provide an ongoing platform for testing, refining and scaling-up innovations.
- Re-design pathways, bringing combinatorial technologies and system transformations to support holistic and personalised care.
- Embed the culture of transformation and improvement in NHS and other health and care organisations.
- Support co-ordinated decision-making across health and care, informed by real-time data and predictive analytics.
- Evaluate the combination of new technologies and service re-designs producing robust and objective results that can be shared and disseminated.

The Test Bed will bring substantial benefits to patients and carers, the NHS, local citizens, industry and the UK economy. These benefits include, but are not limited to:

- Health and Care benefits: Patients will have significantly more control over their care, and experience better outcomes through improved treatment and medication

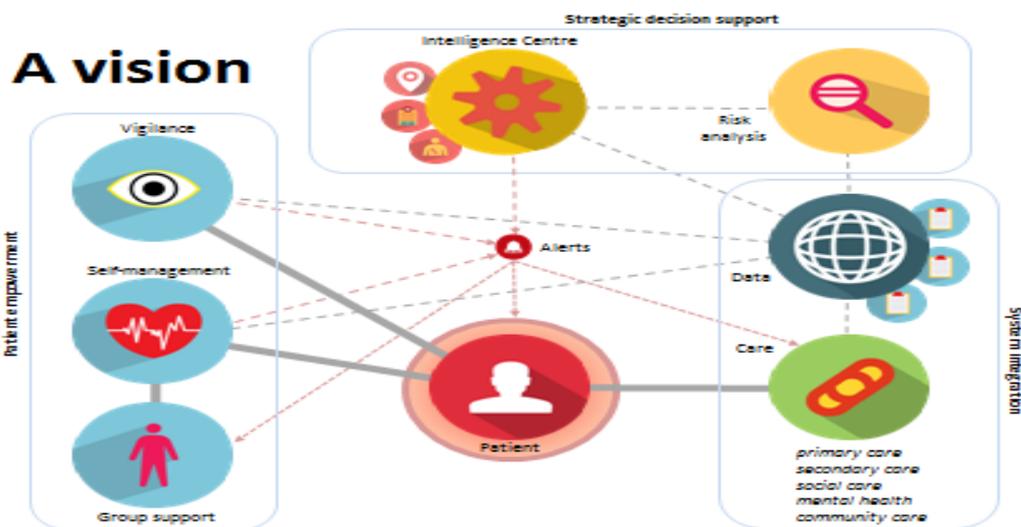
adherence. Proactive care will reduce frequency of exacerbation, and co-ordinated care will address their health and care needs holistically (through co-ordinated data and re-designed pathways). Remote monitoring will also support care based in the citizen's own home, reducing the burden of routine care on patients, their carers and families, and health professionals.

- **Economic Benefits:** Improved self-care, proactive care and coordination will reduce acute activity and therefore cost, and make best use of health and care resources (including reducing demand for social care through promoting independence), as well as savings to the welfare system. There will also be significant benefits for industry and the economy. The programme will provide an 'eco-system' for testing and refining of technologies in a 'real world' environment, thereby generating a 'pipeline' of potentially wealth-generating innovations which could be rolled out at scale. It will demonstrate the value of embedding technologies within pathways, thereby promoting NHS-industry collaboration and profitable growth for technologies which show benefits for patients. It will also encourage innovator organisations to collaborate, strengthening their overall offerings in wider healthcare markets.
- **Social benefits:** Alongside clinical outcomes, the Test Bed will focus on promoting independence, healthy lifestyles and wellbeing for people with LTCs. We will monitor and address social isolation, and will guide co-ordinated support from social care and wider public services as well as the NHS. Significantly reduced healthcare related travel for people with LTCs will also save time (and cost), increase quality of life for them, their families and carers, and have a positive impact on the environment.

The Test Bed will initially focus on people with three or more long term conditions across the Sheffield City Region. The vision for the programme is to create a model that will support holistic care for people, irrespective of age, condition or health status, and that will be spread across England.

The model below in figure 1 provides a visual description for the vision of the programme to develop further:

- The patient's ability to manage their own condition more effectively (empowerment)
- The data linkages between the care team supporting the patient (integration)
- The ability of the health and care system to build its predictive capability to manage demand proactively (strategic decision support)



A model supporting holistic and personalised care for people across England, across the life course, and addressing physical and mental health needs on equal terms.

The programme is interdependent with:

- Active Support and Recovery, more specifically the development of “neighbourhoods”
- The Local Digital Roadmap (LDR) and digital maturity
- The STP and Placed Based Plan for Sheffield.

3. Expected Benefits

The programme has commissioned SchARR to be the evaluation partner. The table below describes the high level benefits that SchARR will construct its evaluation parameters against.

	Main Beneficiaries	Benefits description
Health and Care	Patients	<ul style="list-style-type: none"> • Improved clinical outcomes. • Improved satisfaction.
	Patients, carers, families	<ul style="list-style-type: none"> • Holistic, co-ordinated care. • Reduced time commitment for managing your condition(s).
	Health and care professionals	<ul style="list-style-type: none"> • Increased efficiency of clinical time. • Reduced administration burden. • Increased job satisfaction.
Economic	NHS and social care providers and commissioners	<ul style="list-style-type: none"> • Reducing unnecessary activity. • More effective use of resources. • Potential savings from reduced NEL alone, for this group, of up to £8m per year in Sheffield. (equivalent £735m pa nationally).
	Innovators / healthcare industry	<ul style="list-style-type: none"> • Provides an ‘eco-system’ for testing / refining of technologies in a ‘real world’ environment.

		<ul style="list-style-type: none"> • Growth of technology within NHS. • Growth of innovator organisations.
	Sheffield and wider UK – Economy	<ul style="list-style-type: none"> • Increased labour productivity. • SME growth. • Economic growth in Sheffield City Region, and beyond. • Reduced benefits spending.
Social	People with LTCs	<ul style="list-style-type: none"> • Increased empowerment, control. • Reduced social isolation. • Improved quality of life.
	All citizens	<ul style="list-style-type: none"> • Positive environmental impact.

4. Progress to date

Five initial areas of testing have been set up to begin the deployment of technology. Three of these areas of testing are within “neighbourhoods” within Sheffield and will focus on:

- Early falls and frailty detection (Foundry group) – Patient recruitment has started in October
- Chronic respiratory disease and better self management with associated mental health conditions (GPA1) – anticipated start date in December/ January 2017
- Better management of risk with care home residents (Sloan, Woodseats and Carter Knowle) – anticipated start date in January 2017

The remaining two areas of initial testing will work across existing pathways of care and will involve primary, community and specialist care:

- Patients dependent on insulin for their diabetes (this will also link with a university project for DAPHNE Plus) – patient recruitment has already started
- The acute frailty pathway, from pre-admission through to discharge – initial patient cohort will be selected from patients at the point of discharge from December.

The most ambitious aspect of the programme innovations remains the proposed implementation of Care Coordination capability at a system level. Whilst this will be a longer term objective of the programme the Frailty Pathway project will be designed to allow initial prototype testing for proof of concept. At the Royal Hallamshire Hospital an Innovation Hub has been established to create a safe area for testing data flow. The aim is to develop the capability to:

1. Enable population centric technologies such as personal devices and applications to directly connect to single or multiple instances of health and/or social care systems
2. Enable existing systems data sets from non-commercial partner systems such as GP Practice systems, Acute or Mental Health Patient Administration systems to link to a central aggregated view to enable for example, business intelligence reporting

3. To bring together the data from points 1 and 2 together and present the aggregated data to enable, for example, operational and tactical analytics, and care optimisation with advanced predictive analytics.

Engagement

These areas of testing resulted from an extensive programme of engagement initiatives that were undertaken in Sheffield between December 2015 and June 2016 in order to engage a wider number of stakeholders in the identification of Sheffield specific IT and digital challenges. Innovators who have previously expressed a willingness to work within the PPP programme have participated in these initiatives, providing an opportunity to marry recognised problems with potential innovative solutions. Engagement initiatives have been supported by Sheffield University and the Yorkshire and Humber Academic Health Sciences Network (AHSN). Stakeholder engagement initiatives led by the programme have included:

- Teleconferences and meetings with innovators, March 2016
- Technology Blueprint Workshop, 26 April 2016
- Sheffield 'Localities' Workshop, 12 May 2016
- Digital Media Centre presentation (Barnsley), 9th June 2016
- Acute (Adults, Children and Mental health) sector, 23 June 2016
- Mental Health, planned for December 2016

Governance

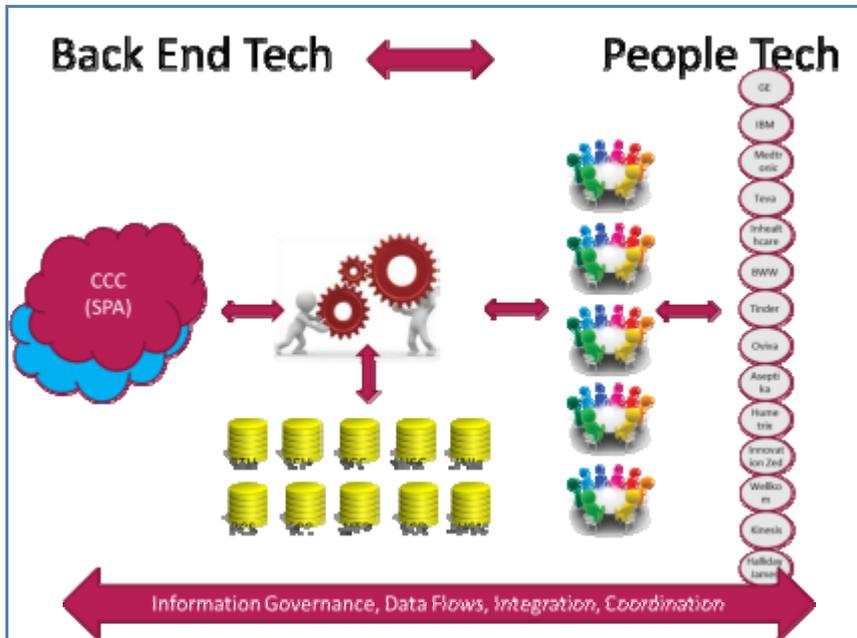
A governance structure has been created to support ongoing strategic oversight and delivery of the programme. A critical challenge is to align the programme governance with the Sheffield Placed Based Plan and the overarching South Yorkshire and Bassetlaw STP.

5. Key Risks and Challenges for the Programme

With a programme as complex and dependent on 29 partners (15 innovators and 14 non-commercial), there are many challenges to ensure that testing even begins. The key issues:

- a. Finances - The programme has been set up by NHSE on a "risk and reward" model. In simple terms the innovators will not get paid for periods of testing, but will expect that, following any "successful" evaluation there will be an agreed route to funding and the opportunity to spread the commercial potential. The system still needs to agree where decisions will be made to take on the learning from the areas of testing (probably through the STP governance) and how technologies will be procured. The programme is already referenced within the STP and the Sheffield Placed Based Plan as a key digital enabler
- b. Information Governance and data sharing – the core issue is ensuring that IG requirements are met, whilst at the same creating conditions to allow testing. The programme has three core elements of data integration/interoperability:
 - Enabling population centric technologies such as personal devices and applications to directly connect to single or multiple instances of health and/or social care systems

- Enabling existing systems data sets from non-commercial partner systems such as GP Practice systems, Acute or Mental Health Patient Administration systems to link to a central aggregated view to enable for example, business intelligence reporting
- To join points 1 and 2 together and present the aggregated data to enable for example, operational and tactical analytics, and care optimisation with advanced predictive analytics.



Each project will have a Privacy Impact Assessment undertaken to ensure that data flows are fully understood before testing commences. NHSE is also commissioning programme support for the seven Test Bed sites nationally.

- Creating the conditions for collaboration - The conditions for testing are covered through a Collaboration Agreement which innovator partners will have to sign up to before their technologies can be deployed. This will cover IP, programme governance, finances during testing and clear performance measures to evaluate impact.

6. Recommendation

CCG Governing Body is asked to note the progress made with the programme to date and to agree to receive an update in Spring 2017

Steven Haigh
 Programme Director
 Perfect Patient Pathway Test Bed Programme

23 November 2016