Health North: Connected Health Cities

The Need

- Despite huge advances in in knowledge and technologies, **chronic disease burdens are increasing** with longevity and lifestyles; care costs are escalating; and new threats such as anti-microbial resistance are met with few countermeasures.

- The UK's National Health Service (NHS) is required to deliver **£20 billion of efficiency savings** in an economic climate that predicts little or no growth.

- 40-50% of NHS Trusts overspent in 2014/15, and the 2016 projected **deficit is £2.3 billion**.[1]

- Manchester, Blackpool, Liverpool and Salford all located in the North of England have the highest early mortality rates in England, and overall the **chance of dying under age 75 is >20% higher in the North** of England compared with the South.[2][3]

Health North

Health North is a Government initiative operating across North England (15 million population) to generate **innovations** that can deliver more effective and efficient health and social care.

The foundations of Health North are to:

- establish a **social contract** with citizens that gives license to use health data for public good;

- produce timely and **actionable information** from patient and population data;

- use new intelligence sources to understand pathways of care across different provider organisations and to **target resources** to needs in much more agile and specific ways than at present; and

- to accelerate **business growth** in the digital health sector in North England.

Connected Health Cities

Connected Health Cities will be piloted in four city regions in its first phase, with the common principles of:

- Engaging and involving the public to build **public trust** and civic partnerships.

- Working with data custodians and existing infrastructure at local, regional and national level to create **linked-data critical masses** for deeper understanding of health in defined populations.

- Developing at the heart of each city region an **Ark** – a secure, combinatorial data analytics facility, with state-of-the-art data management and analysis tools, underpinned by research, education and training.

- Bringing people from academia, NHS and industry into **deep collaboration** in the Ark, working in partnership to create new knowledge that will inform decision-making at levels.

The aim is to pilot data-intensive health service optimisation methodology and understand how it can work efficiently in city regions, then to network those regions so they can 'borrow strength'.

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[1] King's Fund report on NHS Trusts' deficit: www.kingsfund.org.uk/press/press-releases/nhs-trusts-deficit.

[2] Hacking JM, Muller S, Buchan IE. Trends in mortality from 1965 to 2008 across the English north-south divide: comparative observational study. BMJ. 2011;342:d508.

[3] Mortality Rankings, Public Health England: http://healthierlives.phe.org.uk/topic/mortality/comparisons.

What will the outcomes be?

- Validated **methodology**, delivering actionable information to health, social care and citizens, reducing the time lag between data being available and appropriate actions being taken (data-action latency).

- A new model for **civic partnership**, where trust is built and sustained through on-going public engagement and the use of data is open and transparent.

- Platform technology and tools, delivering **actionable information** to healthcare, social care and citizens, reducing data-action latency.

- New **economic development** in the North of England in/around the digital health innovations of the Connected Health Cities.

- Greater engagement and **empowerment of citizens** to take control of their healthcare, contributing to health system optimisation.

- Digital health **innovation network** building across the Health North partnership – sharing knowledge and multiplying assets.

- Increased capacity and capability of the **data scientist workforce**.

How will Health North work with Industry?

Industry partnership is **essential** and integral to Health North, especially with the following sectors: **enterprise IT; health IT; medical therapies and medical devices; digital health; and SME's**.

Health North, with industry partners, aims to fundamentally change the way data, information and knowledge are produced, collected, analysed and acted upon in health and social care.

The goal is to enable **continuous improvement and optimisation** with the following benefits:

- Health and social care **providers** will benefit from improved outcomes and greater efficiency in service delivery and management.

- **Academia** will generate deeper and timelier outputs with more impact.

- For industry, Health North will establish the conditions in which data-rich healthcare innovation is required thus opening **new markets**.

- **Citizens and communities** will receive more personalised care, optimised to their needs that delivers improved health outcomes.

Governance

The Health North pilot project is funded by the UK's Department of Health and delivered by the Northern Health Science Alliance (www.thenhsa.co.uk).