MEMBER SHOWCASE

Case study

NHS CONFEDERATION

Integrated Care System
Nottingham & Nottinghamshire

Improving outcomes through sharing data across health and social care

Overview

Connected Nottinghamshire is a digital transformation programme which aims to integrate different health and social care systems across Nottingham and support improvements in care. A new technological solution borne from the programme has increased patient attendance at health checks by 56 per cent in some GP practices, simply by processing and using data more intelligently.

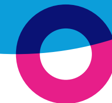
What the health and care system faced

Like several other health and care systems, Nottingham and Nottinghamshire Integrated Care System faced a complex mix of challenges from an ageing population with more complex health and social care needs and historical poor performance against end-of-life metrics and gold standards of care.

Coupled with increasing demand, declining performance against urgent and emergency care targets, and an increasing number of patients with multiple long-term conditions, the system wanted to explore how digital solutions could help to address these challenges.

What the health and care system did

Connected Nottingham was set up to create and develop a local digital roadmap for Nottinghamshire, specifically focusing on projects which would deliver better integration of services to support transformation. Over two years, the team spent time winning the hearts and minds of staff and leaders across the health and care system to deliver something that works.



Three principles were essential to the programme:

- **Shared records**: enabling access to a shared patient record across health, care and beyond with a focus on the patient at the centre and information not just limited health and care. Information on housing, for example, provides a complete picture of an individual's needs and circumstances.
- **Electronic workflow**: allowing attendance/admission follow-on actions to happen immediately as part of a defined workflow, rather than waiting for an individual to action them. For example, if a patient presents at A&E, there is likely to be a number of follow-on actions such as asking a secretary to write a letter, and, elsewhere in the system, booking an appointment.
- **Early intervention**: enabling the identification of those that may require health or care intervention, which would prevent them from presenting at A&E.

One particular project started as a risk stratification tool based on local data available at the time. It had some success, and although the data took months to arrive and was not of high quality, it provided a vision for what Nottingham and Nottinghamshire needed a technological solution to deliver.

If there had been a product available, the ICS would have bought it. Instead, the system had to build one to take the project forward. The project design was led by the clinical chief information officer and data management team who took the concept of what needed to be achieved for both patients and staff and built the system around it.

Time was spent understanding what was needed and what would improve outcomes for patients and service users, before considering what the technological solution should be. Strong clinical leadership was an essential part of this process and the ICS was fortunate to have practising GPs who truly understood data and IT.

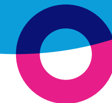
Work started with questions about what data was needed and then considered the data the system already had. Answering these questions involved bringing together staff from across the ICS – including housing, the coroner, social care, primary care and community care – to ensure everyone was on board.

Results and benefits

In total, 150 GP practices are involved in the project. From the outset that meant finding early wins and benefits for people involved, such as moving Public Health England's health check process over to the GP repository for clinical care (GPRCC). This saved each practice £267 and increased the number of patients attending a health check by 56 per cent in some practices, simply by processing and using the data more intelligently.

This quickly demonstrated that including data within the GPRCC system improved patient outcomes and provided a more holistic picture of patients' needs. It also met GP surgeries' business need by increasing the number of people attending health checks.

There are approximately 200 different workflow items in the technological solution the cross-sector team developed. It looks at every patient record and the codes, which include a wide range of issues to flag to care coordinators working in a GP surgery. Care coordinators might then call the individual and flag that they require an intervention, explaining the reasons behind this. The team is now delivering 8,000 interventions a month as a direct result of using this system.



Overcoming obstacles

The team encountered a wide range of issues along the way, from technical, security and public engagement issues, to leadership challenges. Holding fast to the original intention of the project – that it is always about people, service improvement and outcomes for people – was really important.

Consistency in approach was a vital aspect of the project and the team is already thinking about how to expand and ensure that outcomes can be evidenced. This is challenging, but the aim is that as the technological solution evolves, the staff using it enhance their approach and will understand what the best way forward is for patients at key points. They will also be clear on where positive variation is needed to meet successful outcomes.

Each time the team encountered a problem they would work together to solve it. This approach built trust and confidence in the process and the end product, and made the adoption process easier. Making sure the patient remained the centre of focus and solving the 'real' problems for the organisations delivering care were crucial to success.

By the end of 2020, the system is expected to have around 3 billion records, including data from social care, primary care, hospitals, community services, 111, and will shortly include ambulance data. Managing this amount of data presents a challenge in itself.

Key learning

Data quality is important and it is vital for system partners to understand why it is so critical. The technological solution holds lots of data and as such, staff need to be careful about how it used. For example, coding could be for financial and not for clinical use and this needs to be treated sensitively.

Training staff to use and interpret the outputs has been a challenge, but the ICS is using innovative approaches to improve. Care coordinator teams are key to success in changing business processes and their needs have been prioritised in the design of the system to ensure it meets business needs.

There has been a lot of learning in terms of how to use the system and coding effectively for use in a clinical context – often data can only be used to infer as opposed to factually confirm. As the system is used to provide workflow items for consideration by the teams, any risk is mitigated by human review.

The team continues to learn all the time. The system is not perfect and each time an issue is faced, the team works together to resolve it. Early implementation is now live and being tested.

- **Start from the bottom up** by solving real problems that are going to make a difference to the service provided by staff for patients.
- Don't solve the things that managers want: **spend time understanding what frontline staff need** and work together on how to resolve it. This helps to sell the benefit of adopting the system as it has been co-produced with staff and answers questions that are going to make an impact.

Next steps

The vision is for the ICS to be able to analyse healthcare data to evidence when people need social care intervention sooner. The challenge is that currently, the system is identifying a social care need earlier for services, which is creating additional demand. Nonetheless, the overall aim is to demonstrate that this approach is preventing a longer-term high-cost package of care and therefore better for the individual and more cost effective for the system as a whole.

For more information

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January 2020

The NHS Confederation is the only membership body that brings together and speaks on behalf of the whole NHS.