

LINCOLNSHIRE HEALTH AND CARE

LINCOLNSHIRE

INTRODUCTION

Lincolnshire Health and Care (LHAC) have deployed a shared care record solution that currently shares information from 3 of their acute hospital trust's systems. The Lincolnshire Care Portal will be used to support the delivery of integrated care through multidisciplinary teams. It will be fully operational in May 2017.

The Lincolnshire Care Portal uses InterSystems' Healthshare solution.

SCALE

S

COMPLEXITY

L

- ✓ ACUTE CARE
- PRIMARY CARE
- MENTAL HEALTH CARE
- COMMUNITY CARE
- SOCIAL CARE

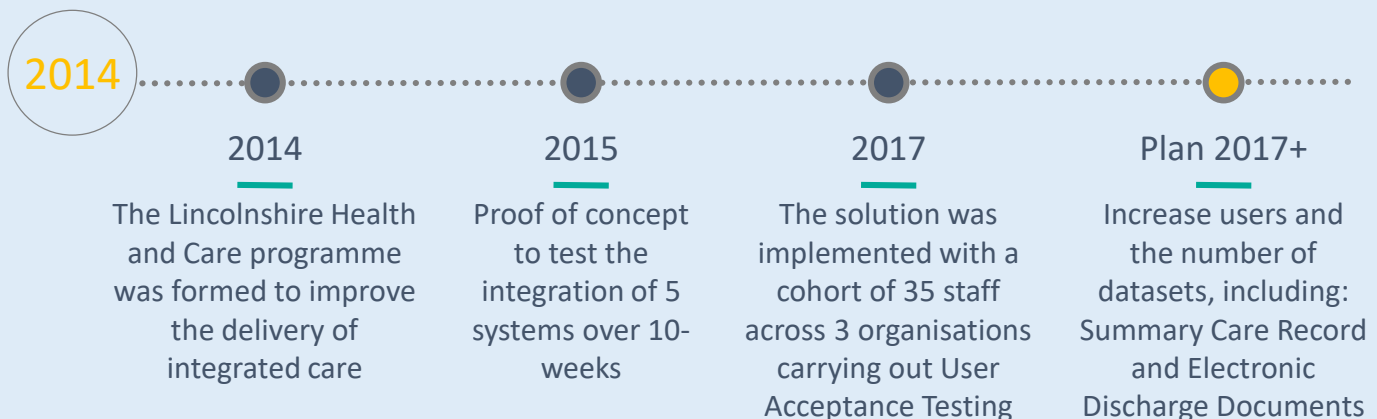
Scale:

S = < 5 organisations
M = 5-10 organisations
L = 10+ organisations

Complexity:

L = Healthcare (HC) only
M = HC + community or social care
H = HC + community + social care

TIMELINE



INVESTMENT OBJECTIVES



DELIVER PREVENTATIVE AND PRO-ACTIVE SERVICES
AIMED AT REDUCING THE DEMAND ON ACUTE CARE
AND LONG TERM CARE.



1 organisation
providing data in pilot
phase

Currently in pilot phase
with **35** users

Approx. **775,000**
population

SOLUTION

- The Lincolnshire Health and Care programme have implemented an information sharing solution using Intersystems' HealthShare product.
- Health and Care workers access patient information using a web-based portal. This access is read-only.
- The record currently contains summary information about the patient drawn from 3 systems at the acute hospital trust: the Patient Administration System, lab results system and radiography results system.
- A small cohort of staff from the mental health trust, community hospitals trust and a GP practice are using the Care Portal as part of extended user acceptance testing.
- Patients have to opt-out if they do not want their information to be shared.

BUSINESS CAPABILITIES

RECORDS ACCESS

- Provides a read-only view of the patient record within a web-based portal.
- The record includes access to:
 - Patient medications
 - Patient demographics
 - Diagnoses
 - Appointments and referrals
 - Allergies
 - Immunisations
 - Test results
 - Documents

INFORMATION SHARING RULES

- A cross organisational framework called the LHAC Care Portal Sharing Protocol is in place.
- All organisations using the portal have signed up to this protocol.
- The Care Portal is based on an opt-out consent model.
- Patients can opt out of by completing a form.
- An audit trail is kept of all accesses of a patient record.

TECHNICAL SOLUTION



PEER-TO-PEER ARCHITECTURE

SOLUTION FEATURES IN USE

FEATURE	IN USE
Coded data	✓
Free text data	⊘
Bi-directional	✓
Real time	✓
Role-based access	✓
Clinical Portal	✓
Analytics	⊘
Write access	⊘
Notifications/Alerts	✓
Patient Portal	⊘

- The LHAC project uses the Intersystems' HealthShare product set, configured over a distributed peer-to-peer architecture.
- The products are: Health Connect an enterprise service bus, Information Exchange and Patient Index.
- Individual organisations store data within their own systems, and distribute information on request.
- This is managed through the deployment of edge gateways at each organisation which act as organisational data repositories.
- The Patient Index manages a master list of patients and their demographics.
- There is a front end portal to access the composite patient record in real-time.
- LHAC will be using the NHS spine 'mini-services' add-on to support integration with the Summary Care Record and the Child Protection Information Service.

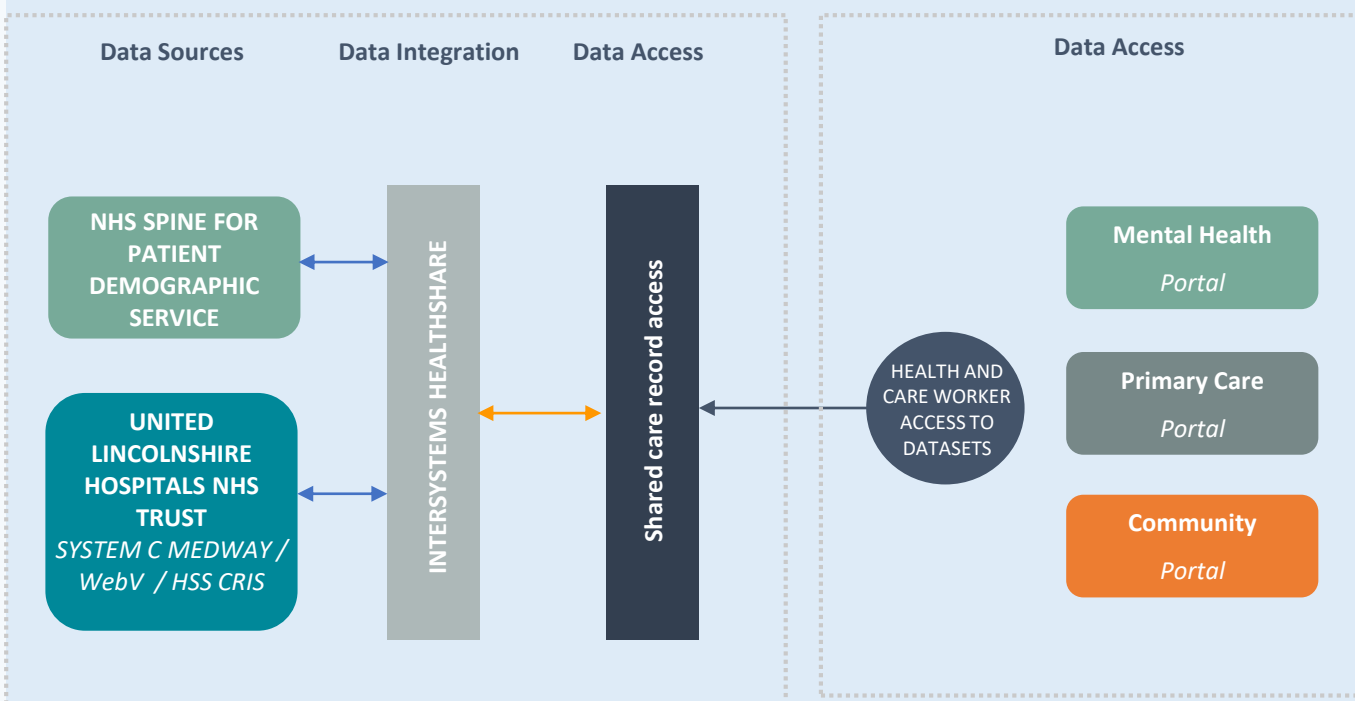
REGIONAL HEALTHCARE IT SYSTEMS

SITE	IT SYSTEM
UNITED LINCOLNSHIRE HOSPITALS NHS TRUST	SYSTEM C MEDWAY WEBV HSS CRIS

OPEN STANDARDS

STANDARD	COMPLIANT
HL7 v2, HL7 FHIR, IHE XDS, ebXML HL7 V.3, GS1	✓ ⊘

HIGH LEVEL TECHNICAL ARCHITECTURE DIAGRAM

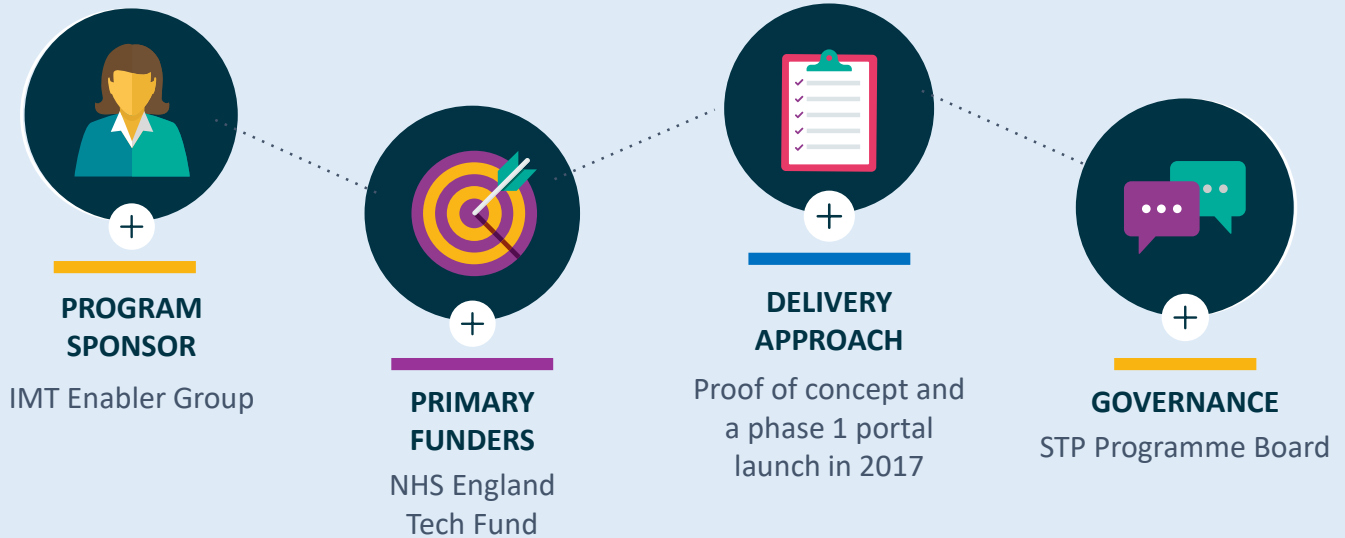


IMPLEMENTATION

Over 9 months from April to December 2016 the LHAC Care Portal Project:

- Installed all of the hardware and software to support the end-to-end implementation
- Configured User Interfaces
- Data Priming: replaying circa 13 million HL7 messages from organisational integration engines in to Edge Gateways, so that they contained a rich set of clinical information

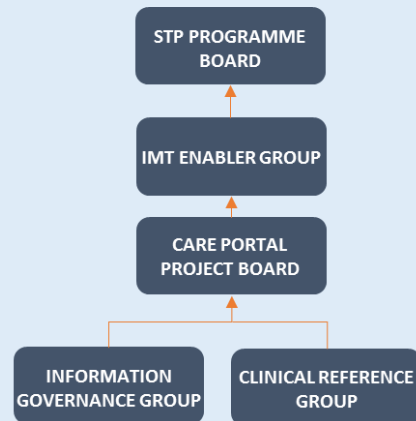
The infrastructure build took 3 months in total. The remaining 6 months was spent on configuring the system, interfacing to the organisational systems and beginning user acceptance testing.



GOVERNANCE

The Care Portal Project is run by the IMT enabler group which includes commissioners and providers from the local area. This was helpful for effective decision making, escalation and engagement.

The care portal project board has the responsibility of implementing the solution and the individual organisations have responsibility for training staff.



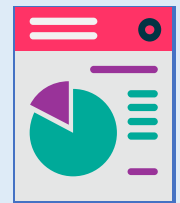
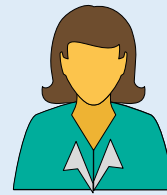
FUTURE AMBITIONS

Phase two will expand the solution to more organisations and increase the functionality. This includes:

- Linking to the Summary Care Record [May 2017].
- Linking to the national Child Protection Information Services Database [May 2017].
- Supporting transfers of care through surfacing Electronic Discharge Documents, outpatient letters [May 2017].
- Supporting End of Life Care by integrating EPaCCs [June 2017].
- Integrate Social Care and Community Care systems [Autumn 2017].
- Utilising the other HealthShare products which includes a patient portal [Spring 2018] and Health Insight [Autumn 2018].

SOLUTION BENEFITS

The Lincolnshire Care Portal will be delivered in May 2017. The intended benefits of the solution are:



	DESCRIPTION	PATIENT	CLINICAN	OPERATIONAL
ACCESS TO RESULTS	<p>Health and care workers have access to patient's previous test results.</p> <p>This reduces the number of unnecessary duplicate tests.</p>	<p>Experience improves</p> <p>Improved outcomes as action can be taken without delay</p>	<p>Saves time chasing information</p>	<p>Reduces costs from duplicate tests</p>
ACCESS IN ONE PLACE	<p>Health and care workers save time as a result of having fewer systems to access once the portal has been implemented</p>	<p>Improved outcomes as time is released for case</p>	<p>Saves time by not having to access different systems</p>	<p>Increases operational efficiency</p>
ACCESS TO INFORMATION	<p>Health and care workers have access to patient data from multiple systems including allergies and medication</p>	<p>Improves patient safety</p>	<p>Improves confidence in making decisions</p> <p>Reduces clinical risk</p>	<p>Reduces operational risks</p>

BENEFITS APPROACH

The benefits case for the LHAC project is based on evidence from projects in Northern Ireland, Bristol and Devon. These sites have similar portal technology deployed and so were seen as comparable. The United Lincolnshire Hospitals Acute Trust baselined numbers to provide the metrics for the business case.

SUCCESS FACTORS



SHARED VISION

SHARED VISION FOR INTEGRATED CARE

- In 2014 the Care Design Groups identified a care portal as the primary enabler for driving service change in the region and setting up Neighbourhood Care Teams.
- This shared vision united stakeholder groups and helped get funding approved.



RESEARCH

LEARN FROM OTHER SITES

- The project team undertook analysis and evaluation of other sites to inform technology choices and best practices, including Northern Ireland, Scotland, Leeds and Hampshire.



DESIGN

CLINICALLY LED DESIGN

- Workshops were set up with members of the Care Design Groups to gather input on the requirements and design.
- In total, 32 different stakeholders were engaged.



DELIVERY

PROOF OF CONCEPT

- A proof of concept was developed to integrate 5 existing systems.
- This was a 10-week delivery.
- At the end the project team held a series of 'Show and Tells' to demonstrate the portal functionality to stakeholders.
- The proof of concept was successful in building support.



GOVERNANCE

INFORMATION GOVERNANCE

- The information governance group already had a county-wide high-level information sharing agreement in place.
- The pre-existing arrangements were a starting point for the additional governance required for the portal.
- The group meets regularly, has a wide range of stakeholders and has existing documentation.

LESSONS LEARNED

FUNDING

Challenge: A bid for funding in 2013 was not approved because the project did not have enough clinical buy in or appropriate governance.

Approach: Engaged clinical staff in the requirements and design and set up a working group. The business case and bid for funding was approved.

DESIGN

Challenge: HL7 messaging is currently not well developed to support community type contacts, therefore additional configuration work had to be undertaken to support this.

Lessons Learned: It is important to have clear, agreed solution designs in place at an early stage for the source system data to be surfaced, so any requirements for additional configuration work are highlighted at an early stage.

RESOURCES

Challenge: There were very limited resources to deliver the change as there was a very small central team.

Approach: Utilised the knowledge and expertise of the acute trust's IMT team. As the acute trust has the largest number of complex IMT systems their team were best placed to support the project.

PROJECT PLANNING

Challenge: The proof of concept took 10 weeks to deliver and was a smooth process. This led to an underestimation of the complexity of meeting the clinical requirements for live deployment.

Lessons Learned: Ensure the clinical requirements for surfacing source data are clear before commencing implementation. This will prevent underestimating how long things take and the capacity and resources required.

PROCESSES

Challenge: The LHAC Portal is first of type for surfacing Summary Care Record (SCR) and Child Protection Information Service (CP-IS) data in this type of portal technology. LHAC was not aware of this when the project started. There was lack of clarity about what the process was to surface these.

Lessons Learned: Engage early to understand processes and the time and effort required to complete these. Identify the local resource to support and a named NHS Digital contact to ensure timely progress.

FURTHER INFORMATION

CONTACT

LIZ JONES

PROJECT MANAGER

INFORMATION CORRECT AS OF 06/04/2017

REFERENCES

Lincolnshire Local Digital Roadmap
Lincolnshire Health and Care website
LHAC Project Documentation

Produced in collaboration with NECS and Accenture