

CONNECTED NOTTINGHAMSHIRE

NOTTINGHAMSHIRE

INTRODUCTION

Connected Nottinghamshire is the interoperability programme for Health and Social Care in Nottinghamshire. The programme has implemented a Medical Interoperability Gateway (MIG) solution to share information from primary care with 9 other health and community organisations.

Connected Nottinghamshire has also implemented a solution for information sharing and risk stratification known as eHealthScope.

SCALE

M

COMPLEXITY

M

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

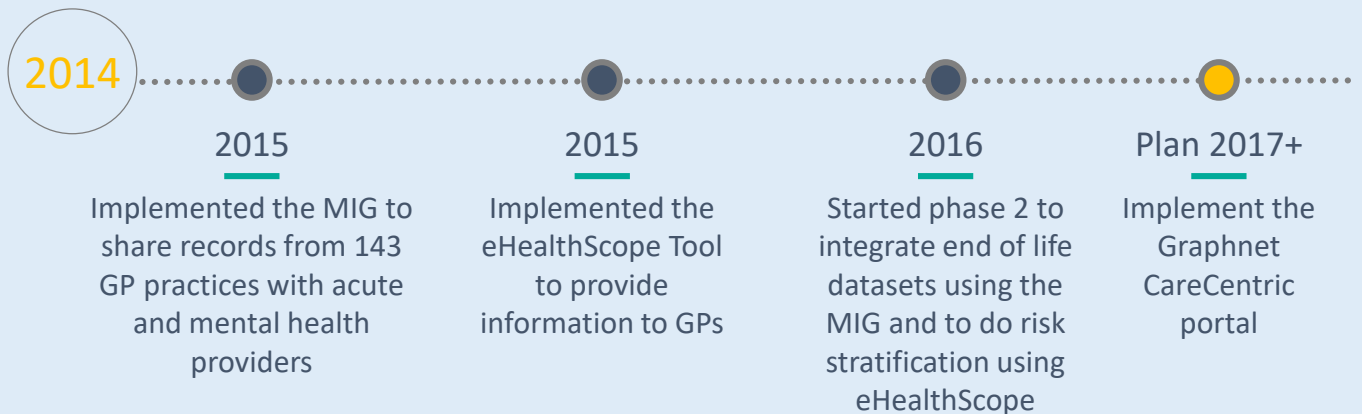
Scale:

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



IMPROVED SHARING OF HEALTH INFORMATION TO IMPROVE THE PATIENT'S EXPERIENCE OF CARE AND SUPPORT BUSINESS TRANSFORMATION.



9 healthcare organisations

Approx. **9000** records viewed each month via MIG

Approx. **1.1 million** population

SOLUTION

- The Connected Nottinghamshire programme has implemented the Medical Interoperability Gateway (MIG) platform to share primary care data with other organisations.
- In phase 1 The Detailed Care Record (DCR) and Shared Record Viewer (SRV), were implemented, and in phase 2 end of life datasets were included.
- End users either access the information through a portal viewer or embedded in their core clinical systems.
- Connected Nottingham has also implemented the eHealthScope tool for reporting and risk stratification. This tool was developed by GPs in the region.
- GPs and clinicians use this tool to identify at-risk patients and view information about them from other care settings. The eHealthScope tool uses data from primary, community and acute care providers.

BUSINESS CAPABILITIES

RECORDS ACCESS

- The Connected Nottinghamshire programme enables clinicians to access information stored across the systems of other care organisations on the programme.
- The record includes access to:
 - Hospital attendance
 - Diagnoses
 - Immunisations
 - Test results
 - Medications
 - Allergies

RISK STRATIFICATION

- Supported through the eHealthScope tool and a GP Repository for Clinical Care.
- Calculates a patient's risk score based on the Devon Algorithm and metrics that include recent admissions, OPD attendance, A&E attendance, End-of Life, Risk of Admission.

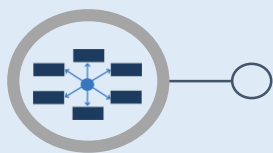
CARE PLANNING AND COORDINATION

- The eHealthScope tool supports cross organisational care working as it joins up data about at-risk patients into a single view.
- GPs can see key information that will help decide how a patient at risk needs to be managed and can identify where there is a gap in their care plan.
- The consolidated information helps manage multidisciplinary meetings.
- Reports can be shared with other staff that are delivering direct care.
- At-risk patient's who have opted out of information sharing in the past can be identified.

INFORMATION SHARING RULES

- A Nottinghamshire wide consent model agreed with 11 key principles.
- The principles guide define implicit and explicit patient consent in context.

TECHNICAL SOLUTION – Medical Interoperability Gateway



FEDERATED RECORD LOCATOR MODEL

- The MIG platform allows patient data from Primary Care to be viewed by other organisations.
- Data is stored in the systems of the individual organisations and viewed on a per-request basis at the point of need.
- Information is shared real-time and all access is audited.
- Organisations access the MIG through their own clinical system or through the MIG portal (see below)

SOLUTION FEATURES

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

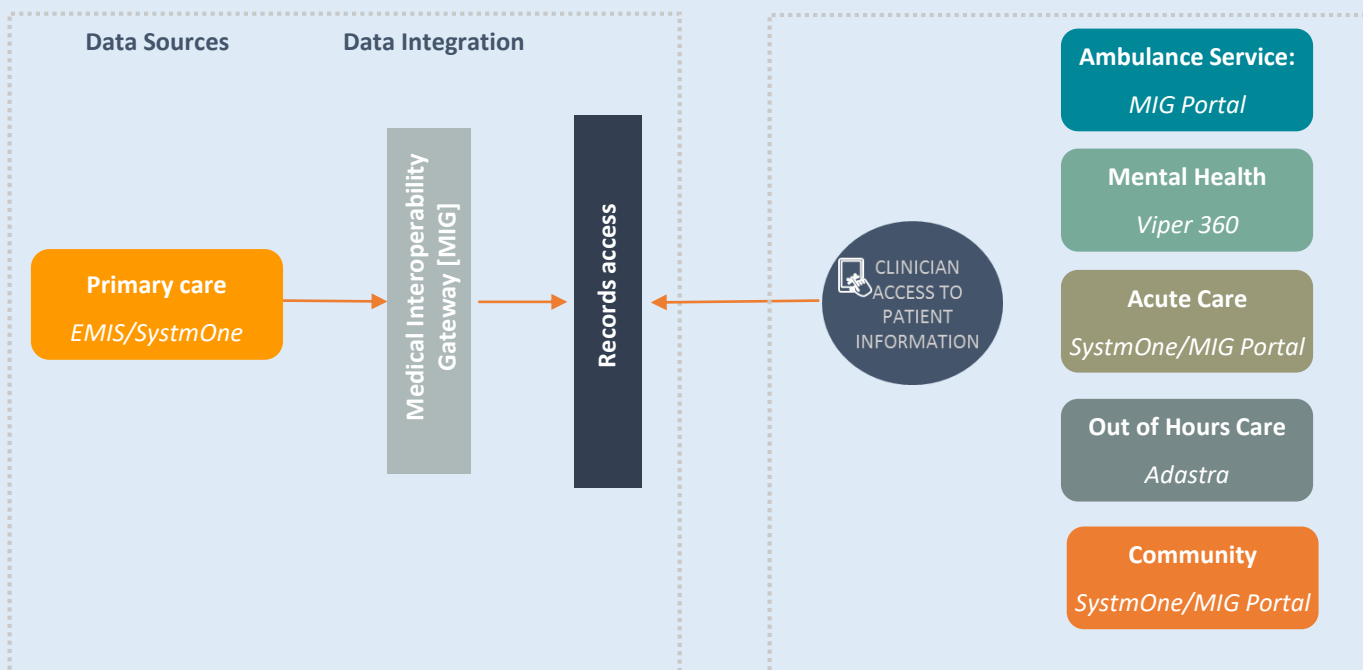
ORGANISATION ACCESS:

SITE	MIG ACCESS THROUGH:
NEMS Community Benefit Services	Adastra
Derbyshire Health United Health Care	Adastra
East Midlands Ambulance Service	MIG portal
Nottinghamshire CityCare Partnership	SystemOne
Nottinghamshire Healthcare NHS Foundation	Viper 360
Sherwood Forest Hospitals	SystemOne
Nottingham University Hospitals NHS Trust	MIG portal
Primary Integrated Community Services	SystemOne
Circle Nottinghamshire	MIG portal
143 GPs	EMIS, SystemOne

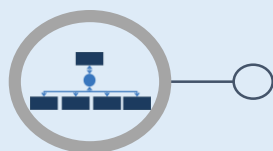
OPEN STANDARDS

STANDARD	COMPLIANT
HL7 v.2 HL7 v.3 HL7 FHIR	✓

Medical Interoperability Gateway



TECHNICAL SOLUTION – eHealthScope Tool



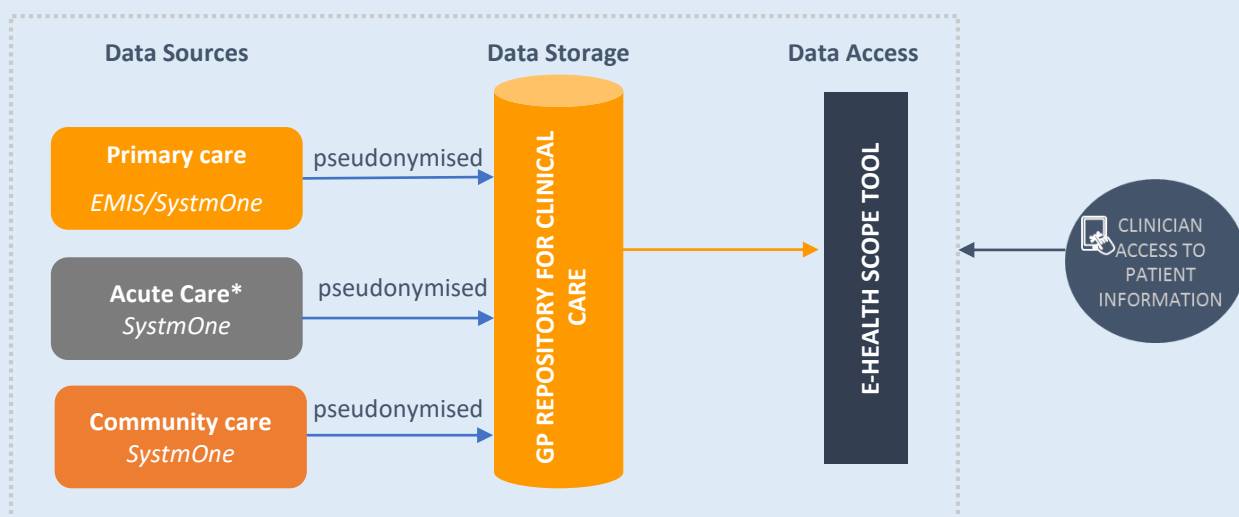
**CENTRAL
REPOSITORY**

SOLUTION FEATURES

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Patient Portal	⊘

- Data is extracted from the clinical systems every 24hours.
- Data is pseudonymised and encrypted at source prior to data transfer over a secure N3 link directly to the Data Management Team's database for processing.
- Data is stored in a central data repository: the GP Repository for Clinical Care (GPRCC).
- A web portal is used to access the data through a tool called eHealthScope.
- Each GP practice controls who can access the data within eHealthScope and all access is logged.
- Queries are run on the data to extract reports.
- GPs use the information from the report to show which patients from their practice have a risk of admission and who may need support from local care teams.

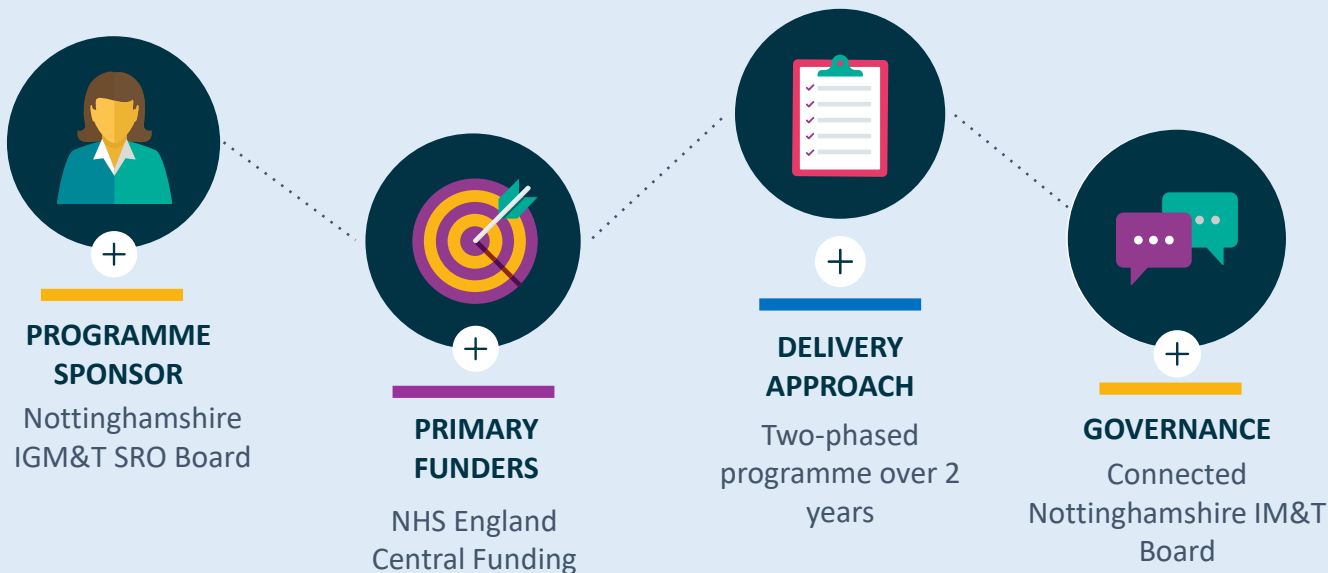
eHealthScope Tool



*Secondary Uses Services (SUS) feed which includes A&E events and admissions information.

IMPLEMENTATION

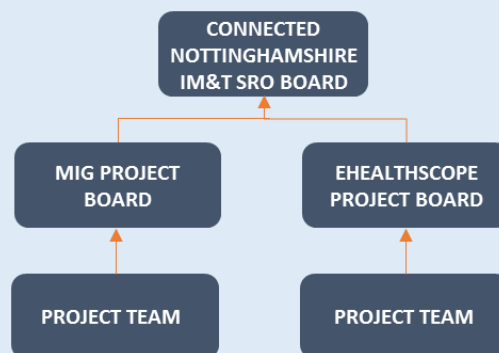
Phase 1 of MIG was implemented over 9 months between January 2015 and November 2015. The implementation required opening firewalls, configuring the gateways and setting up the information sharing agreements. This was done by the 3rd Party Supplier: HealthCare Gateway in partnership with the local IT teams. The eHealthScope Tool was implemented in parallel over the same timeframes. Phase 2 of MIG was implemented during 2016.



GOVERNANCE

The MIG and eHealthScope boards were run in parallel. The project boards met monthly at the same time and signed off the completion of every stage.

Patient and clinical representatives sat on the boards.



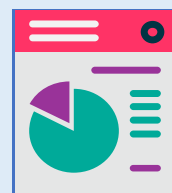
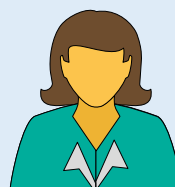
FUTURE AMBITIONS

Phase two of the programme is in progress, and there are specific milestones and plans to:

- Expand MIG access to additional organisations and integrate mental health information (Sherwood Forest and Nottinghamshire Healthcare) – May 2017.
- Integrate the Graphnet CareCentric portal with the MIG– May 2017.
- Integrate social care data with the eHealthScope tool to incorporate additional indicators relating to social care risk scores e.g. loneliness.
- Use the eHealthScope tool as an integration engine for the portal.
- Integrate the eHealthScope tool with the CareCentric portal.

SOLUTION BENEFITS

The Connected Nottinghamshire programme identified the following potential direct and indirect benefits:



	DESCRIPTION	PATIENT	CLINICIAN	OPERATIONAL
EFFICIENCY	The MIG and eHealthScope Tool present information in a single place	Experience improves as action regarding their treatment can be taken sooner	Saves time chasing information and updating documentation	Increases care organisation productivity and reduces duplicate effort
PREVENTING ADMISSION	Healthcare professionals have access to patient's information. This improves clinical confidence and has an indirect benefit of preventing admissions	Experience improves as may not need to be admitted to hospital	Improves clinical confidence in decision making	Prevents admissions and supports the avoidance of A&E attendance
CARE COORDINATION	Identification of patients at risk of admission through the eHealthScope Tool.	Health outcomes may improve due to early intervention	Helps manage multi-disciplinary team meetings	Enables effective care coordination through early intervention

BENEFITS MONITORING

A survey conducted at 12 GP surgeries over 1 weekend in Rushcliffe CCG during the initial implementation of the MIG found:

- 92 % of Clinicians thought that the MIG had enabled them to improve their overall care for patients.
- 75% believed the MIG helped them to make better informed decisions around planning patient care.
- 66.6% believed that the MIG had reduced the time taken to search for patient information.

Note: These benefits are assumption based and there are no supporting data or metrics to quantify the benefits described.

SUCCESS FACTORS



DELIVERY APPROACH

INCREMENTAL APPROACH

- Connected Nottinghamshire had a short term goal to use the Summary Care Record, a medium term goal to use the MIG, and a longer term goal to integrate the MIG with a Graphnet Portal.
- The incremental approach allowed staged funding and flexibility to tailor the later stages using lessons learned from the earlier stages.
- The incremental milestones also helped reduce the risks for delivery.



OPEN COMMUNICATION

OPEN COMMUNICATION

- The Connected Nottinghamshire team ensured that all communication was kept open and honest to build trust between organisations and partners.
- Member organisations worked together and existing silos broke down.
- Clinical representatives on the board.
- The implementation of the programme was accelerated as collaboration increased.



PATIENT ENGAGEMENT

ENCOURAGE HIGH LEVELS OF PATIENT ENGAGEMENT

- Connected Nottinghamshire formed and engaged patient empowerment groups.
- The patient engagement groups helped identify possible issues that might have arisen.
- The groups helped champion the solution to patients through patient engagement events and reviewed communications to patients.



BENEFITS

BENEFITS TOOLKIT

- Connected Nottinghamshire have developed a Change Management and Benefits Toolkit.
- The toolkit includes various benefits models and template documents that care organisations can use to baseline and then build their benefits cases.
- The Toolkit has been successfully trialled in phase 2 and will be used in phase 3 to ensure a unified approach to benefits monitoring.

LESSONS LEARNED

INFORMATION GOVERNANCE

Challenge: It took a long time to set up information governance agreements because there were no existing information frameworks and standards.

Approach: The Nottinghamshire Records and Information Group (RIG) brought together leads from all health and care providers in order to develop cross community frameworks and standards. A number of standards and guidance notes were developed by sub groups of the RIG and endorsed as a county wide approach which has now built a level of trust that enables effective collaboration.

ENGAGEMENT

Challenge: GPs were initially resistant about sharing information because of concerns around the governance and potential risks of information sharing.

Approach: The programme set up workshops and engagement events for practices to answer questions and reassure them. The programme provided assurance about the security of the data, that access was audited and privacy impact assessments were undertaken to minimise and address any identified risks. GPs were reassured that data was not being physically moved and it was just made available to be viewed.

SECONDARY DATA

Challenge: Stakeholders were concerned about the risks of using data for secondary uses, e.g. risk stratification.

Approach: The programme pseudonymises all the data shared with the eHealthScope Tool and aggregates all data to remove any concerns about this type of use. Information governance was embedded into the process and strict controls set up in line with the Records and Information Group (RIG) governance guidance. Stakeholders were engaged about the controls in place and this reassured them.

EMBEDDED PORTAL

Challenge: The programme found there was low uptake of MIG usage in the acute trusts for two key reasons. Firstly there is an existing culture of using the Summary Care Record which can already provide some of the information. Secondly because the MIG view is not embedded in the clinical systems.

Approach: Connected Nottingham are implementing a portal solution with additional functionality at Nottingham University Hospital. It is hoped that this will increase the usage of the data sharing solution.

FURTHER INFORMATION

CONTACT

ALEXIS FARROW

DIGITAL TRANSFORMATION LEAD

Produced in collaboration with NECS and Accenture

INFORMATION CORRECT AS OF 06/04/2017

REFERENCES

Connected Nottinghamshire website
Connected Nottinghamshire programme
information