YOUR CARE CONNECTED
BIRMINGHAM AND SOLIHULL CCG

INTRODUCTION

Your Care Connected (YCC) is an information sharing programme, hosted by Birmingham Cross City CCG on behalf of the other CCGs in the region. It uses the Medical Interoperability Gateway (MIG) to enable secondary care clinicians to view information recorded by the GP. In the next phase, the ambulance service and out of hours providers will gain access, and other organisations will follow.

YCC plays a role in the Birmingham Intelligent City programme, which aims to deploy a city-wide infrastructure to meet the evolving demands of its citizens and support new models of engagement.

AT A GLANCE

SCALE — L

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

MATURITY — 2

0 – No planned programme for sharing data
1 – Sharing one data type or planning data sharing
2 – Sharing two data types (inc. GP) at read only
3 – Sharing three or more data types at read only
4 – Sharing three or more data types, with write capability

*for the purpose of comparison the data types are GP, Acute, Community, Mental Health, Adult Social Care, Child Social Care
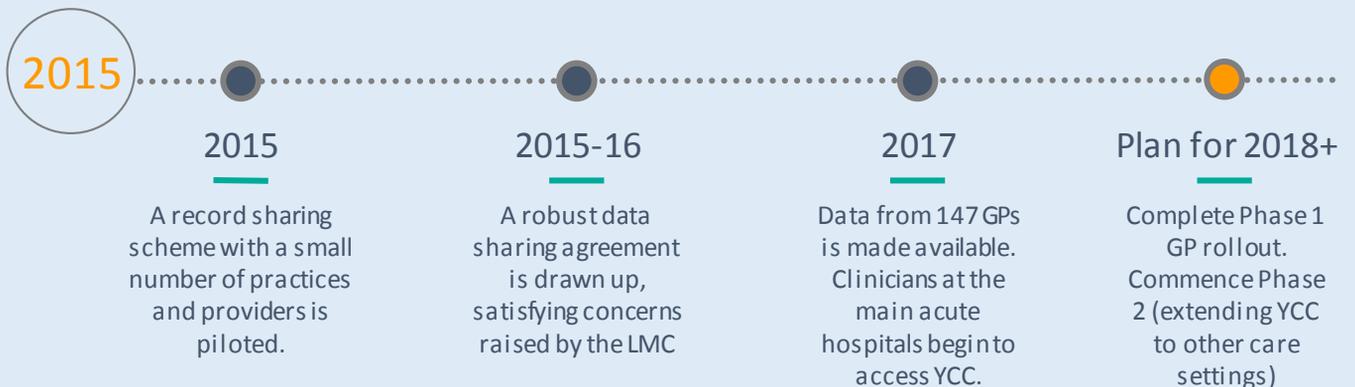
HOW YOUR CARE CONNECTED IS BEING USED

Individual Patient Care	Care Planning & Coordination	Health & Care System Management	Population Health Management	Research
LIVE	LIVE	IN FLIGHT	IN FLIGHT	IN FLIGHT

> Birmingham is a big, complex economy. It's a plural city. So we're having to think outside the box. Not just in terms of the YCC solution, but also how we get clinicians on board and engage our population.

TIMELINE

2015

2015
A record sharing scheme with a small number of practices and providers is piloted.

2015-16
A robust data sharing agreement is drawn up, satisfying concerns raised by the LMC

2017
Data from 147 GPs is made available. Clinicians at the main acute hospitals begin to access YCC.

Plan for 2018+
Complete Phase 1 GP rollout. Commence Phase 2 (extending YCC to other care settings)

One million records from **147** GPs

1.2% opt out rate

6500 record lookups in a month

LOCAL CONTEXT

- Your Care Connected is a key enabler in the Birmingham, Solihull & Sandwell Health and Social Care Local Digital Roadmap (LDR). It plays a role in each of its four programmes (Collaboration, Infrastructure, Shared Care Record, and Intelligence).

- The YCC programme is nearing the end of its first phase. Detailed planning for Phase 2 is currently underway, with some Phase 2 activities having already kicked off.

- In Phase 1, data from 147 EMIS and Vision GP practices (approx. one million patient records), spanning four CCGs (Cross City, Solihull, South Central and Sandwell) has been made available to clinicians at five hospitals across the region. The number of GPs will rise to 313 (over 1.8 million patient records) by mid-2018 as the SystmOne practices are also brought on board. Work is underway to give access to the next wave of services, focusing first on urgent & emergency care.

- YCC will ultimately encompass the individual clinical portals that have already been developed in recent years in Birmingham for mental health, acute and primary care, as well as patient-facing portals such as myHealth at Queen Elizabeth Hospital Birmingham (QEHB) and the patient portals offered by GP system suppliers. The aim is to provide a more seamless end user experience.

FOCUS ON: THE BIGGER PICTURE

" The Your Care Connected programme cannot be seen in isolation. It's part of a much bigger initiative to influence the way in which our city functions, and how its people behave and connect with each other. It is very much linked to our Intelligent City programme, which aims to address the two main challenges we face: 1) our citizens have moved to a much more consumerist position and expect their healthcare where and when they need it, and 2) our population is increasingly diverse – socially, culturally, linguistically – so we need to come up with innovative ways of reaching out. We need to make it easier for people to take ownership of their health and care.

Our infrastructure needs to support this. We are planning to deliver a city-wide wifi solution and a network of digital signs which can tailor their messaging to the onlooker (their likely needs and language), plus the current status of the local healthcare system (for example directing people to the best service based on availability). Even the weather can have an influence on messaging! For example alerts regarding the pollen count in hot weather or flu jabs in cold...

In developing YCC, we are constantly looking ahead and thinking about how it needs to work in the context of all this. Designing a future-proof governance model has been important to us. We also want to use the new infrastructure to ensure YCC becomes embedded in everyday life, for clinicians and citizens alike. "

Ciaron Hoye, Head of Digital, Birmingham Cross City CCG

YOUR CARE CONNECTED SUPPORTS...

INDIVIDUAL PATIENT CARE

- Hospital clinicians accessing YCC already view it as a real breakthrough in working cooperatively with GPs to improve patient care. Gone is the need to ring, email and fax around to obtain the most up to date information.

- The dataset currently made available from the GP record includes test results, diagnoses, treatments and medications.

- A significant piece of work has been carried out to define the data that will be made available to and from other care settings as YCC is expanded. A matrix has been drawn up, detailing the datasets for GP, hospital, mental health, social care, maternity, district nursing, and emergency care. These will be delivered in Phase 2 of the programme.

HEALTH AND CARE SYSTEM MANAGEMENT

- As well as the sharing of data to support direct patient care, the YCC team is focused on the delivery of intelligence which will help clinicians chose the best pathways of care for their patients. This will not only improve the patient experience but also allow for more targeted interventions which in turn will have a positive knock-on effect on the wider health and care system, for example in avoiding unnecessary admissions.

- Move up a level, and measures are being built into the YCC programme to support city planning, whereby health and care data will be used to identify and redress weaknesses in the system or highlight opportunities to build on good practice. The consent model has been developed with this in mind from the start.
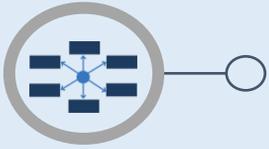
RESEARCH

- Research has consistently been an aspiration for YCC and again the consent model is intended to cater for this, with patients having the ability to opt in for this purpose.

- Longer term ambitions relating to research will be delivered in Phase 3 of the programme, for example setting up an innovation and research hub.

TECHNICAL SOLUTION

FEDERATED RECORD LOCATOR MODEL

- YCC uses the <u>Medical Interoperability Gateway</u> (MIG) to provide a view of data from GP systems.
- Information is shared in real-time and all access is audited.
- Clinicians in "viewing" organisations can click through into YCC from their own clinical system, in patient context.
- Access to the shared record is read-only.
- In Phase 2, YCC will be extended to other CCGs and care settings. Analytics and research capabilities are in Phase 3.

SOLUTION FEATURES

FEATURE	IN USE
Coded data	✔
Free text data	✔
Bi-directional	✔
Real time	✔
Role-based access	✔
Mobile	✔
Write access	⊘
Notifications	✔
Alerts	⊘
Patient Portal	✔

KEY SYSTEMS IN SCOPE

SITE	TYPE	VIEW	SHARE	IT SYSTEM
Birmingham Women's Hospital	Acute	Yes	Planned	Lorenzo> PICS
Birmingham Children's	Acute	Yes	Planned	PICS
Sandwell and West Birmingham	Acute	Yes	Planned	Cerner
Heart of England	Acute	Yes	Planned	Orion
Uni. Hosp. Birmingham	Acute	Yes	Planned	PICS
The Royal Orthopaedic Hospital	Acute	Yes	Planned	PICS
Birmingham Community Healthcare	Comm	Yes	Planned	RiO
Birmingham and Solihull MHFT	MH	Yes	Planned	RiO
147 GP Practices (313 by mid-2018)	GP	Yes	Yes	S1/ EMIS/ Vision
Birmingham City Council	LA	Planned	Planned	OLM Eclipse
Solihull Metropolitan Borough Council	LA	Planned	Planned	OLM Eclipse
West Midlands Ambulance	Urgent	Yes	Planned	Cleric
Out of Hour (Primecare / Badger)	Urgent	Yes	Planned	Adastra
111	Urgent	Planned	Planned	Adastra
Walk-in Centres	Urgent	Planned	Planned	Adastra/ Vision
Hospices	Pall	Planned	Planned	SystmOne

OPEN STANDARDS

STATUS	SNOMED	Read	dm+d	HTML	ITK	HL7	HL7 FHIR
IN USE	✔	✔	✔	✔	✔	✔	
NOT IN USE							
PLANNED							✔

HIGH LEVEL TECHNICAL ARCHITECTURE

Data Sources　　**Data Integration**　　**Data Access**

PHASE ONE

GPs (4 CCGS)
SystmOne, EMIS, Vision

MIG

PHASE TWO

GPs (further CCGs*)
SystmOne, EMIS, Vision

Acute Hospitals — Individual hospital portals

Community

Social Care — Social Care portal

Mental Health

Urgent Care Services & Ambulance — Urgent Care portals

Hospice

YOUR CARE CONNECTED PORTAL

CLINICIAN ACCESS TO PATIENT INFORMATION

Data Access:
- GP
- Acute Hospitals
- Mental Health
- Community
- Acute Hospital (Royal Orthopaedic)
- Social Care
- Urgent Care Services & Ambulance
- Hospice

*GPs from neighbouring CCGs are also in scope for Phase 2, to cover the urgent care footprint

IMPLEMENTATION

Delivery of the LDR and the STP Digital workstream have been merged to ensure a streamlined approach and reduce duplication of effort. The programme team operates out of Birmingham Cross City CCG, with close collaboration from partner organisations across the region. The recurrent annual costs associated with YCC are being met by the partner organisations, based on an equal split. There has been talk of the asset eventually being "city owned".

GOVERNANCE

The YCC programme has developed an economy-wide governance and consent model, approved by local information governance groups and the Local Medical Committee (LMC). The model is documented within a robust data sharing agreement, which provides the active legal basis for the economy care record. The agreement has so far been signed by 300 organisations across the region.

Care has been taken to ensure the governance structure is as inclusive as possible, with all interested parties, including Healthwatch, represented through a Digital Transformation Group.

Digital Transformation Group

CCGs	Provider Organisations	Primary Care Organisations	Ambulance	Patient Groups (Healthwatch)
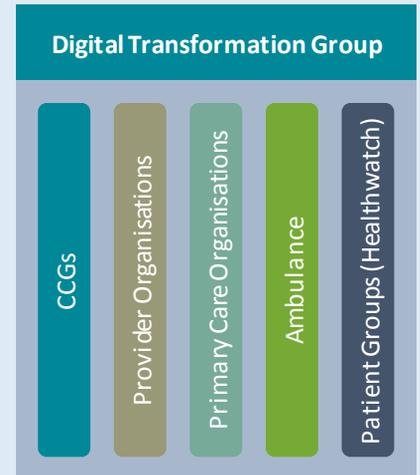
CONSENT

Considerable time and resource has been allocated within the YCC programme to the design of the consent model. The aim from the outset has been to get a solid foundation in place in order to support future innovation. From a direct patient care perspective, the model is simple: consent for data to be made available in YCC is implied for all patients, with explicit consent required at the point of treatment in order to then view the record. Patients are free to opt out.

The principle behind the economy-wide model is to work towards a scenario in which this consent to view does not need to be requested multiple times. Instead, it can be captured once and reused. The consent options also cover the use of data for purposes other than direct care.

Proposed economy-wide consent model	
Consent to view the shared record, obtained at the point of referral or discharge	I.e. consent is given by the patient for their information to be viewed at all points along their referral pathway, or consent is given by the patient when they are discharged for their information to be viewed to support their subsequent care.
Consent to view the shared record for non-NHS direct care	Recognising that non-NHS organisations increasingly may form part of a patient's care journey and have a need to access information in order to provide quality patient care.
Consent for data to be used for city planning	To enable pseudonymised data to be used in support of population health management, risk stratification, service redesign, commissioning etc.
Consent for data to be used in research	To enable pseudonymised data to be used in support of research projects, potentially where the patient is targeted directly because they fulfil certain criteria

Patient portal

The YCC programme hopes ultimately that patients will record and manage their own consent preferences within a patient portal. This solution would also support the requirement for transparency, since it would provide the ability for patients to see an audit trail of when and how their data had been used.

COMMUNICATION

Birmingham's Intelligent City programme identifies that it is not possible to rely on the existing dated methods of engaging and communicating with residents. This is particularly true given the diverse nature of the city's population. Therefore, in addition to raising awareness about YCC through more traditional channels (such as mail-outs, leaflets, posters, radio, and the website, which have all been employed), they are also pioneering the use of new technology such as digital signs, with tailored messages and changeable content. The signs will be positioned to capture a broad audience, for example in a mosque car park, schools, and shopping centres.

Measuring success

The region is not adopting new engagement tools lightly, however, and they want to have confidence that their ideas are justified. They will be analysing the efficacy of the new modes of communication compared to more traditional options. They already know, for example, that sending SMS messages to patients works well for their population. But how does it compare with other methods that could have been used? The YCC team is keen to understand this area better in order to make more informed choices about which approaches they adopt.

Clinical leadership and buy-in

Clinicians are the voice of the YCC programme. There are five clinicians embedded into the Digital function at Crosscity CCG who provide clinical leadership. They act as ambassadors and work directly with their peers, for example they have run all the kick off meetings with GPs. As well as ongoing clinical engagement activities, the CCG invites all GPs to an annual event at the local football stadium. A key agenda item is digital. There is also an annual digital-facilitated event which brings together clinicians from the acute trusts and primary care with the universities and suppliers.

Low opt out rates

Over one million patients have been contacted regarding YCC so far, and a lower than expected number of patients are choosing to opt out of the service: just 1.2%, which is less than the national average for the Summary Care Record. Information regarding individual patient concerns is being collated for use within future information sharing initiatives. As part of the implementation process, support has been provided to individual GP practices regarding the opt out process and the required activities for recording patient privacy requests. The YCC website provides detailed information about the direct care consent model to help patients understand how it works and why it has been developed.
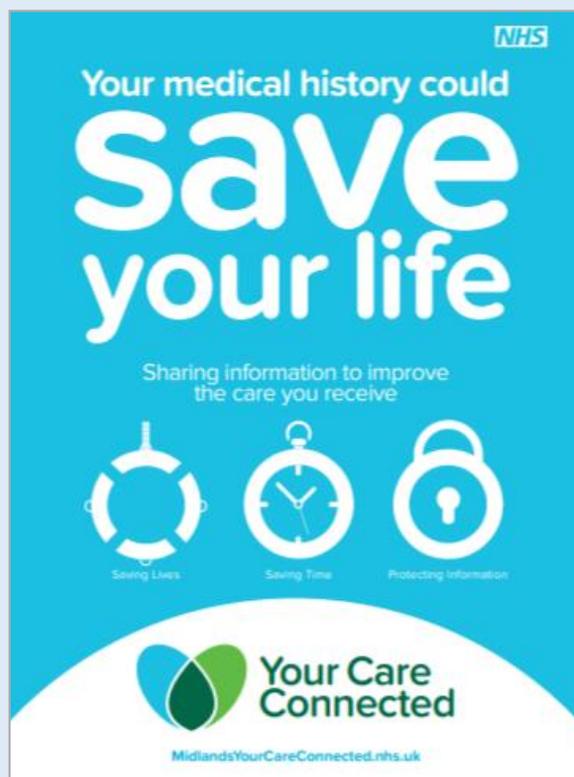
SUCCESS FACTORS

CLINICAL ENGAGEMENT

Digital Transformation not IT

- Having clinicians embedded within the digital function has changed the proposition entirely. Instead of conversations about "IT", the focus is now on digital transformation. This not only helps us deliver better solutions but it is a much more motivating environment for people to work in.
- We have followed a clinician-led design approach. We asked clinicians to articulate their 'problems' or to tell us where they sensed an opportunity. Digital colleagues then looked for solutions, and IG and legal worked with us to understand and mitigate any governance issues. Following this methodology means we're not asking clinicians to buy into our big vision; it's their vision too.

STANDARDS

Data Quality

- The ambitious nature of YCC – comprising 313 GPs alone – has required a minimum level of data quality to be achieved throughout all organisations.
- All GPs have been required to meet a certain level in respect to their clinical coding to be able to take part in the shared record. Practices struggling to achieve an appropriate level have been provided with bespoke training.
- The data quality assessment framework looks at seven key areas including diagnoses not set as problems, palliative care reports and safeguarding reports.
- Without good data quality it is difficult to present "one version of the truth" or to use data meaningfully for planning or research. Again, it's about getting the foundations right so you can build on them.

FUTURE AMBITIONS

The future development of YCC includes plans to:

- Deliver in 2018/19:
    - Refresh communication and engagement workstream
    - Enable urgent care access (Ambulance, OOH, 111)
    - On-board hospices and walk in centres
    - Increase provider utilisation

- Deliver in 2019/20:
    - Enable hospitals to view information held in other hospitals
    - On-board social care
    - Develop patient facing digital proposition for all health and care settings

Plans currently in discussion:
- Linking the care record with areas adjacent to YCC
- Greater and more timely access for GPs to extended hours data
- Potential uses of Artificial Intelligence (AI) within the shared record

LESSONS LEARNED

EARLY STAKEHOLDER INVOLVEMENT

Challenge: When the CCG first embarked on the shared record journey, they encountered significant IG and legal concerns raised by the LMC. The team realised it needed to do a lot more work in order to be in a position to address these concerns, and the implementation could not proceed until this was the case.

Lessons Learned: Putting more resources into the legal, information governance and engagement work streams in the early days of the programme would have helped mitigate many of the concerns raised. Once a robust data sharing agreement was in place, and the LMC felt it was being fully consulted, YCC was able to move forward. The process of getting to that point has in fact resulted in a more positive and collaborative relationship overall.

> **Birmingham LMC has been fully consulted on the YCC project and I have been attending project board meetings in an advisory capacity in order to ensure that the perspective of Birmingham GP practices have been fully considered and their interest safeguarded as far as is possible. The degree to which the board has engaged with Birmingham LMC and been prepared to take on board and act upon our advice has been both welcome and appreciated."**
>
> Dr Robert Morley Executive Secretary, Birmingham Local Medical Committee

CRITICAL MASS

Challenge: Clinicians won't really use a shared record solution in earnest until a critical mass of patient records has been reached.

Lessons Learned: The YCC team believe hitting the 60% mark (in terms of the number of records made available through the shared solution) is a big milestone. Once a clinician feels there is a good probability of shared information being available about their patients, they suddenly start to access it more and more. The YCC usage stats bear this out. The team has started an audit to understand who is using the shared record in which departments, and why is this so, and will use their findings to drive further clinical uptake.

FURTHER INFORMATION   INFORMATION CORRECT AS OF 27/04/2018

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