



Summer Schools 2023

a digitalhealth event 

27-28 July

#DHSS23

Building Integrated Care Systems supported through digital in Birmingham

Chair: Eddie Olla

Chief Digital Officer
Coventry and
Warwickshire ICB

Nick O'Reilly

Director of Digital
NHS Birmingham and
Solihull ICB

Dr Masood Nazir

Medical Director
Integrated Care and
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Dr James Reed

CCIO
Birmingham and Solihull
Mental Health NHS FT

Daniel Ray

Chief Technology
Officer
Birmingham
Women's and
Children's Hospital



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Birmingham and Solihull
Integrated Care System
Caring about healthier lives

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Birmingham and Solihull Digital Leadership

Nick O'Reilly – Director of Digital, ICS

First Digital Strategy – Our Vision

Strategic Objectives:

- 1. Levelling Up** – Eliminating The disparities of health and care provision.
- 2. A harmonised system-first approach** - A system-first approach built on seamless collaboration across organisations.
- 3. Shared Care Record** - A Shared Care Record fundamental to cohesive system wide care.
- 4. Digital First for Better Care** - Digital solutions improving health outcomes and care quality.
- 5. Safe** – Clinical and Cyber safety is culturally embedded in the ICS.

A year on – What we have learned

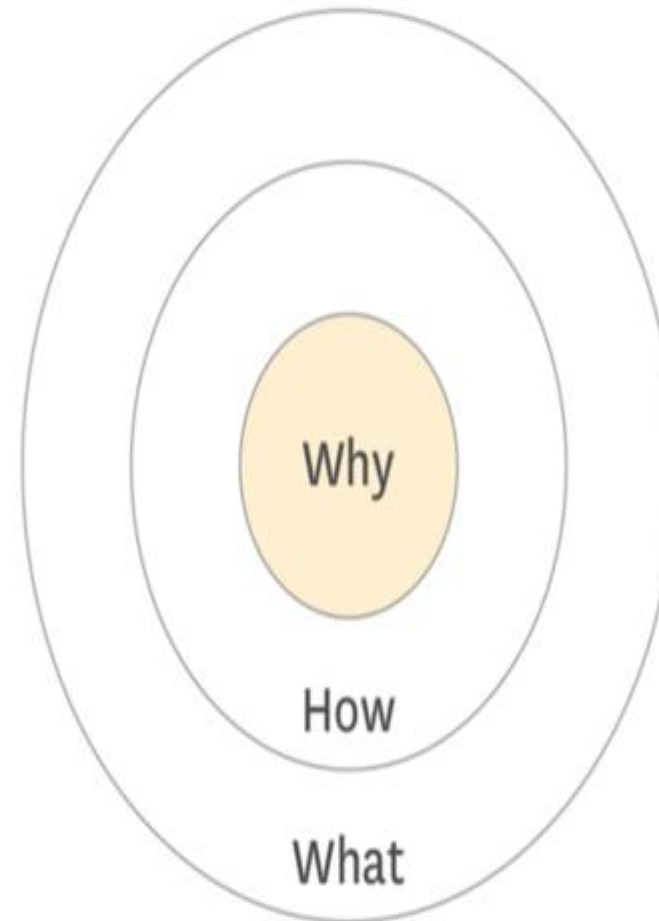
- Common Systems Purpose – Still not fully Achieved
- Need Better Rules of Engagement – Collective Objectives and Shared Accountability
- Invest more in the Chief Clinical Officer Role and the CCIO System Team
- Like all teams a system digital team needs time and effort to storm, form and norm
- The Business need to bring us their problems, not some products or suppliers
- Sharing Knowledge and Skills by design not by demand
- The strategy we agreed last November is not the one we need now



What will make most difference #1

Vision and Strategy

- Clearer vision of Placed based care and integrated care avoid too many blank looks.
- Be curious rather than judgemental – don't rush to decisions.
- An agreed set of principles that we
- adhere to and abide by.



Why - Your Purpose

What is your cause? What do you believe?

How - Your Process

Specific actions taken to realise your Why.

What - Your Process

What do you do? The result of Why. Proof.

What will make most difference #2

System Convergence

- Build on what already exists avoiding not invented in my back yard approach.
- System wide approach with fewer disparate systems.
- Avoid changing things that work with things that do not, has to be better than what went before.
- Projects that bring organisations together to drive system wide impactful change.



What will make most difference #3

Capacity and Resources

- Prioritise time for digital leadership to come together.
- Clinical Insight and Clinical engagement.
- Needs investment of people, time and money.
- Collaboration across the ecosystem.



Cut to the Chase (*and Victor likes a good chase*)

Key Challenges

- Establishing the ICS and System wide working
- No control of the purse strings or of the digital workforce
- It takes time and effort to form a system wide team
- Provider led system wide principle often compete with local priorities
- NHS Matters often dominate - Councils disengage

With time and effort Cats can be Corralled





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Shared Care Record

Dr James Reed

CCIO, Birmingham & Solihull Mental Health FT

The Road to the Shared Care Record



CDAY

**23RD MARCH
2020**

The Road to the Shared Care Record



Under Construction.... But Fully Operational



Acute Hospitals – UHB, UHCW, SWFT, GEH, WVNT

MH / Community – BSMHFT, BCHC, FTB, HACW, CWPT

Maternity / Neonatal

Primary care – all via GP Connect

Hospices - Birmingham, H&W, C&W

Prison – HMP Birmingham

Social care – All areas covered

Third Sector – CGL

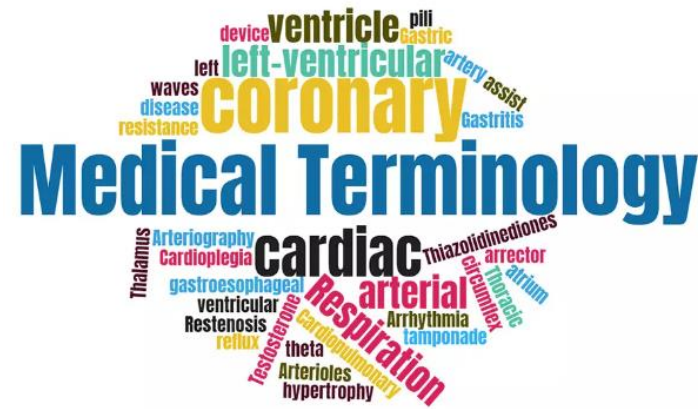
Reaching Across Boundaries



The Road to the Shared Care Record



Challenges





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Elective Care, Diagnostics and Digital

Dr Masood Nazir

Medical Director Integrated Care and Chief Clinical Information Officer

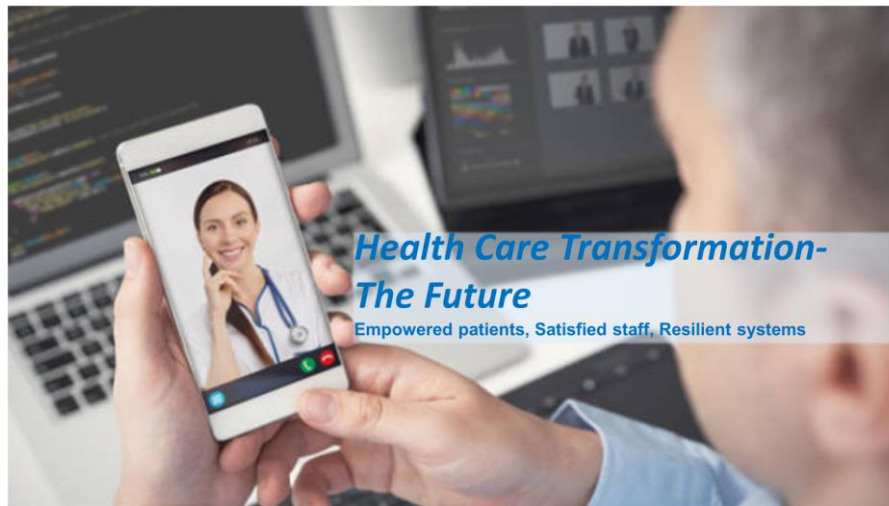
The NHS is under pressure more than it has ever been before, a big part of which is navigating what our patients want against what they need.

A shortage of clinical staff is leading to 'burn-out', as we try to deliver the requirements of our various contracts and other national priorities.

To prosper, in these challenging times we will need to evolve our delivery model and not keep doing what we have always done.

Our transformation to respond to a new era for healthcare will be based on:

- advanced team-based care with clinical roles beyond the physician
- smart technology to empower and engage patients
- a culture of continuous improvement, supported by data-driven analytics
- a sharp focus on improving the patient experience of care.



What are we doing:

- 1. Patient engagement and involvement:** Ensure that patients are informed about where they are in the referral process, including estimated wait times and any necessary steps they need to take to progress their referral. Involve patients and their families in the development and delivery of outpatient elective care services. This should involve providing clear and accessible information to patients, gathering patient feedback, and involving patients in decision-making processes.
- 2. Pathways and protocols:** Develop clear and standardised pathways and protocols for elective care that are clinically effective, efficient and patient-centred. This involves reviewing existing pathways, identifying best practices and working with clinicians to develop new pathways where necessary. **Includes the ICS Clinical Charter**
- 3. Prioritisation and triage:** Developing robust and clinically sound prioritisation and triage processes that ensures timely access to care for those who need it most. This involves clear clinical guidelines, referral criteria and pathways, and ensuring that resources are used efficiently and equitably
- 4. Choice of mode of consultation:** Ensure that patients are offered an appropriate mode of consultation once their referral has been clinically assessed. This includes the use of telemedicine and other digital technologies to improve access to care and reduce waiting times, while ensuring that patients receive high-quality care that meets their individual needs and preferences
- 5. Commissioning the best services for patients using Population Health Management:** Digital tools are being used to collect and analyse data on patient populations, identifying patterns, patient experience and trends that can inform the development of preventative care strategies.

An integrated coordinated care across the system will dramatically improve outcomes for patients in the coming years

- More **timely access** to more services **close to where they live**
- Have access to more **widely skilled teams** so that they can more easily connect with the **right person for their needs**
- Management of **chronic conditions** will be better **controlled**
- **Outpatient** visits will be **reduced** through better management in primary care
- **Hospital** stays will be more **infrequent** and **shorter**
- Pro-active, preventive care / Earlier diagnosis
- Better patient outcomes through improved treatment pathways

How patients will access primary care	How this enables an increase in patient access	What will a patient be able to do?	Patients will have increased access	What are the benefits?
<p>Via the internet</p> 	<p>Standardised Web Portal</p> 	<p>Prevention and self care</p> 	<p>Local pharmacist</p> 	<p>Better patient experience and outcomes</p> 
<p>Or via mobile phone app</p> 	<p>Better integration of healthcare services</p> 	<p>Visibility of their own records</p> 	<p>Web chat, call back or video consulting</p> 	<p>Reduced demand on emergency services, A&E and primary care</p> 
<p>Or via the telephone</p> 	<p>Practice receptionist</p>  <p>Single Point of Access</p>  <p>NHS 111</p>	<p>Request medication</p> 	<p>Partners</p> 	<p>A clinician in one of the cluster practices</p> 
<p>Or via visit to practice</p> 	<p>In practice training in use of the portal</p> 	<p>Book an appointment</p> 	<p>In practice appointment</p> 	<p>Sustainable primary care service</p> 
<p>Multiple options for access 24 hours a day, 7 days a week, 365 days a year Reliable self-care information Web usage will reduce call demand Helps patient signposting Training in use of the system</p>		<p>Visibility for patients Visibility for clinicians Increasing use of self triage Consistent reliable advice Signposting to the most appropriate person Funding in GP</p>	<p>On line 24/7/365 Telephone access 24/7/365 12 hours Mon-Fri Weekends Integrated partnership working Rapid response to e-messages Better use of funding</p>	<p>Easier and more convenient for patients More choice for patients Fewer delays for patients Less demand on emergency services Smarter working in primary care</p>

What we are aiming for and can achieve



Right Person



Right Place



Right Care

For patients, the future is predictive, preventative, and personalised



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Daniel Ray – CIO, Birmingham Women and Childrens Hospital

EPR Levelling Up & Data -

EPR -

- Being clear on governance and configuration
- Ensuring close engagement and buy – in at each stage
- Ensuring consistency with ICB strategy not Trust strategies
- Understand system functionality for services by EPRs vs integration that is needed.

Data

- Fundamental to understand full patient pathways
- No longer clinical services reviewed within a single provider
- Data linkage strategies fundamental
- True long term outcomes for patients across ICB systems – paramount.





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Some of the Small Print or the Directors Cut

(Can be shared, will not be Presented)

Nick O'Reilly – Director of Digital, ICS

About Birmingham and Solihull ICS

Our ICS supports 1.36 million people living in Birmingham and Solihull.

Our priorities are to:

- Reduce inequalities - improving quality of care by tackling differences in experiences and outcomes for patients
- Integration - work together to join up services and help them work better together
- Protect people from harm – prepare for emergencies and work together on approaches to infection control, immunisation and screening
- Be there for people throughout their life, from birth to end of life care
- Build, develop and retain a great, inclusive workforce
- Contribute to the wider factors of health - such as employment, education and environmental sustainability and recognise our role in growing the local economy



Our Places and our Partnership



The map shows the location of our major secondary care providers across our local health and care system



List of partners

- Birmingham City Council
- Solihull Metropolitan Borough Council
- 158 general practices
- Birmingham and Solihull Clinical Commissioning Group
- Birmingham and Solihull Mental Health NHS Foundation Trust
- Birmingham Children's Trust
- Birmingham Community Healthcare NHS Foundation Trust
- Birmingham Women's and Children's NHS Foundation Trust
- The Royal Orthopaedic Hospital NHS Foundation Trust
- University Hospitals Birmingham NHS Foundation Trust
- West Midlands Ambulance Service University NHS Foundation Trust

Digital Strategy Guiding Principles

Committed: Structured and Committed

- Culture, Vision, Values, Transparency and Governance that enable a unified digital strategy.

Integrated: Breaks Down Barriers with System Wide Initiatives

- Exploiting Digital and Data in collaborative partnerships to transform care pathways improving health and wellbeing.

Collaborative: Leadership to Transform and Innovate

- Leaders across the ICS with system wide culture of user need driven innovation and transformation.

Appropriate: Purpose Led and Place Based

- Bringing stakeholders together to address key health and care challenges so that no-one is left behind.

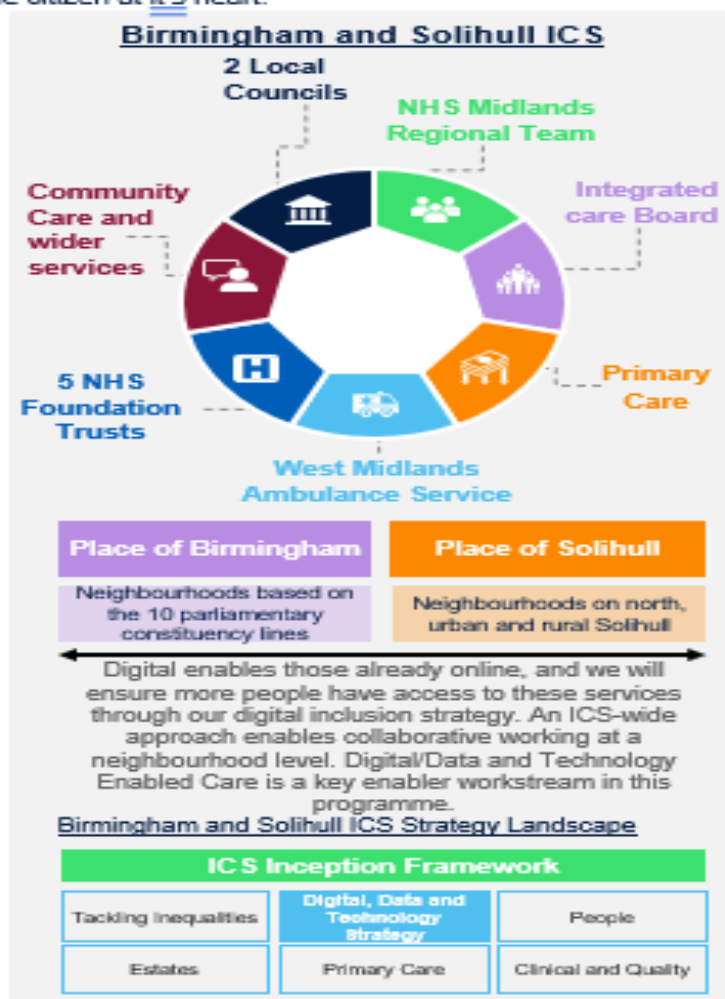
Levelled Up: Consistent Digital First Maturity

- A target for all ICS partners to achieve an enhanced level-playing field providing better joined up care for citizens.

Governed: Value for Money and a Systematic Approach

Investment enabling better value applying design standards to achieve better care outcomes for all.

First Digital Strategy - Vision



What is success for clinicians and staff?

"Wherever I am in our system, I can deliver for my patients as all our information is in one place. I trust our infrastructure and so it's easier for me to focus on doing my job. Our single ICS-wide EPR system supports my decision making when working with citizens, and when I need support, I can get help regardless of where the patient or citizen is located."

What is success for our Citizens?

"I'm able to access health and care services in a way that suits me best, and when I engage with a service they seem to know me, even if I've not used it before. I feel more in control of my own healthcare journey and I trust the services I use to support me in a timely, efficient and safe way. Regardless of my digital aptitude, digital technology is supporting my health and wellbeing."

First Digital Strategy - Vision

We will make the lives of people within Birmingham and Solihull better by using digital technology to transform the way we deliver health, social care and wellbeing services throughout the region.

What does our future vision look like, and what's important to BSoI?

Organisational Vision

Digital Infrastructure

A Single Anchor Electronic Patient Record will be a valuable step towards a cohesive ICS digital environment. Staff can work anywhere in the ICS and have access to technology that enables their job.

Data Driven Care

Staff can access data on demand, with information in the same places for all clinicians to support evidence based decision making.

Digital First

Online access and mobile working driven by processes and operations that are digitally enabled. The workforce can go anywhere across the system and have confidence in their digital tools.

Responsive

Agile and innovative teams that are able to respond to the citizen need, regardless of location.

Citizen Vision

Digitised Care

Citizens are able to live more independently as they're supported by digital solutions and technology that keeps them connected to us.

Personalised Treatment

Our health and social care offering is personal to the citizen, via improved digital care pathways.

Streamlined Care Journeys

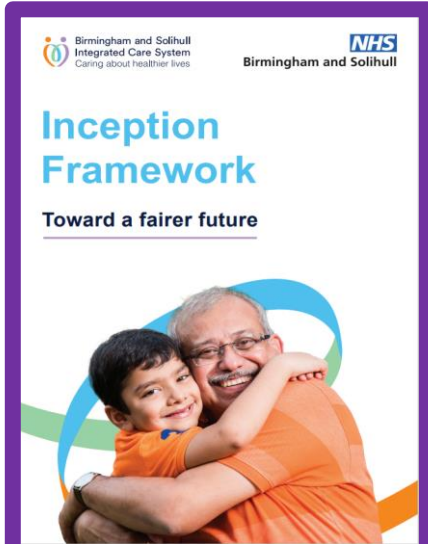
Processes are joined up and integrated across the ICS, so the citizen's journey is more efficient, reducing delays and waiting times.

Leading Diagnostics and Treatments

The innovation and research completed by the ICS has improved diagnostics for people, opening up new treatments to the population.

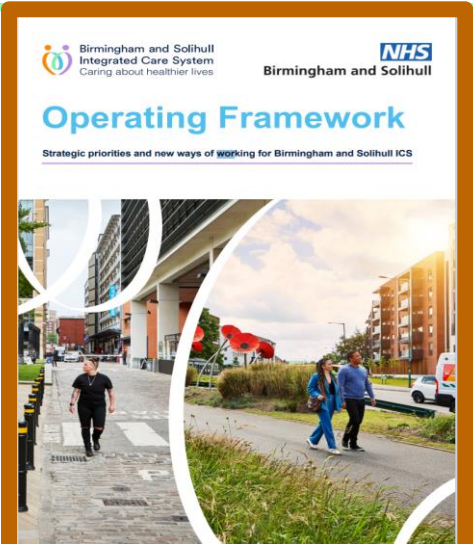
A harmonised health and care system

The ICS Business Journey from Inception to Operating



Enabler Four
Investing in innovation and technology

Where technology can support better outcomes we will ensure the investment and education are available to deliver this at pace, ensuring rapid adoption leaves nobody behind



Use of technology to support and drive integrated working

There is collective ambition to use technology and digital to turbo-charge and systematise the transformation of services both at Integrated Neighbourhood Teams level and the wider health and care system

Feb 2022: Priorities

- A. Invest in our workforce.
- B. Respond to COVID-19 ever more effectively.
- C. Deliver significantly more elective care to tackle the elective backlog.
- D. Improve the responsiveness of urgent and emergency care (UEC) and build community care capacity.
- E. Improve timely access to primary care.
- F. Improve mental health services and services for people with a learning disability and/or autism.

Oct 2022 Challenges

- 1 Ensuring our citizens have a real voice in helping to shape the way we plan and deliver services for them.
- 2 Creating a single oversight approach: ensuring accountability for delivery is clear.
- 3 Ensuring decision making is driven as locally as possible.
- 4 Enabling cross-organisational planning and delivery of care.
- 5 Making our major collective investments support the ambitions of the many and not the few and focusing them where the impact will be greatest.
- 6 Supporting innovation to accelerate change.

And finally – the very smallprint

MAKING CHANGE POSSIBLE – UNLEASING THE POTENTIAL OF OUR DIGITAL AGENDA

How we invest, deploy and use digital technology over the next five years provides the single biggest opportunity to accelerate the transformation of care we are looking to achieve. The digital agenda has dramatically changed how people live their lives over the last few years – booking everything from a train to a holiday is often just a couple of convenient clicks away. Companies use the data they receive about their customers to constantly improve the products they provide and to make sure they are providing what their customers want when they want it.

We are adopting this same approach to the way we will invest in digital over the next five years: prioritising smart technology that supports people to better manage their conditions in their own home; using online and smart platforms to make it easier for our citizens to book appointments and get test results, and digitally connecting health and care providers so that different parts of the system can share information that supports providing better care.

Legacy technology – often designed to support single organisations to help their patients and citizens – can create a real barrier to clinicians and professionals delivering the best care because those older systems do not talk to each other. This often creates additional unnecessary bureaucracy, complicates decision-making and can slow down the process of providing the right care at the right time.

That's why our first priority has been to move quickly to create a single electronic patient record for all NHS organisations providing adult care in Birmingham and Solihull. This will extend to include digital systems in local authorities and in care homes.

By having a unified health and care record, seamlessly accessible by all provider organisations, we won't just be able to improve access to care: over time we will be able to increasingly support our clinicians and professionals to make much more informed decisions about how they proactively support people to stay well for longer. They will be able to use the data we collect to better predict which cohorts of patients are more likely to need care in the future and which cohorts of patients might be prevented from getting sick in the first place if we put the right health and care measures in place.

To support this, the ICB is investing in Population Health Management tools and resources and we're committed, over the course of the next five years, to ensuring all staff who need it have the training, development and ability to take full advantage of this new approach to using data, digital and technology to improve care and support the broader prevention agenda.

Investing in technology, using digital platforms to completely transform how we deliver care and using data to continuously improve how we design and deliver care will make a real difference to how people experience health and care in Birmingham and Solihull in the future.

Whether that is being supported to stay at home using digital solutions and technology that is connected to health and care support, receiving more personalised care as we use data to constantly improve the offer we make to patients and citizens, experiencing faster and more streamlined access to care as we progress to a single care record: almost all of our patients and citizens should notice a difference to how they experience health and care in five years' time.

And we're already starting to see a difference in some of our services thanks to the approach we're taking on digital transformation. The work we've already done on a single maternity system is enabling teams to provide much more personalised care to expectant mums, the roll out of Wi-Fi across our estate is supporting staff to stay connected wherever they work and whoever they work for – something that is particularly beneficial to social care and ambulance staff who work across multiple sites. We've also launched our first Video referral service between West Midlands Ambulance Service and our Older Person's Assessment and Liaison Service at the Queen Elizabeth Hospital.



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Masterclass: orchestrating a converged EPR deployment across three NHS trusts

Dr Alec Price-Forbes

CCIO
University Hospitals
Coventry and Warwickshire
NHS Trust

Dan Milman

CEO
Innovate Healthcare Services

Manoj Srivastava

CIO
George Eliot Hospital NHS
Trust

Chair: Ronke Adejolu

National Associate CNIO
NHS England



Our challenge

Cost	Demographics	Access	Variation in Clinical Practice
			
			
Inefficient Use of Information	Fragmented Care Versus Integrated Care	Duplication, Defensive Medicine & Waste	Protracted Adoption of Innovation

HOSPITAL PRESCRIPTION FORM

*** IMPORTANT - IMMEDIATE ACTION ***

This form can only be dispensed at the Pharmacies of University Hospital (Coventry) or Hospital of St Cross (Rugby).

** Please notify pharmacy staff of any allergies when handing in prescription **

CONSULTANT PRICE-FORGES		SURNAME: POTTER		FORENAME(S): HARRY	
CLINIC/DEPARTMENT RHEUMATOLOGY		ADDRESS: CUPBOARD UNDER THE STAIRS 4 PRIVET DRIVE LITTLE WIMMING SURREY			
PHARMACY USE ONLY					
Time in:					
Pager No: _____ or _____					
Calling Back on:					
EXEMPT / PAID / TO PAY PAY AT G.O. CHECK RECEIPT <input type="checkbox"/>		HOSPITAL NO. H12345	DATE OF BIRTH 31/7/1980	ALLERGIES (if none state NKDA) NO IDEA	
TIME OUT:		WEIGHT IN Kg. DON'T KNOW			
PHARMACY ENDORSEMENTS					
METHOTREXATE (NORDIMET) S/C INJECTIONS 15mg ONCE A WEEK ON A MONDAY FOLIC ACID 10 5mg ONCE A WEEK ON A TUESDAY HYDROXYCHLOROQUININE PO 200mg BD PREDNISOLONE PO 15mg 20mg daily reducing by 5mg each week to 5mg/d 3/12					
GP RETURNAL					
CLIN CHK	DISP	FINAL CHK	DATE: 1/4/2021	GMC/IP No: 4314303	
			PRESCRIBER'S SIGNATURE: A	PRINT NAME: PRICE-FORGES BLEEP/EXT No: 24210	
UNIVERSITY HOSPITALS COVENTRY & WARWICKSHIRE NHS TRUST					
Rugby St Cross Hospital CV22 5PX			University Hospital CV2 2DX		
** PLEASE COMPLETE REVERSE OF FORM ** H/ 79290					

- 60 year old; increasingly unwell and breathless
- Echo showed severe heart failure
- During hospital stay has an allergic reaction – rash and hypotension to **Teicoplanin**

- Re-presents to second hospital with acutely ischaemic leg
- Transferred to a third hospital where the Vascular team investigate and decide on surgical treatment; a complex bypass procedure

Separate EPRs across Trusts



Anaesthetic review: no other hospital records

No notes, echo, allergies, reports



Requests echo – not done for 3 days
Surgery delayed



Surgery: given teicoplanin -
Anaphylaxis,
prolonged hypotension



Revascularisation unsuccessful
(delay, ↓BP) Pt requires ICU, poor outcome

Single EPR across Trusts



Anaesthetic review: single instance EPR – all relevant information from other care settings available



Echo reviewed, EPR auto-alerts allergies and populates risk assessment tools



Surgery performed: successful revascularisation



Patient on common enhanced recovery pathway, discharged to community with shared information about ongoing care

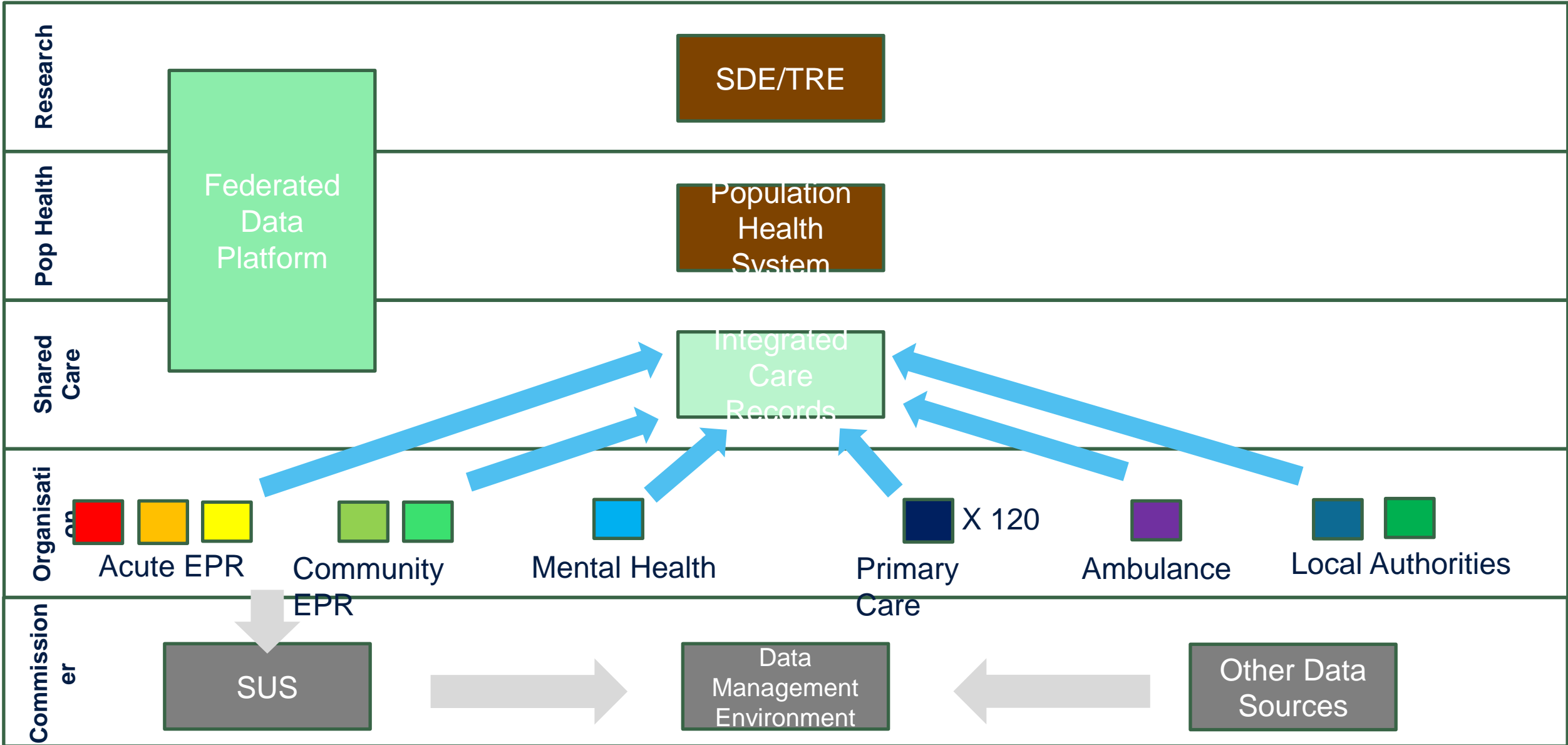
Health inequalities is the case for change

Within Coventry, along the number 7 bus route:

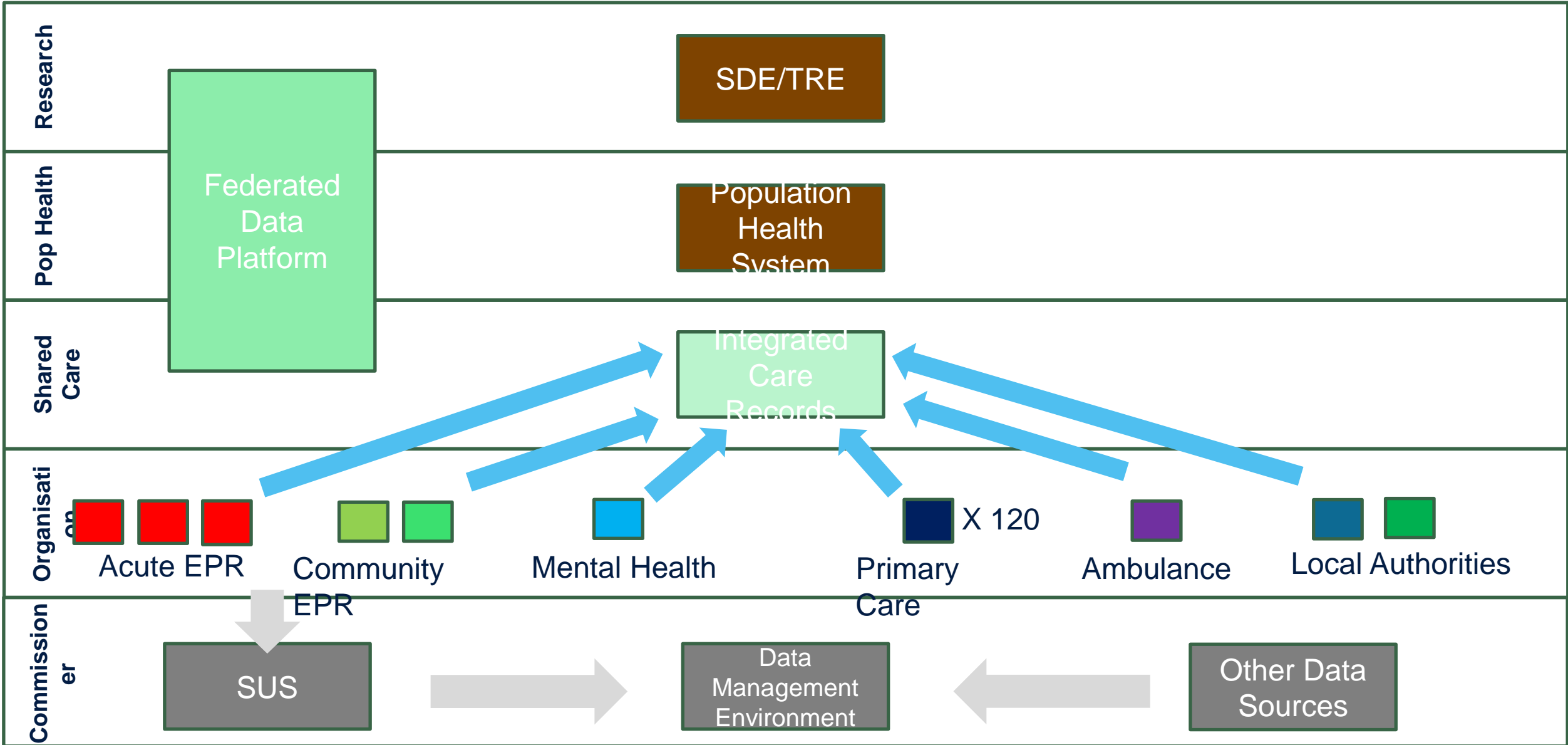
7.0 years is the difference in how long males are expected to live in two areas of Coventry, the gap increases to **10.1 years** for females along the same route.



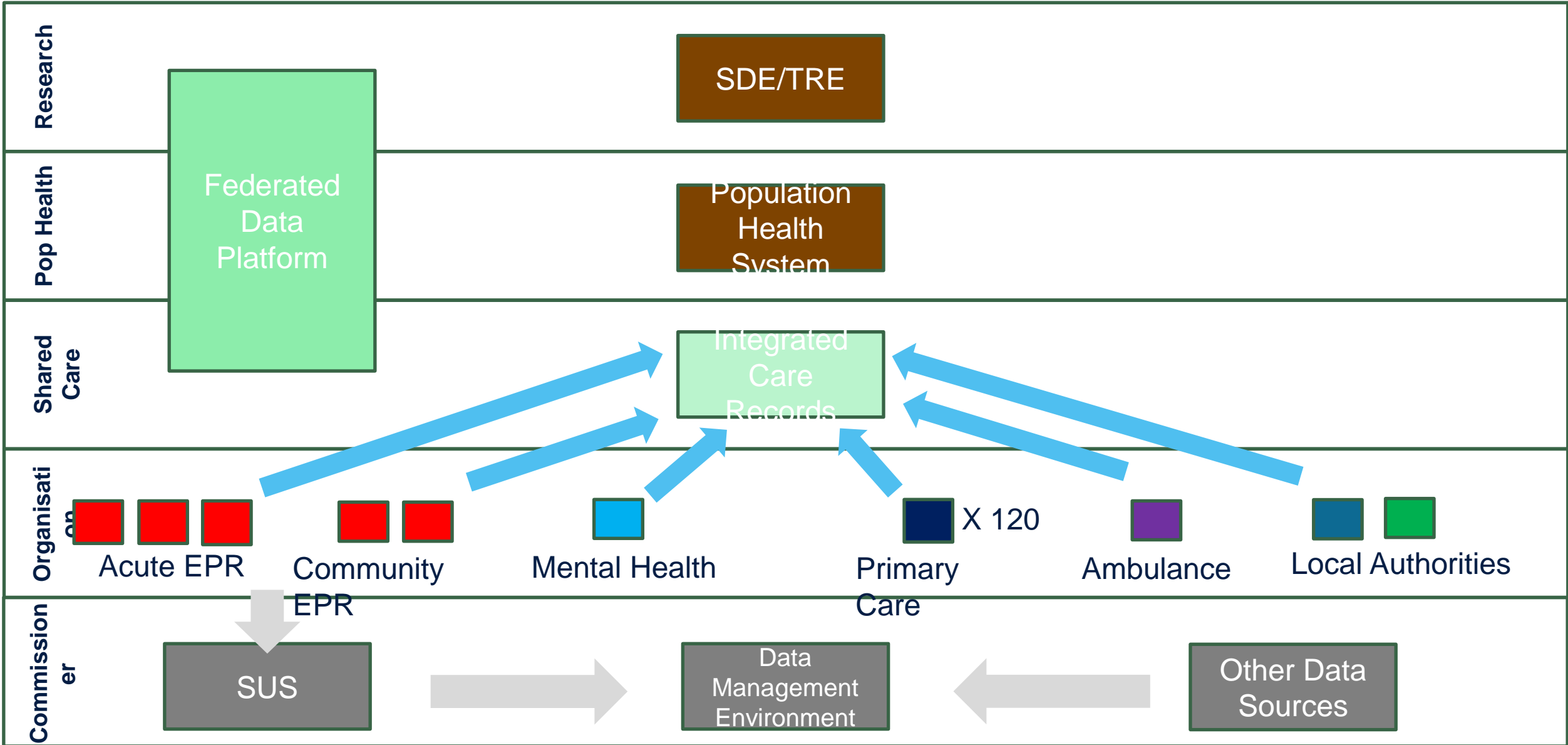
Existing Architecture (Interfaced EPR)



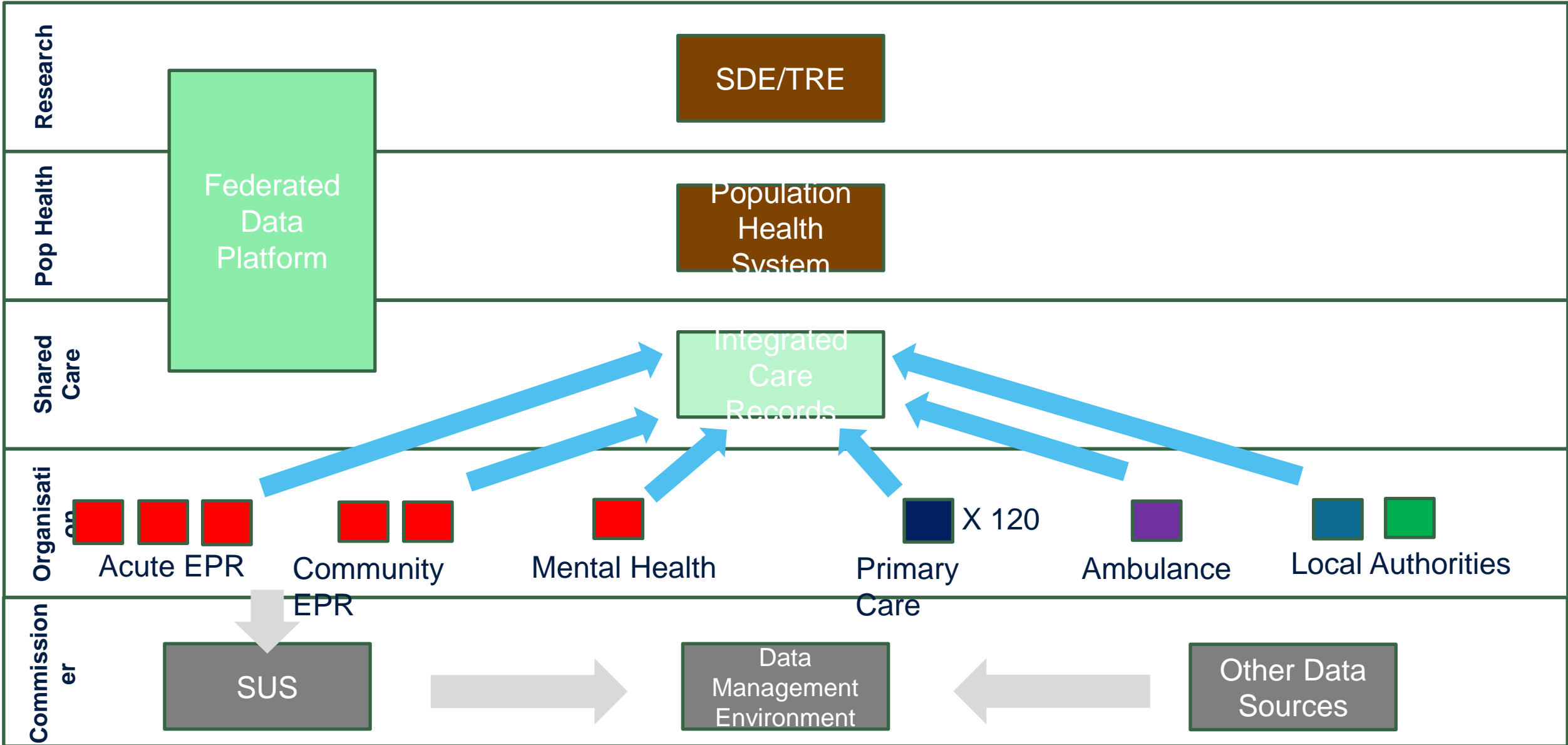
Consolidated EPR (Acute)



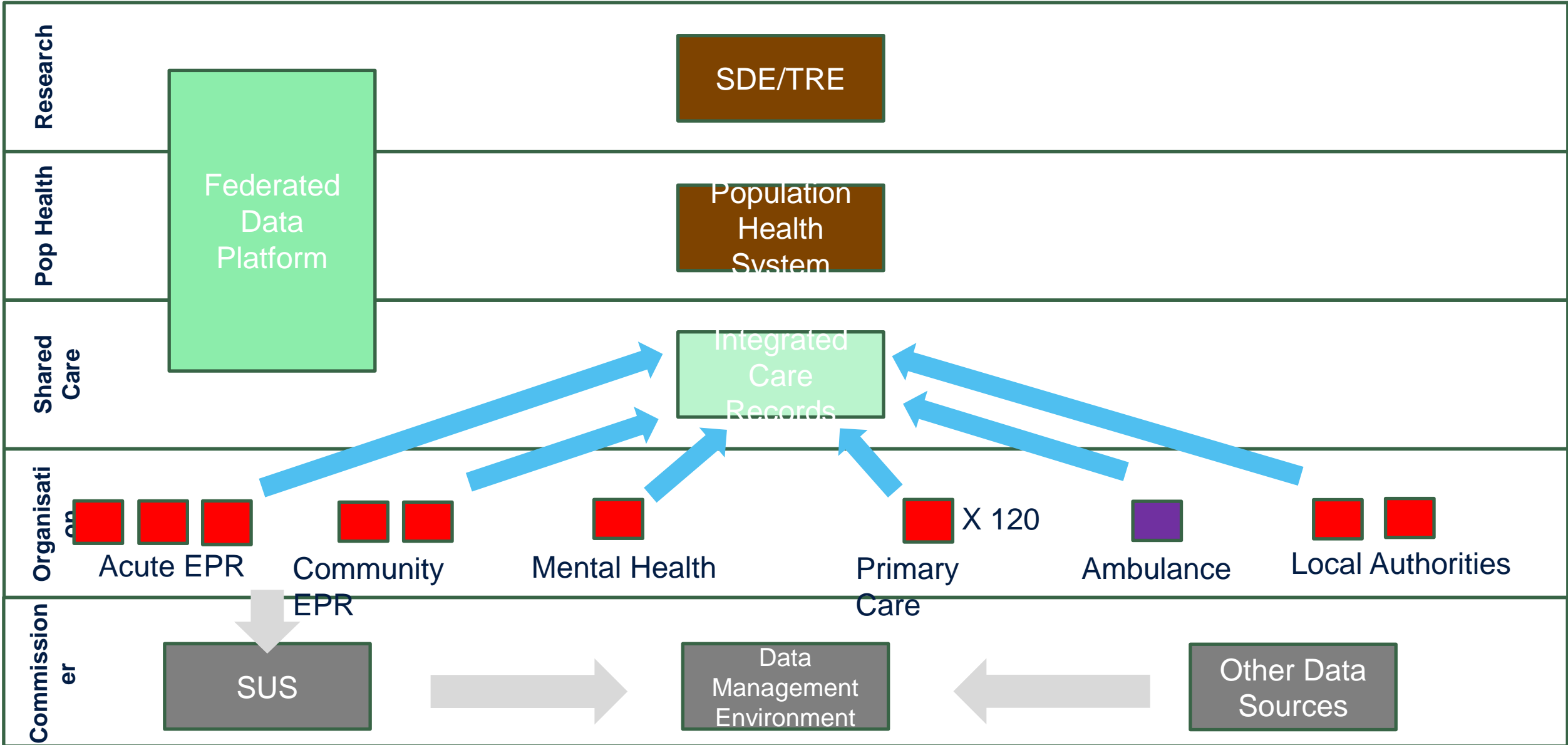
Consolidated EPR (Acute & Community)



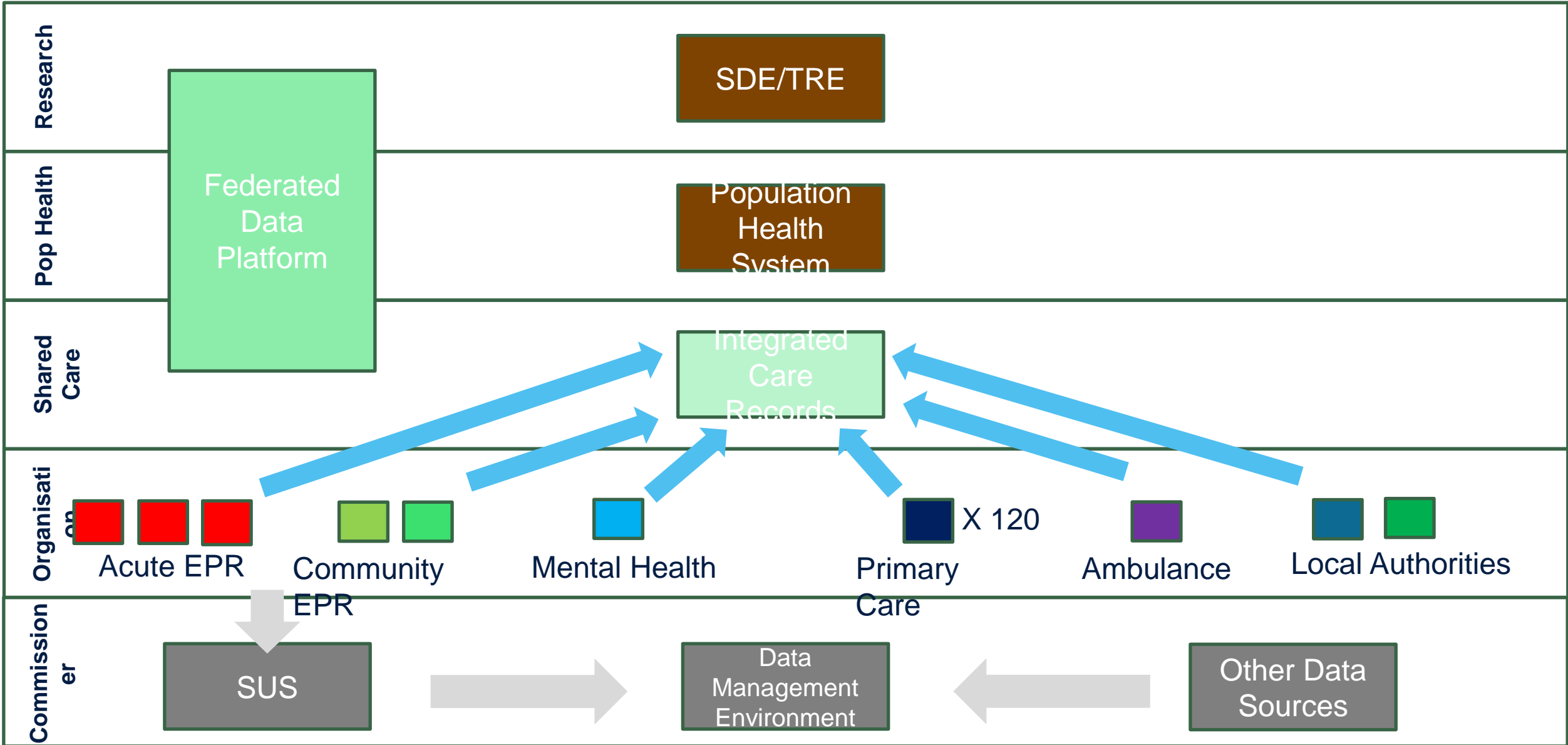
Consolidated EPR (Acute, Community & Mental Health)



Consolidated EPR (Acute, Community, Mental Health, Primary Care & Social Care)



Consolidated EPR (Acute)



Don't forget our purpose!





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