Welcome to the NHS Hospital Interoperability & Systems Conference

04th March 2026
Birmingham City Council House, Victoria Square, Birmingham, B1 1BB

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Join the Healthcare Engagement Society (HES)

- **What it is** – A secure, year-round platform bringing NHS professionals together across six specialist communities.
- **Why it matters** – Stay connected beyond today's event, share challenges, and learn from peers facing the same priorities.
- **Your benefits** – Exclusive access to interviews, insights, best practice, and real-time discussion threads with colleagues nationwide.
- **How to join** – Simply scan the QR code, choose your community, and start connecting today.

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Chair Opening Address

David Hancock
Director and Chair
INTEROPen

Keynote Presentation

Prof Vincent Sai
Group CEO and Partner
Modality Partnership

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A Commitment to Care

InteropConnect 2026: Humanising Care & System Delivery

Prof Vincent Sai FRCGP[Hon] FCA

March 2026

modality
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pathfinder
A Commitment to Care

NHS
Providing NHS services

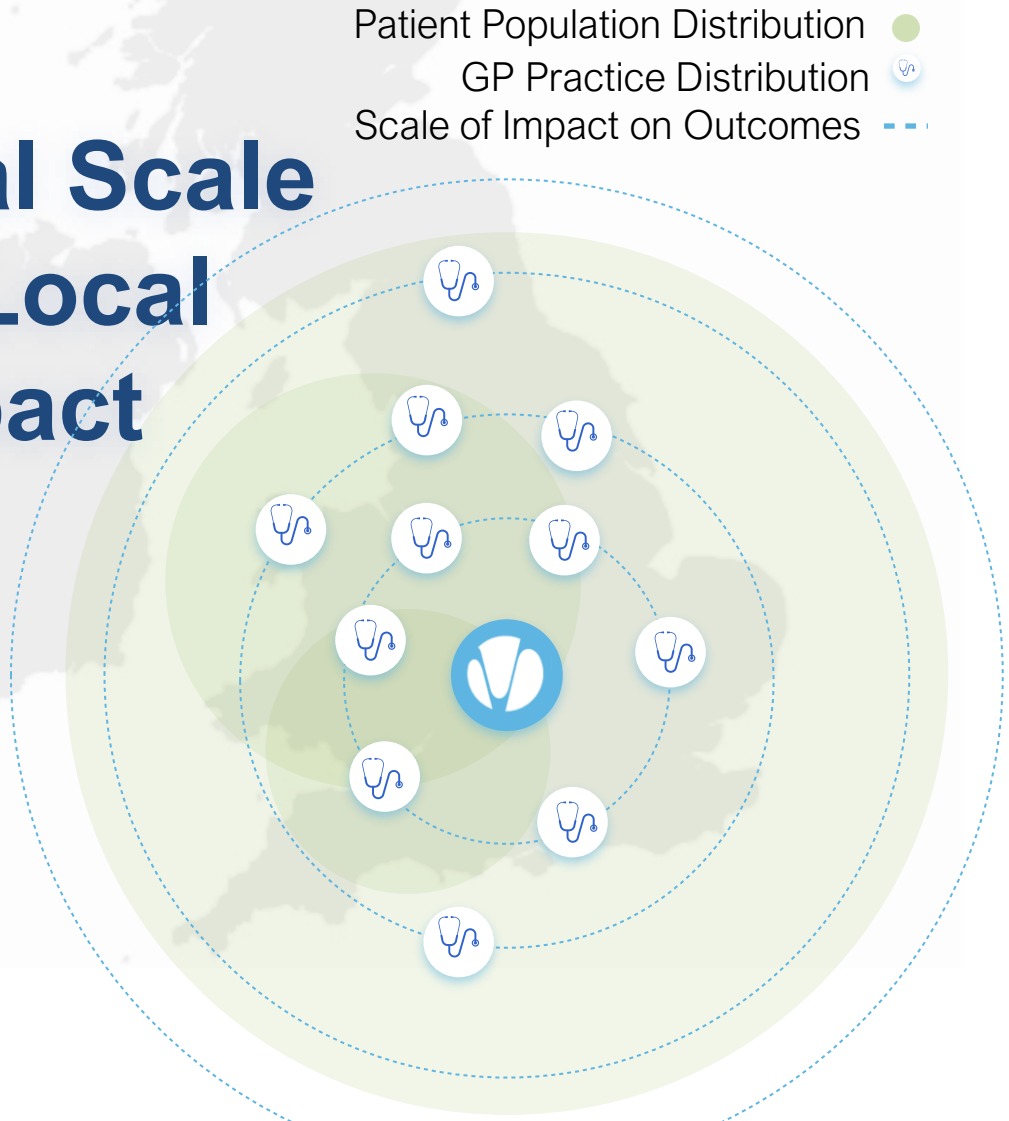
National Scale and Local Impact

Connected by Purpose:
1,800+ colleagues, 54 sites

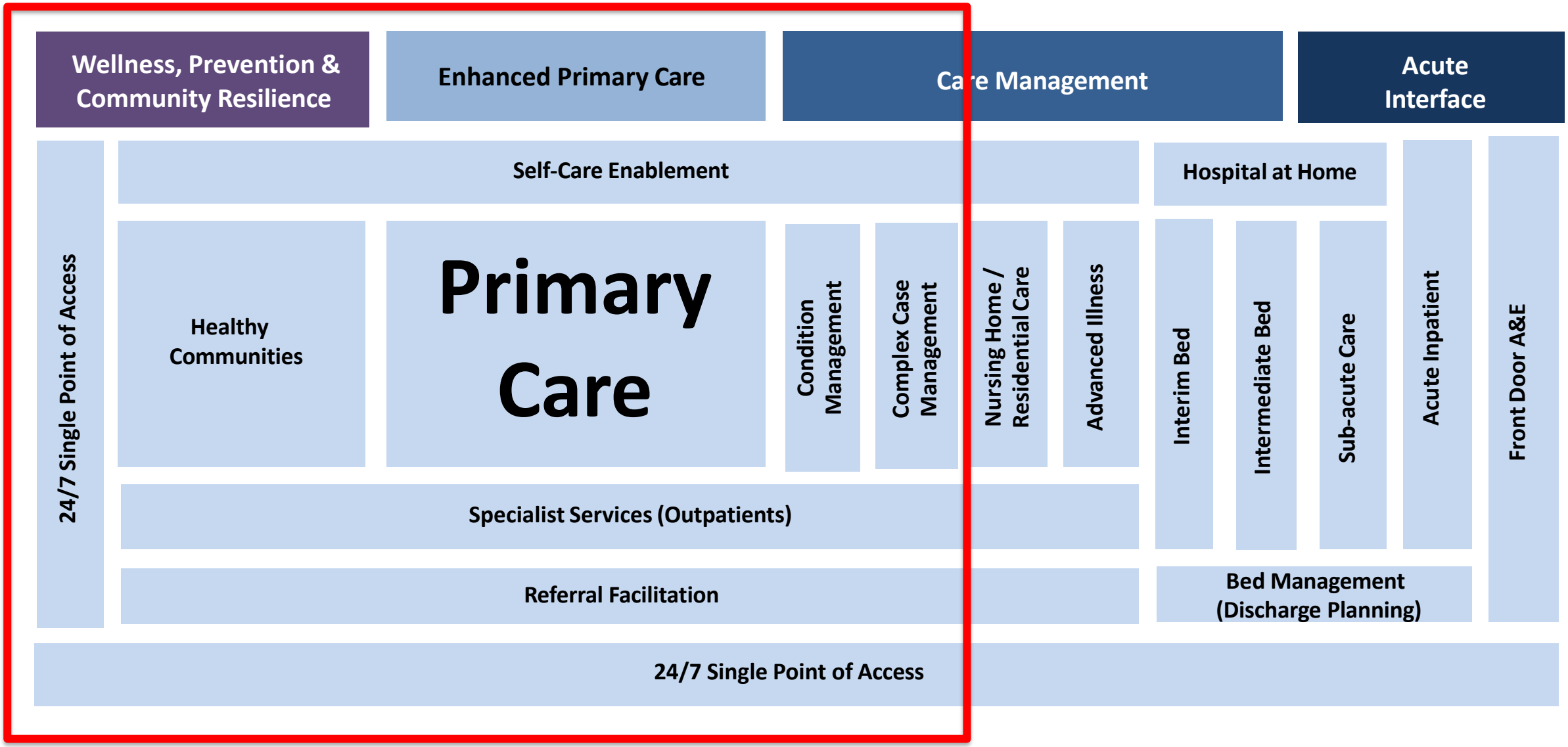
At Scale Delivery:
Largest GP Partnership
12M+ Citizens Reached

Driving Faster Access & Recovery:
Across 18 Outpatient Specialties

Empowering the Future Workforce:
Global Training Academy



Shifting the Centre of Gravity



Person-Led Care

Doctor

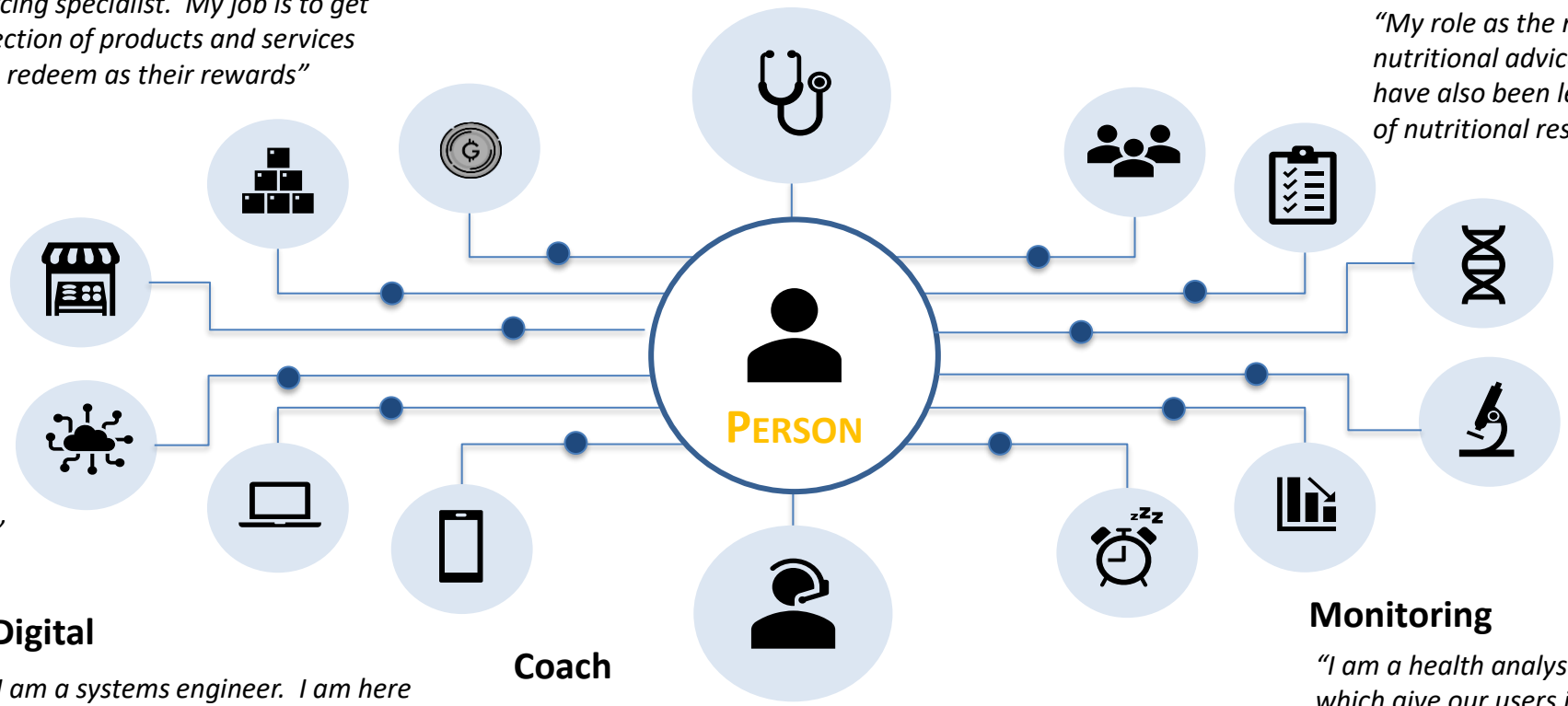
"I have been a doctor for almost 30 years; I have a specialist interest in obesity, diabetes, hypertension. I am responsible for co-designing the right treatment with my patients" Dr Bhardwaj

Rewards

"I am a sourcing specialist. My job is to get the best selection of products and services patients can redeem as their rewards" Masood A

Nutritionist

"My role as the nutritionist expert is to provide nutritional advice & guidance to service-users. I have also been leading on growing our library of nutritional resources and recipes" Mumta J



IoT

"I specialise in connecting devices to make it convenient for our users to share data" Faisal M

Research

"I conduct research and evaluation understand how to maximise impact of our treatments for patients" Billy S

Digital

"I am a systems engineer. I am here to ensure the app is secure, easy to use and reliable" Sachin J

Coach

"The best part of my job as a coach is seeing patients thrive and achieving the goals we set together" Sheryl A

Monitoring

"I am a health analyst – I produce dashboards which give our users insights into how they are progressing in their treatment" Simon W

Critical Enabling Mindset

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Purpose

Do more with less culture
Cost of living pressures

Mission-led investment delivering impact

People

Access pressures continue to create strain

Visible leadership and wellbeing driving engagement

Pathways

System level uncertainties creates divides (tribalism)

Closing divides to enable partnership working

Accelerating Access

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Tackling Backlogs via Innovative Outpatient Services

We combine specialist clinical expertise, intelligent digital pathways, and operational excellence to transform outpatient care - improving access, reducing waiting times, and delivering sustainable elective recovery.

Care Closer to Home
Referrals reviewed by NHS Consultants and GPwERs - no need for in-person hospital appointments.

Backlog Clearance
Efficiently clears referral backlogs, delivering virtual pathways for most patients.

Rapid Mobilisation
Proven 100% record of safe service launch within agreed timelines.

More than

150k

Consultations delivered in the past 12 months

Growing list of services

18

Specialties

Up to

70%

Reduction in Outpatient Department attendance in person

Satisfaction

98%

Of patients would recommend our services to their friends and family

Triage Times

48 hrs

Average from GP Referral to review

Accredited in

NHS Frameworks

Increasing capacity in elective care

NHS
Providing NHS services

Women's Health Hub

Why change is needed:

- **743,000+ women** are waiting for gynaecology care
- Recovery largely stalled - only **3% reduction** in 12 months
- Women in deprived areas are **2× more likely** to wait over 52 weeks

What we deliver:

- **Primary Care Led Triage:** Right patient, right setting, first time
- **Community Specialist Care:** Delivered by a broad multi disciplinary clinical team including NHS Consultants and GPwERs
- **Rapid Access:** Median waits ~14 days
- **Backlog Recovery Capacity:** High-volume elective pathways
- **Demand Reduction:** <10% escalation to secondary care

How we work:

- **Integrated Pathway:** Referral review → Diagnostics → Specialist consultation → Treatment plan → Safe discharge
- **Care Quality:** Clinically governed across primary and secondary care
- **Rapid Mobilisation:** 950 patients reviewed in first 2 months following launch
- **Scale of Delivery:** 14,000+ appointments per year

What stakeholders say

"I have received excellent care – all staff are professional and attentive "

Patient

"Modality has been instrumental in getting our wait times down and well below national average"

Trust Executive

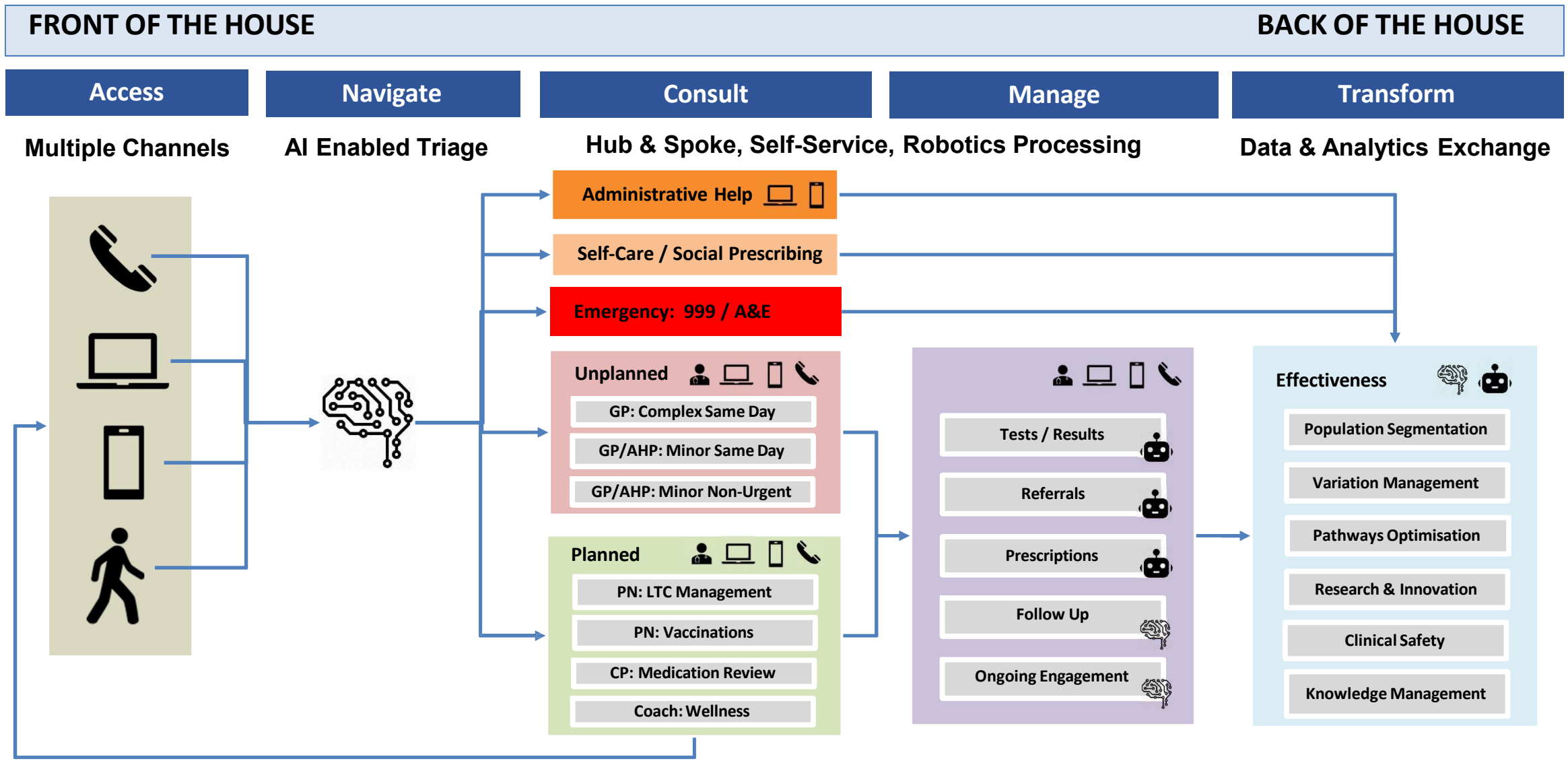
"Teaming up with Modality has allowed me to focus on more complex cases"

Hospital Consultant

"We have seen a material shift in the number of patients being managed out of hospital"

Commissioner

Primary Care As the Digitally Enabled Learning Front End



Improving the Working Day

Transforming Operations with Intelligent Automation

We deliver innovative, clinician-led automation solutions designed to streamline your practice's processes, reduce manual workloads, and empower your team to deliver exceptional patient care.

Award-Winning
Nationally recognised for Best Use of Digital for Primary Care.

Clinically Led
All developments are guided by clinical expertise, ensuring practical and patient-focused solutions.

Seamless Integration
Our solutions integrate seamlessly across both EMIS and SystmOne (S1) environments, making adoption effortless.

MHRA Device Registration
Approved for Pathology Information System Application Software.

What we offer:


Patient Registrations


Pathology Results Filing


Repeat Prescriptions

Up to

100K

Hours saved, across **50+ practices,** our automation solutions:

- Reduce manual workloads
- Enhance efficiency
- Reduce cost

Achieve up to

280%

Higher throughput at lower unit costs, optimising resource use while maintaining quality

Improved

10%

Staff satisfaction, reducing risk of burnout and turnover

Supporting

50+

sites and enabling more workforce resilience and effective teamwork

Full adherence with

NHS Digital Standards

NHS Digital clinical risk management standards (DCB0129 and DCB0160)

Driving Population Health

Empowering Health Through Metabolic and Lifestyle Medicine

We combine personalised coaching, innovative digital tools, and evidence-based strategies to transform health outcomes, prevent chronic diseases, and promote sustainable behaviour change.

Award-Winning
Nationally recognised for scaling lifestyle medicine and transforming care delivery.

Clinically Led
Backed by healthcare experts for safe, personalised interventions.

Integrated Solutions
Blending wearable technology, AI-driven insights, and neighbourhood care models.

What we offer:

Personalised Long Term Condition Management Programmes (Diabetes, Prediabetes and others)

Achieving

4.6

Out of 5 Stars; patient satisfaction, delivering personalised and accessible care

Realising

38%

Fewer A&E visits, reducing healthcare burdens

Averaging

9.9

mmol/mol HbA1c reduction, improving diabetes outcomes

Delivering

90%

Reduction in diabetes medication usage

Keeping Patients Well in the Community

The largest patient-supported platform in the UK

Supporting Trusts and Systems to improve outcomes, performance, flow, reduce ED admissions, support savings and keep patients healthy in their communities.

Patients Healthy at Home and in Neighbourhoods

Patient support programmes driving savings, improving adherence, coaching, and expanding care access at home and in neighbourhoods.

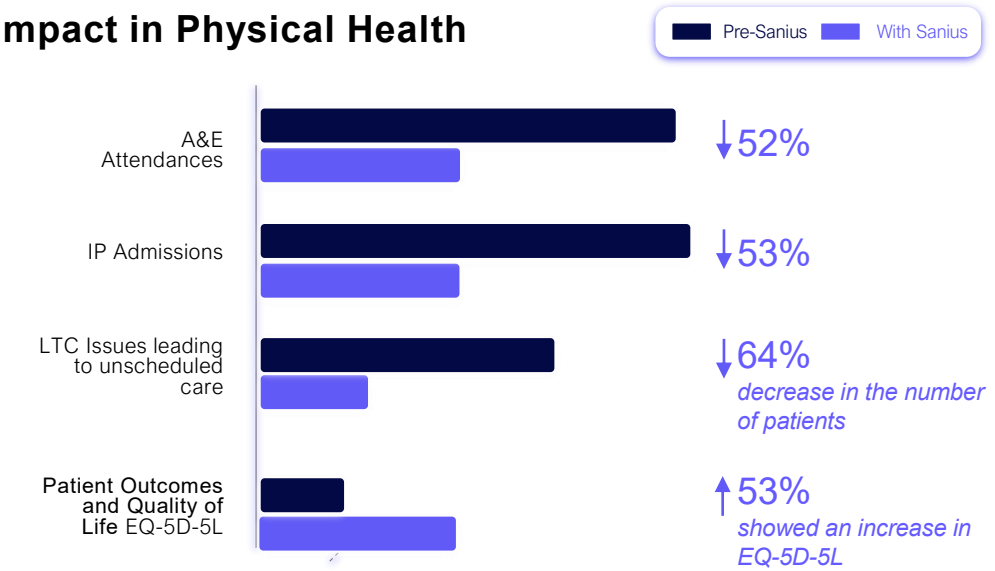
Improving Flow, Outcomes and Savings

New outpatient models streamlining referrals, reporting to cut costs, improving flow, and enhancing adherence.

Reduce ED Admissions through Clinically Supported Primary Care at Home

Redesigned pathways with faster triage, virtual reviews, and monitoring to cut waiting times, reduce admissions, and ease winter pressures.

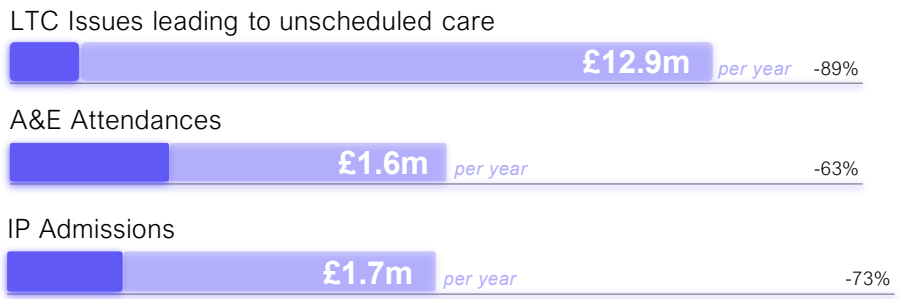
Impact in Physical Health



Cost Improvements

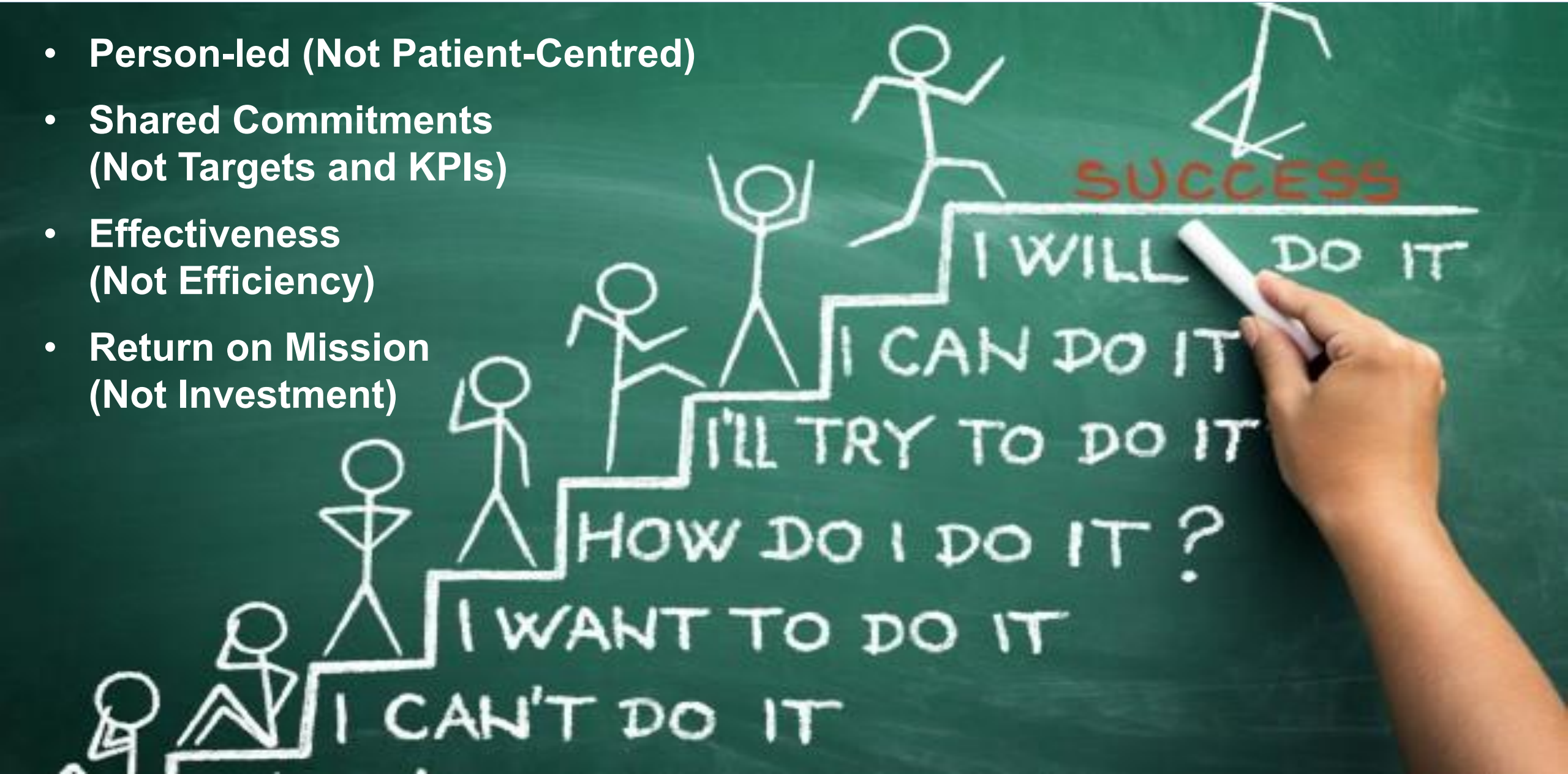
APPLIED ACROSS THE SANIUS HEALTH PATIENT SANIUS COHORT

Based upon the reduction seen in both the % of patients recording each event, as well as in the average rate of each event per year



Closing Reflections

- Person-led (Not Patient-Centred)
- Shared Commitments (Not Targets and KPIs)
- Effectiveness (Not Efficiency)
- Return on Mission (Not Investment)



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Skill Clinic

Demetra Georgiou
Genomic Transformation Lead
Imperial College Healthcare

John Fraser
Head of Data and Informatics
Genomics Unit
NHS England

Chris Smith
Senior Informatics Project Manager
North Thames GMS

Genomics Interoperability in Practice, From National Standards to Local Delivery

InteropConnect 2026

John Fraser, NHSE GU
Demetra Georgiou, ICH
Christopher Smith, GOSH

Why transformational change is needed

The **10-Year Health Plan** positions the **NHS at a historic crossroads**. Public satisfaction is at an all-time low, millions await treatment, and our model of care is no longer fit for purpose. This isn't a failure of our healthcare professionals, but the **daily cost of a fragmented system**.

Information silos across hospitals, GPs, and community care force patients to repeat their stories and clinicians to work with incomplete data. This leads to frustration and **system barriers** that divert time from what truly matters. High-quality and effective care.

7.6 million+ people are now waiting for treatment

Only 74.5% of A&E patients seen within four hours - down from 96.6% in 2011

33% of patients wait over a week to see their GP

Less than 20% use the NHS App monthly

NHS England Genomic Medicine Service

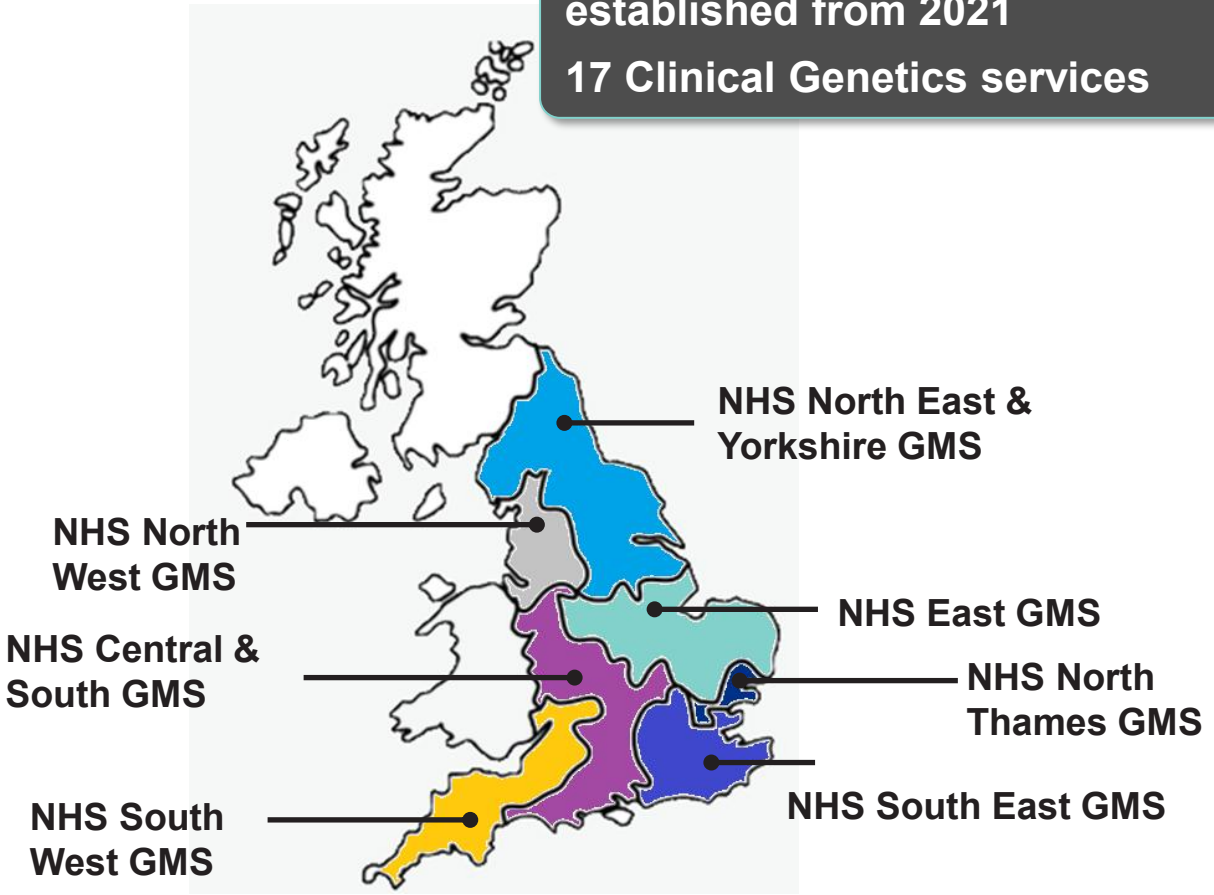
Working across the care continuum from primary to secondary and tertiary

7 Genomic Laboratory Hubs

7 Genomic Medicine Service Alliances established from 2021

17 Clinical Genetics services

Geography	Patient Population	NHS Trusts	NHS ICSs
North East & Yorkshire	8 million	34 NHS Trusts	4 ICSs
North West	7 million	34 NHS Trusts	4 ICSs
Central & South	10 million	45 NHS Trusts	14 ICSs
East	8 million	32 NHS Trusts	13 ICSs
North Thames	7 million	36 NHS Trusts	11 ICSs
South East	8 million	29 NHS Trusts	8 ICSs
South West	4 million	18 NHS Trusts	7 ICSs



Genomics Data & Digital Projects

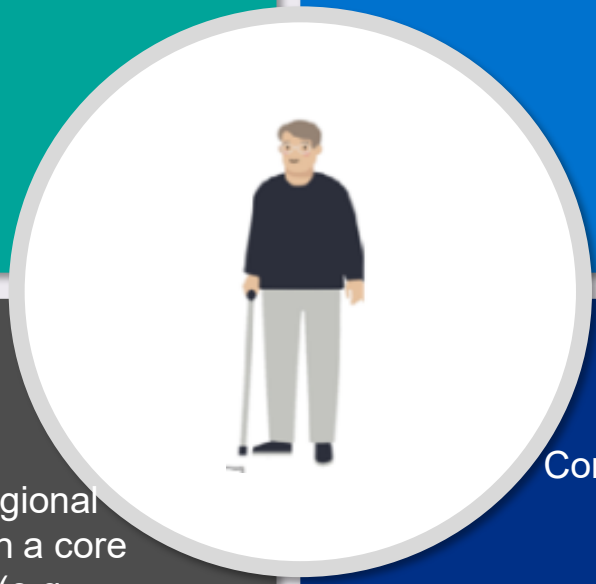
Four key projects are currently running within the Genomics Data & Digital Programme, with the Patient central to all.

Digitising the Test Directory

Structuring & digitising the portfolio of commissioned genomic tests

Unified Genomic Record

Unified point of administration & access for patient and familial genomic data



Digitising Order Management

National digitisation & standardisation of local/regional manual processes through a core broker with core systems (e.g. Patient Demographic Service)

Bioinformatics Community

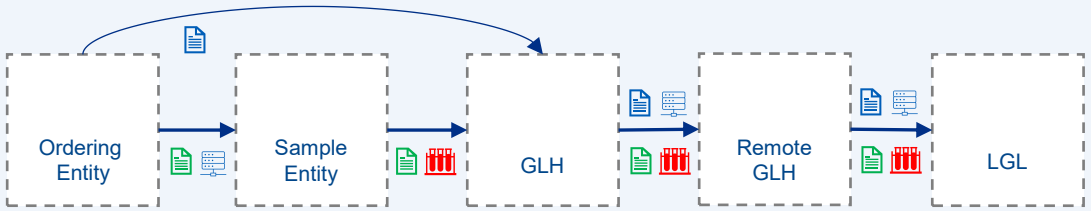
Common set of standards allowing portability of both data and capabilities between GMS geographies and partners e.g. Genomics England

A Solid Legal Basis – a national approach to information governance

Genomic Order Management

Digitised Order Management

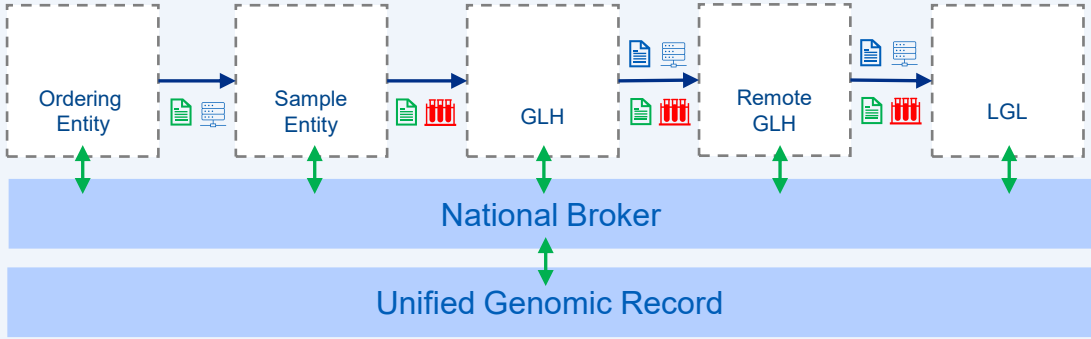
CMO
Current Mode of Operation



- Paper based test order form
- Paper based sample linkage form
- Sample(s)
- Some local integrations

Scalable

FMO
Future Mode of Operation



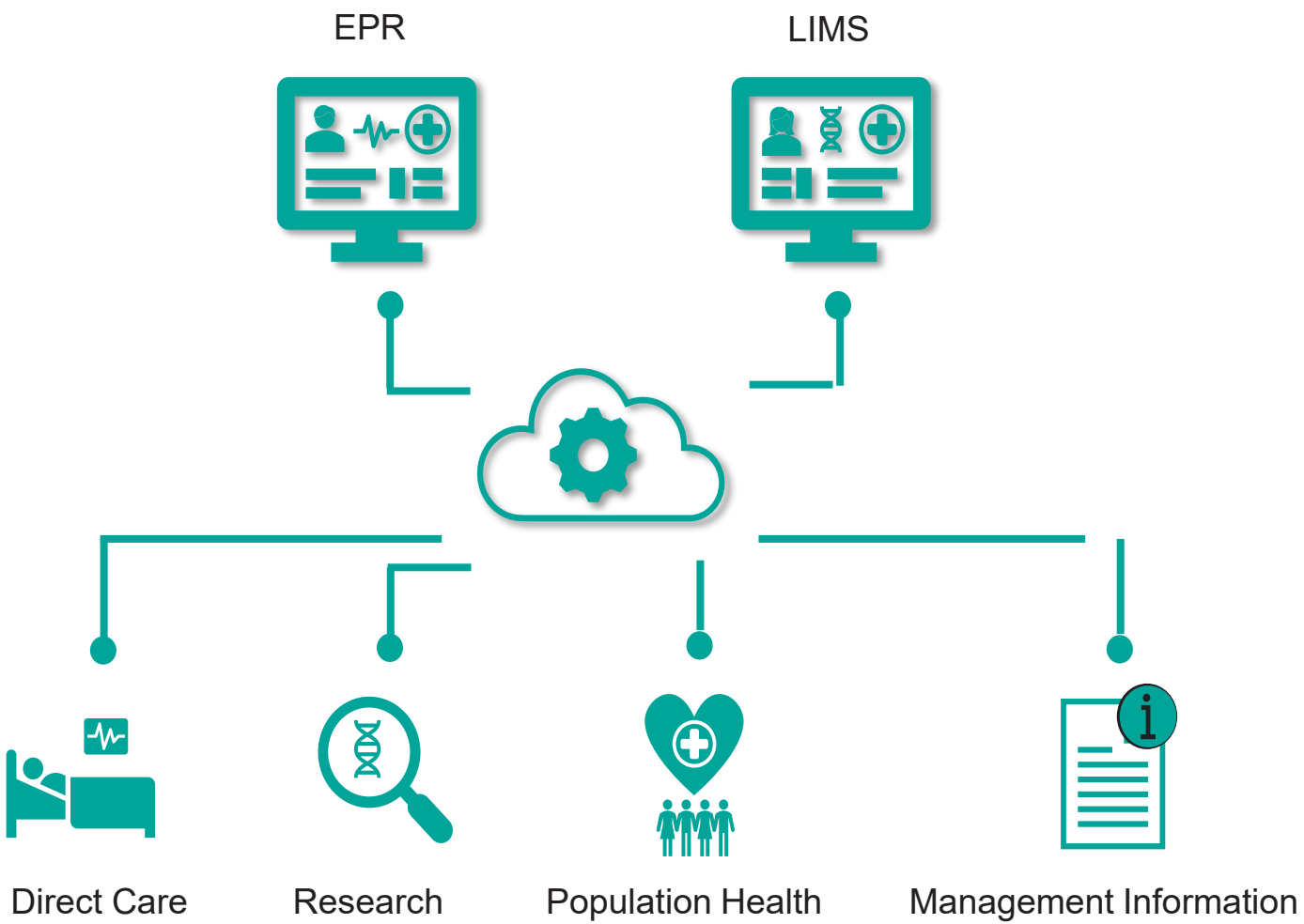
Challenges

- Variation in how [illegible] are ordered nationally

Opportunities

- Native Interoperability with EPR and LIMS
- EPR and LIMS Integrations
- National Web Portal

Interoperability key in maximising the value of data



- We believe the **global standardisation** of genomic standards is key for **accelerating biomedical advances**. By enabling the responsible sharing and interoperability of genomic and clinical data **across institutions and borders**.
- We believe making this a reality requires global health services to **align on standards** and generate a **consistent set of priority requirements** for industry to support.
- We need EPR & LIMS vendors to prioritise the delivery of **Genomics Modules** that support **native FHIR interoperability**.

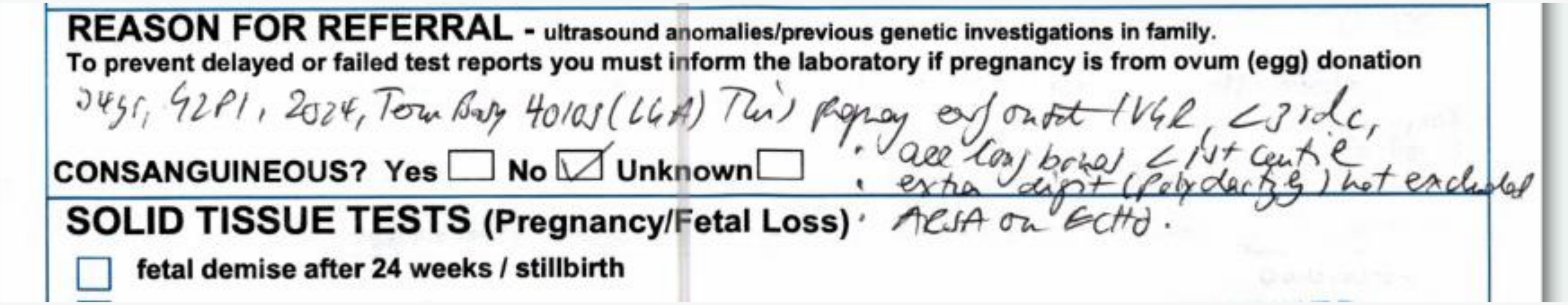
HL7® FHIR®

Current mode of operation in practice

Clinical risk

Delays

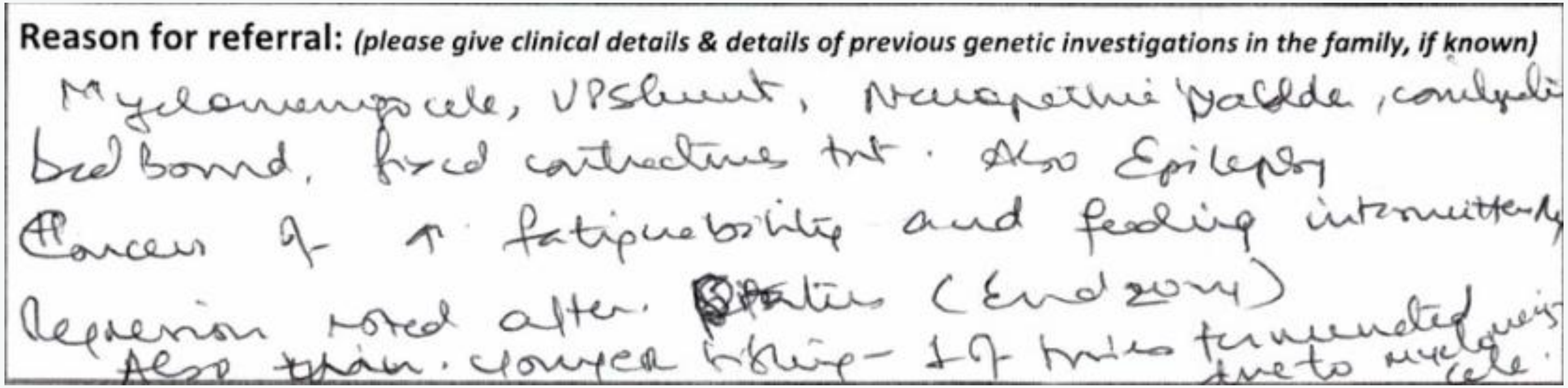
Operational challenges


REASON FOR REFERRAL - ultrasound anomalies/previous genetic investigations in family.
To prevent delayed or failed test reports you must inform the laboratory if pregnancy is from ovum (egg) donation

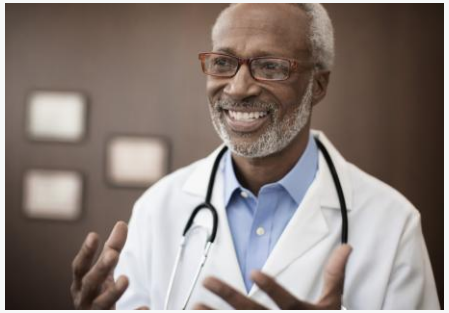
CONSANGUINEOUS? Yes ☐ No ☑ Unknown ☐

SOLID TISSUE TESTS (Pregnancy/Fetal Loss)

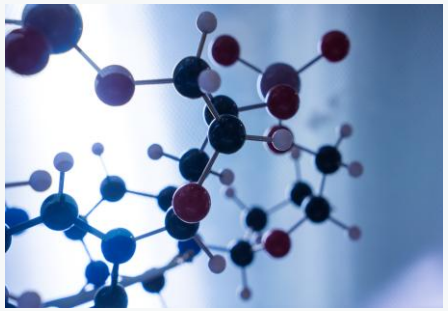
☐ fetal demise after 24 weeks / stillbirth


Reason for referral: *(please give clinical details & details of previous genetic investigations in the family, if known)*

Health data not always structured and connected across primary and secondary care.
HPO capability limited across EHRs
Public often unaware of genomics.
Patients not always alerted when eligible for genetic tests based on clinical and family history.



Clinicians are not always confident offering genetic tests.
Many clinicians unaware of Test Directory
Laboratory scientists often receive inadequate information.



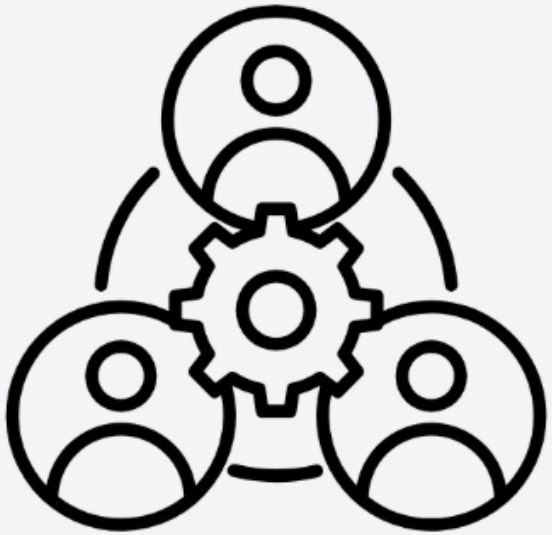
Genetic result often not given on time for treatment or ahead of management decisions.
Genetic results placed in EHR often in PDF.
Clinicians not aware of limitations of such results
VUS's are NOT triaged for further analysis.
Understanding of variation across populations is limited

Research trials and studies are not always identified by clinicians.
Patients are often "lost" in the system as there is no register.
Challenge in natural history of disease studies.
Pharmaceutical industry colleagues struggle to identify how to improve access.

Patients are rarely on a register.
When a treatment is available, based on their genotype and phenotype, they are not always made aware.
RWE is extremely hard to collate as data is disperse

Order Management Alpha

North Thames GMS – The organisations involved



Great Ormond Street

EPR - EPIC

LIMS - EPIC Beaker

TiE - Intersystems

Royal Marsden Hospital

EPR – EPIC

LIMS - EPIC Beaker

TiE - Intersystems

North West London (Imperial Health)

EPR – Cerner Millennium

LIMS – Sunquest

TiE - Intersystems

NHS England

Central Broker

FHIR Standards

Approach to design and testing

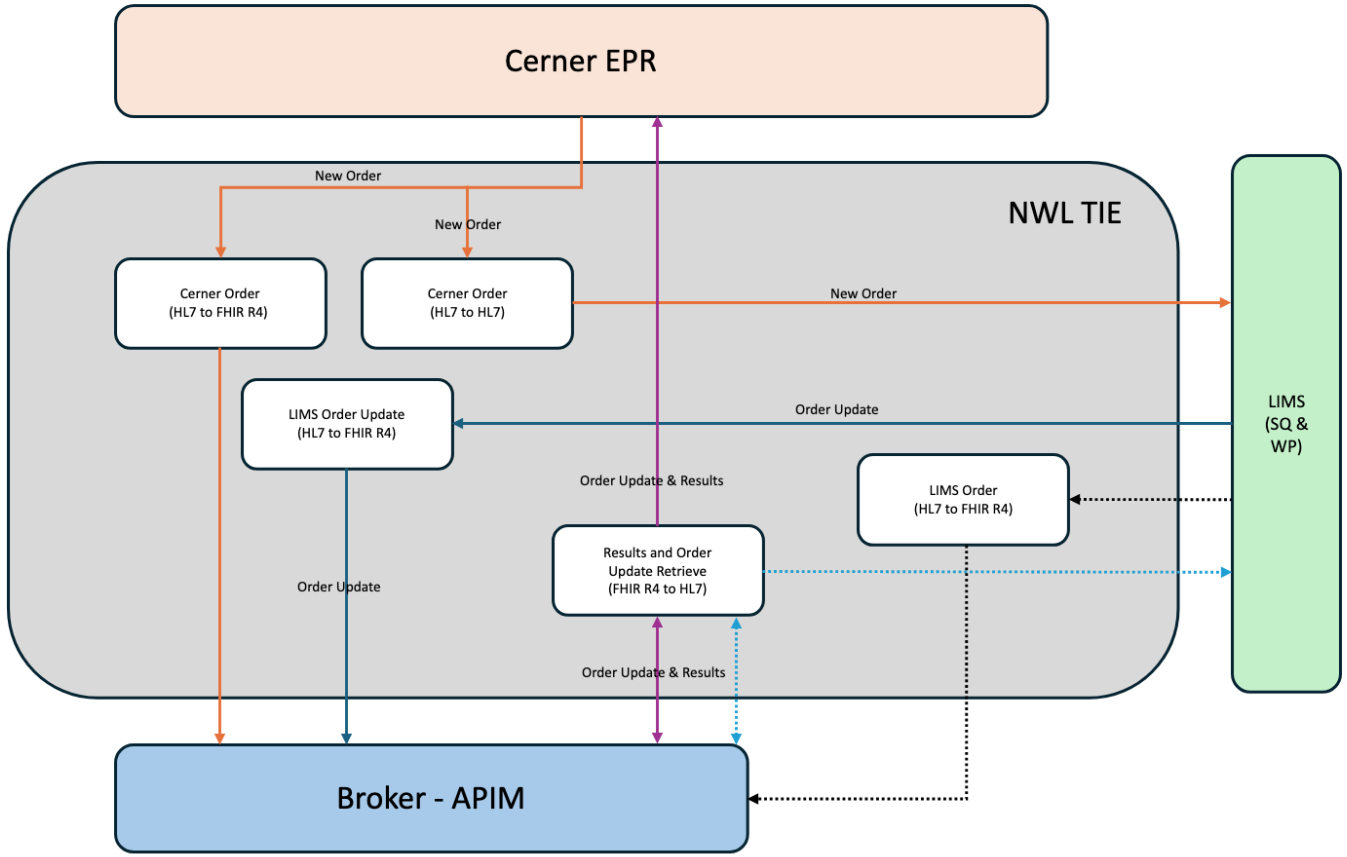
Hackathons

- Real time testing approach was selected using test patients
- Real time fixes were implemented to develop solutions
- Group discussion and problem solving between all parties provided expert problem solving

Showcase

- Two showcases were used to display progress against a scope matrix
- Each provider presented their own aspect of the selected workflows.
- Collaborative displays of technical builds alongside operational discussion points

Challenges (NWL)

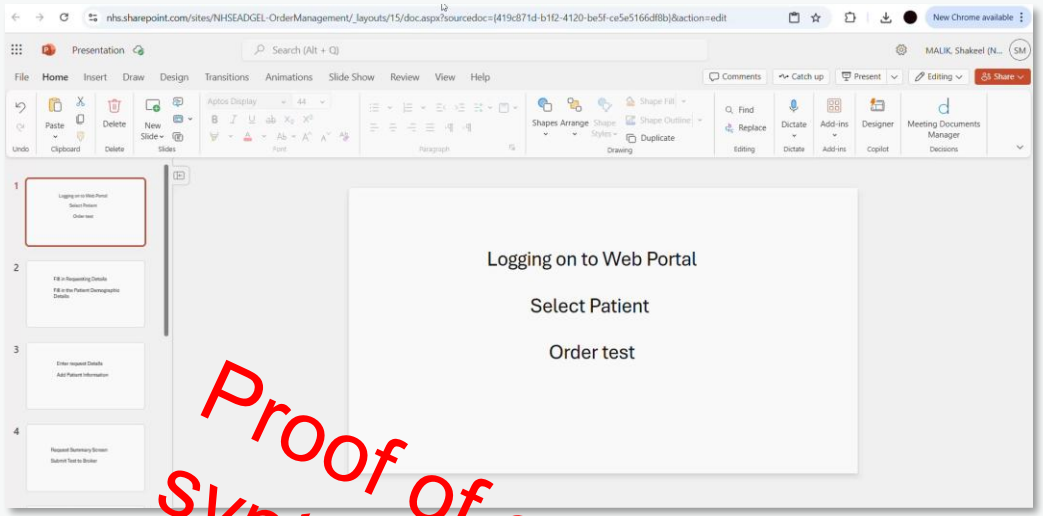


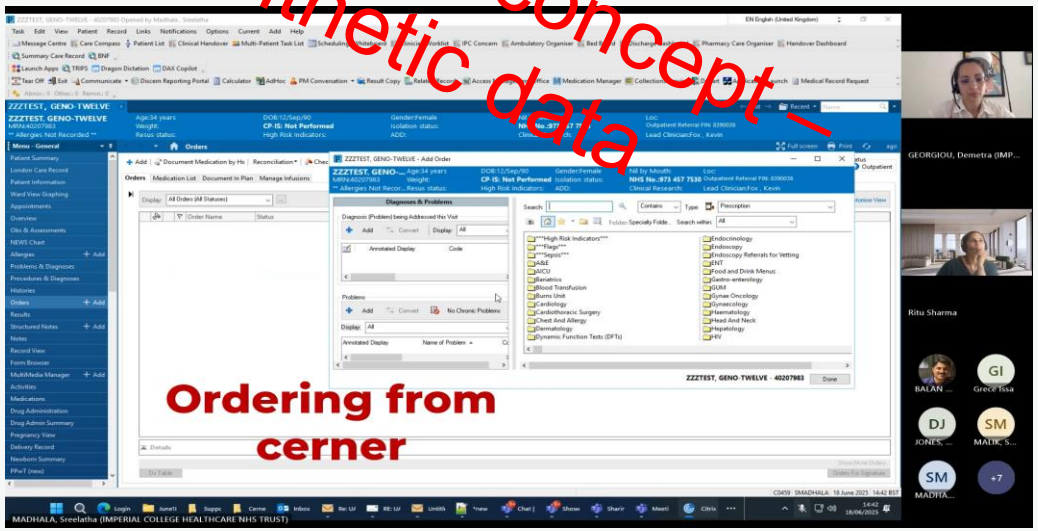
HPO not available on cerner

FHIR Challenges

Multiple orders (duo/trios)

Digitised Order Management Private Beta





- The Alpha Phase has concluded. We have successfully built the following Proof-of-Concepts:
  - A native FHIR national broker
  - A basic national web portal coupled to the broker
  - Broker integration with EPR, LIMS & Trust Integration Engines with partners in the North Thames region
- The Project is now starting its Private Beta. A production ready first version of the national capability is being built in 2026, ready for early adopters to integrate with in FYH2-26.

Summary

Some Lessons Learned

Technical challenges:

- **Authentication.** Protocol is designed for user authentication CIS2, but some access channels cannot support this.
    - *Needed to balance API methods between user and system level authentication.*
- **FHIR versus HL7v2.** The protocol has been designed for FHIR R4, although some operations are replicable in HL7v2. System support for order comms is typically HL7v2 only.
    - *Translation between FHIR and HL7v2 has been identified as a local responsibility, to ensure pressure is maintained to move systems to native FHIR when possible.*

Clinical data model:

- **Familial Relationships.** Some diagnostics rely on comparative genomic analysis between family members.
- **Fetal Records.** Genomic diagnostics are increasingly being performed pre-natally, with the results needing to be recorded for both the mother and future baby.
    - *Needed to model familial and fetal relationships for both ServiceRequests and Reports*
    - *Increasing need to model grouping of related requests*

Project Governance:

- **National versus GMS scope.** The FHIR IG and broker is developed by the national team, but proving the implementation relies on multiple local Trusts and systems.
    - *Identifying a reliable regional partner and working as a joint team with open communication and clearly defined responsibilities has been essential.*
    - *Generating not just a technical blueprint, but a model for engagement and governance.*

The NHS GMS data and digital strategy – building blocks

Digitised Test Directory

Digitised Order Management

Unified Genomic Record

Bioinformatics

Developing an interoperable informatic and data infrastructure

…that enables the NHS to use and share genomic data appropriately to improve patient care.

Putting the NHS at the forefront of using genomic data

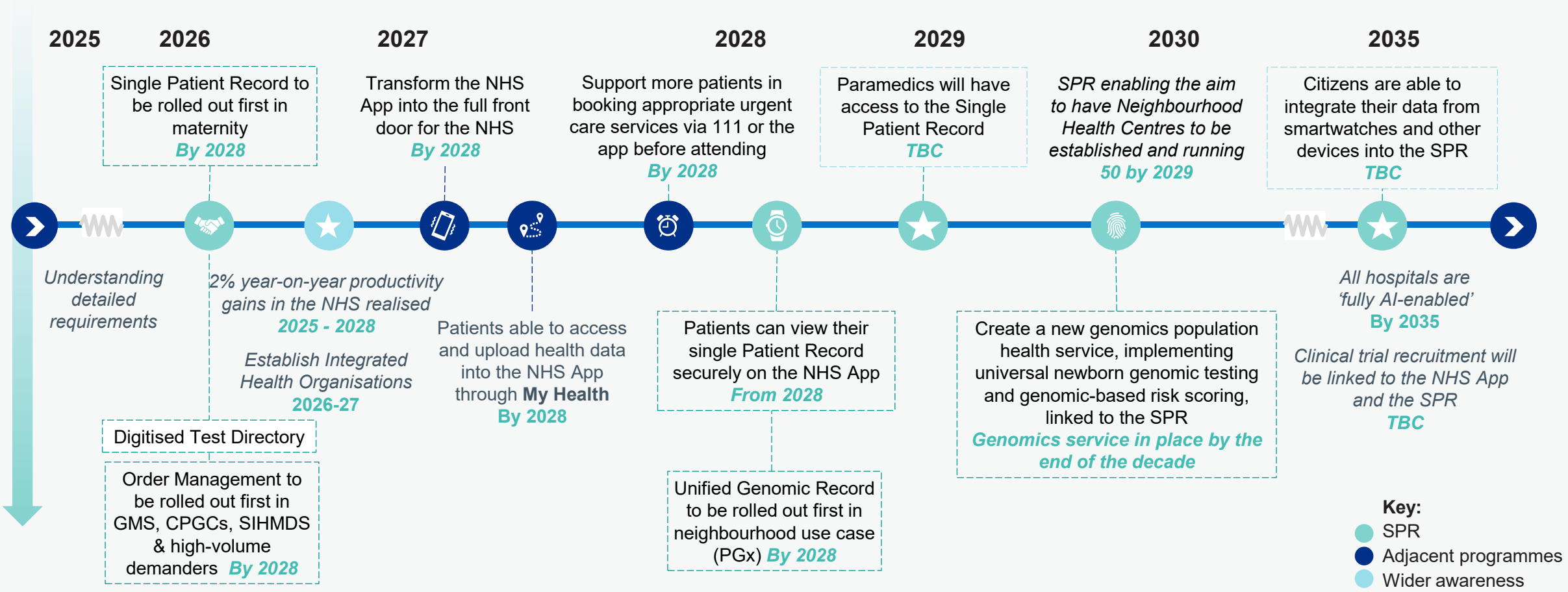
…alongside other health data to drive health improvements for individuals and populations.

Enabling the NHS to use cutting-edge analytical tools and up to date variant databases

… to maximise diagnosis, increase access to precision medicine and efficiency.

The Future: Delivering on the 10YP

The Single Patient Record is central to delivering the NHS Long Term Plan, with a clear roadmap from early maternity rollout to full integration across services, technology, and patient experience by 2035



Next Steps?

Digital Genomic Test Directory – Nationwide release during 2026

Ongoing consultations through until April 2026, reviewing completeness of information and testing, along with improvements to the user interfaces, before rollouts begin.

Digital Order Management – Private Beta in 2026.

Development of the national capability in FY H1-26, allowing for early adopter partners to start integration in FY H2-26.

Unified Genomic Record – Private Beta in 2026.

Continued identification and development of specific use cases, to prove both the technology and the potential benefits. Implementation of priority use cases & alignment with the Single Patient Record (SPR).

Bioinformatics Community – Proof of Concept in Q4 of FY 25/26.

aws kainos

Identification of priority use cases, cloud connectivity, connecting data and creating workflows for national collaboration on federated data sets. Findings will then scope future work packages.

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Refreshments & Networking

Chair Morning Reflection

David Hancock
Director and Chair
INTEROPen

CONVENZIS

Case Study

solsta
THE VITAL COMPONENT

Case Study

Ty Baines
Network Manager
Royal Devon University Healthcare NHS Foundation Trust

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Case Study

ManageEngine

Case Study

Manash Rich Ray
Head - Customer Success (UKI)
ManageEngine

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Leadership Interview

Corielyn Bromley
Executive Director of Continued Professional Development
Association of Professional Healthcare Analysts

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Skill Clinic

Alison Johnson
UK Health Lead
ORCHA

Automating waiting well - Designing an inter-operable engagement layer for elective recovery

Alison Johnson
UK Health Lead, ORCHA

THE ELECTIVE CARE AND RTT PROBLEM

- **Waiting time is underused** - patients receive little support whilst waiting.
- **Demand exceeds capacity** – Rising referrals continue to drive the RTT pressure beyond what NHS Trusts can absorb.
- **Cancellations waste the capacity** - Patients arrive under-prepared leading to late cancellations and wasted resources.
- **Outpatients are overloaded** - Too many first appointments deliver low value and and could be avoided or deferred with greater emphasis on digital solution support.
- **Communication is fragmented** – Inconsistent patient engagement drives DNAs, anxiety, and operational inefficiency.

The Digital Orchestration Gap

Waiting lists are not just a capacity issue. Where does the patient waiting experience ‘go dark’ digitally, following referral?

Most architectures manage:

- Referral
- Episode
- Appointment

But not the waiting period in between.

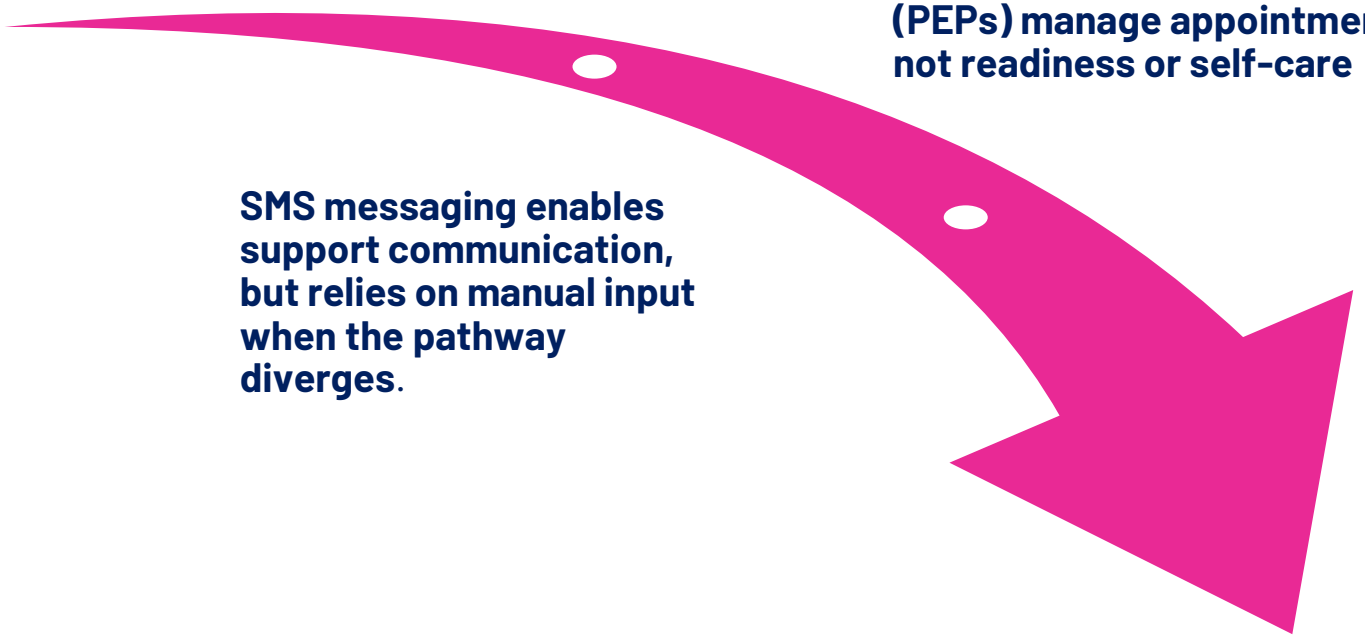
- How much manual effort is required to keep the patient engaged?

Understanding the Architecture Gap

EPRs manage episodes but not waiting time behaviour

Patient Engagement Portals (PEPs) manage appointments, but not readiness or self-care

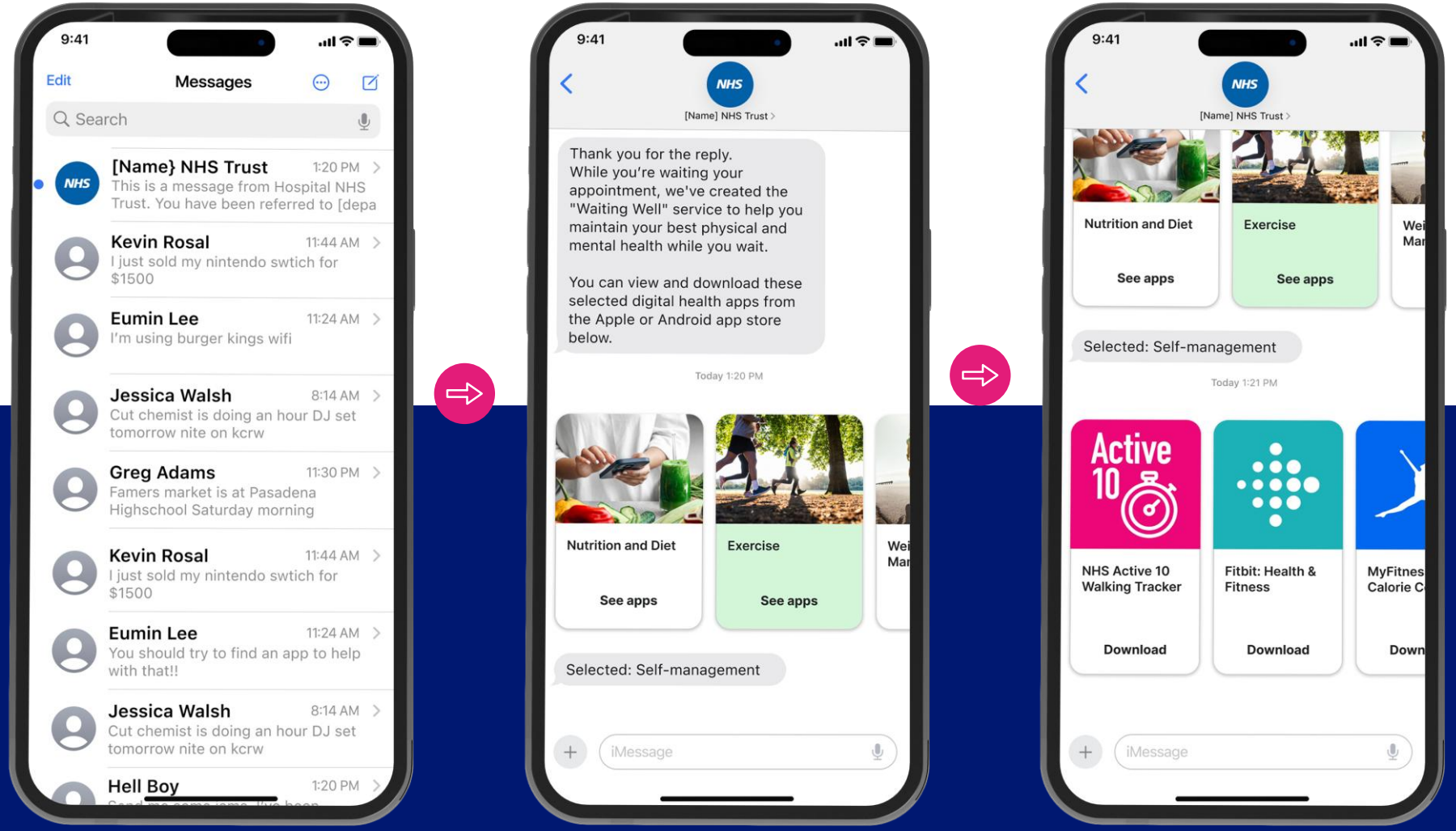
SMS messaging enables support communication, but relies on manual input when the pathway diverges.



This all creates:

Manual input
Inconsistent patient support
Hidden admin costs
Governance duplication

CareQ – Delivering Automated Waiting Well Support



ORCHA

CAREQ

From Passive Waiting to Active Preparation

01

Empower your patients with automated, curated Digital Support Packages

02

Engages patients at referral or whilst on a waiting list through trusted NHS-branded communications

03

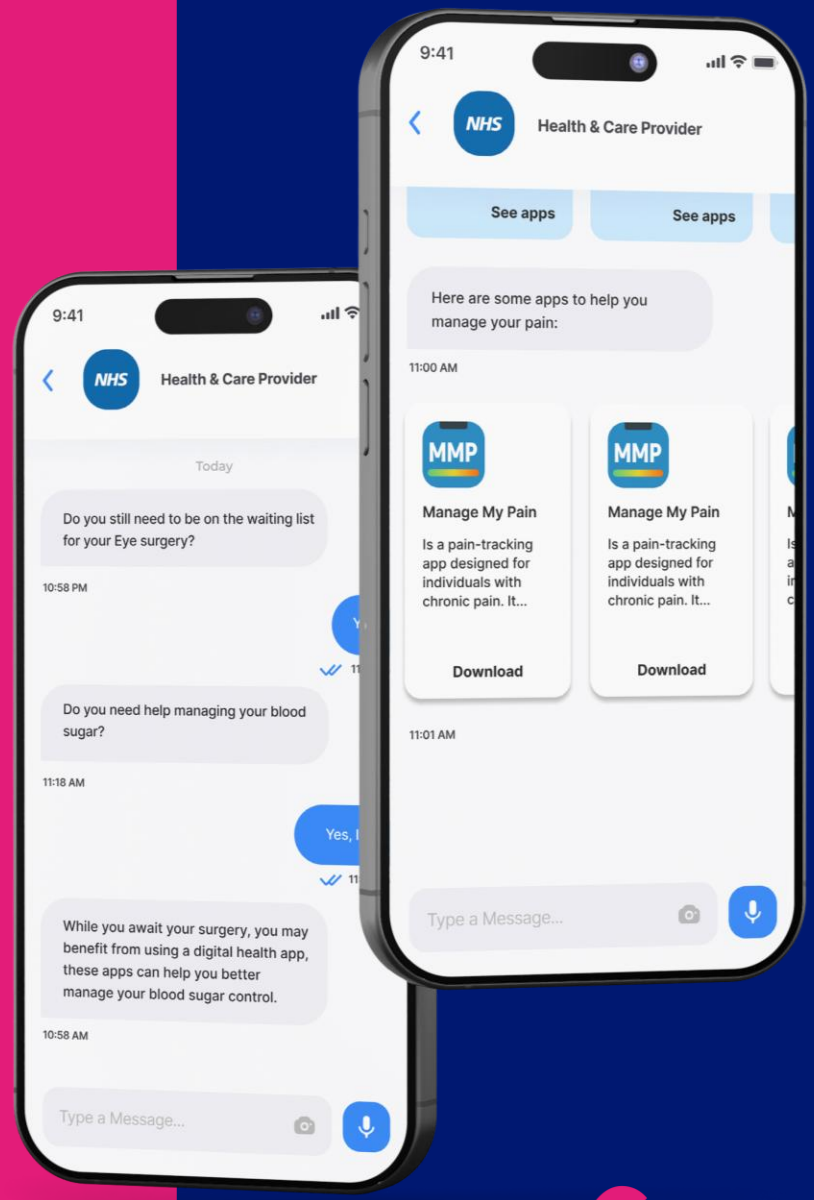
Supercharge self-care and self-management strategies with high-quality digital health interventions

04

Digital support packages are matched to the patient's pathway, needs, and risk. profile

05

Reducing strain on services and improving system efficiencies



ORCHA

CAREQ

Automation as Infrastructure

Rules-based cohort identification

Automated pathway assignment

Structured engagement logic

Escalation triggers

Enterprise level automation – one integration – 000s of patients supported

Interoperability and Governance

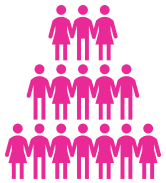
Key characteristics:

- API-enabled
- Configurable, not bespoke-built
- Compatible with existing comms platforms
- No duplication of core systems

This Global Review has been adopted globally and has been used in over 38,000 assessments, and has been through 7 iterations.

Enterprise Value

CAREQ

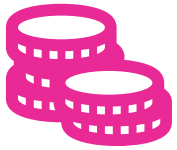


Scalable patient engagement

Reduced manual admin workload

Increased patient preparedness

Fewer avoidable cancellations

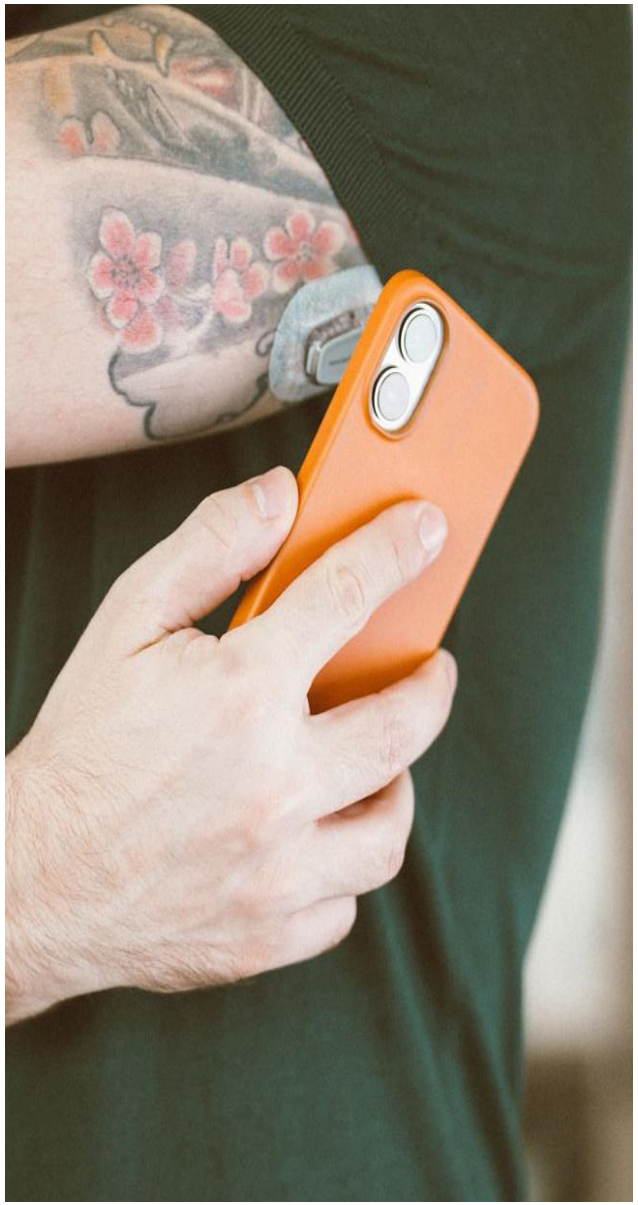


Lower cost per patient support

ORCHA

DELIVERING TANGIBLE RESULTS AND PRODUCTIVITY GAINS

	Length of Stay	Re-Admissions Rate	Avoided Procedure Cancellations
Benefits Measure	**Reduction in LOS** – assumed reduction of 5% based on an average 4 days at a cost per bed day of £350.00, based on a waiting list size of up to 50,000 with 25% activation and 50% engagement	**Re-Admissions Rate** – using the average Re-Admissions rate of 4%, and using 6% of this (0.24%), at a cost per bed day of £350.00	**Avoided Procedure Cancellations** – based on validated cancellation rate of 7%, a 10% reduction in cancellations, and cost per procedure of £1000, with a waiting list size of up to 50,000
Impact	**1812** bed days saved for a cohort of 50,000 patients with 25% activation and 50% engagement	**15** re-admissions avoided, equivalent to 75 bed days	An additional **350** protected procedures
Evidence Base	• Health Foundation • Surgery Hero Pilot • pmc.ncbi.nlm.nih.gov/articles/PMC11053376/ • jamanetwork.com/journals/jamanetworkopen/fullarticle/2806718 • pubmed.ncbi.nlm.nih.gov/37274301/	• Health Foundation • CHKS	NHS Trust Level Analysis
Expected Financial Saving	£634,200	£26,250	£350,000



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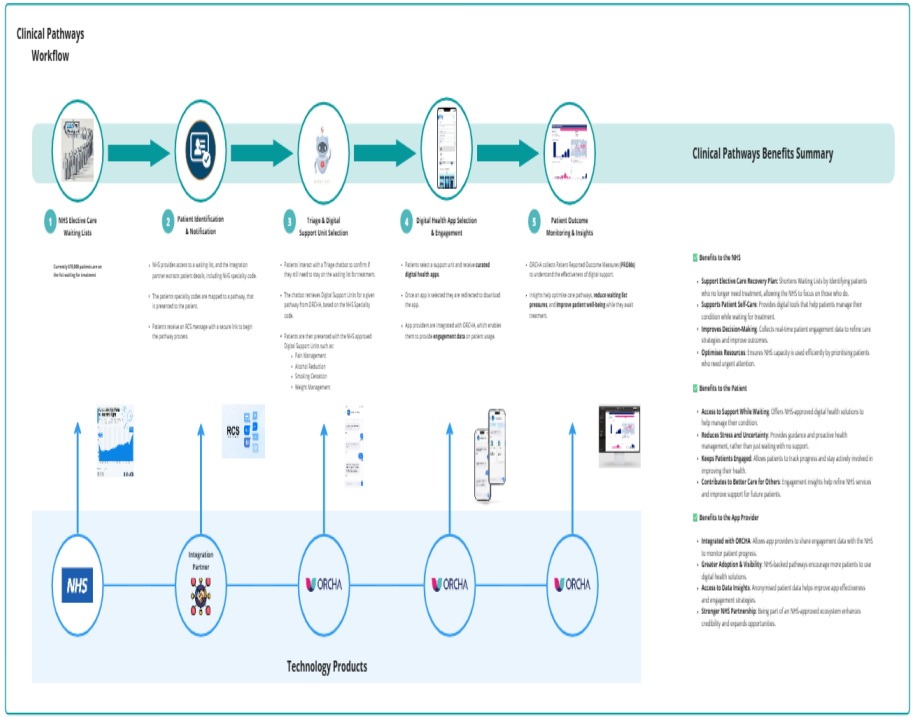
CAREQ

Final Takeaway

- Waiting lists are predictable
- Waiting behaviour can be influenced

But only if digitally orchestrated;

- Design waiting time as a governed, automated, interoperable workflow – not as an unmanaged operational gap



Webinar: Preparing for NICE – Mandated Digital Health Adoption – 18th March at 12.30

- From April 2026, NICE plans to bring digital and AI health technologies into the same statutory appraisal and adoption pathway as medicines. That means when NICE issues positive guidance, NHS organisations will have a legal duty to fund and adopt - often within a 90-day window.
- This marks a major shift away from pilots and local variation, towards consistent, system-wide adoption of digital health. But while the vision is clear, many of the practical questions are still emerging.
- Join us to unpack what the proposed NICE changes mean in practice for ICSs, Trusts and primary care — and what systems can do now to prepare, so the 90-day clock doesn't become a pressure point.

ORCHA

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KECKWICK LANE,
DARESBURY,
CHESHIRE, WA4 4FS

@orcha

DIGITAL HEATH. ***UNLOCKED***

Slido

Please scan the QR Code on the screen. This will take you through to Slido, where you can interact with us.

SCAN ME

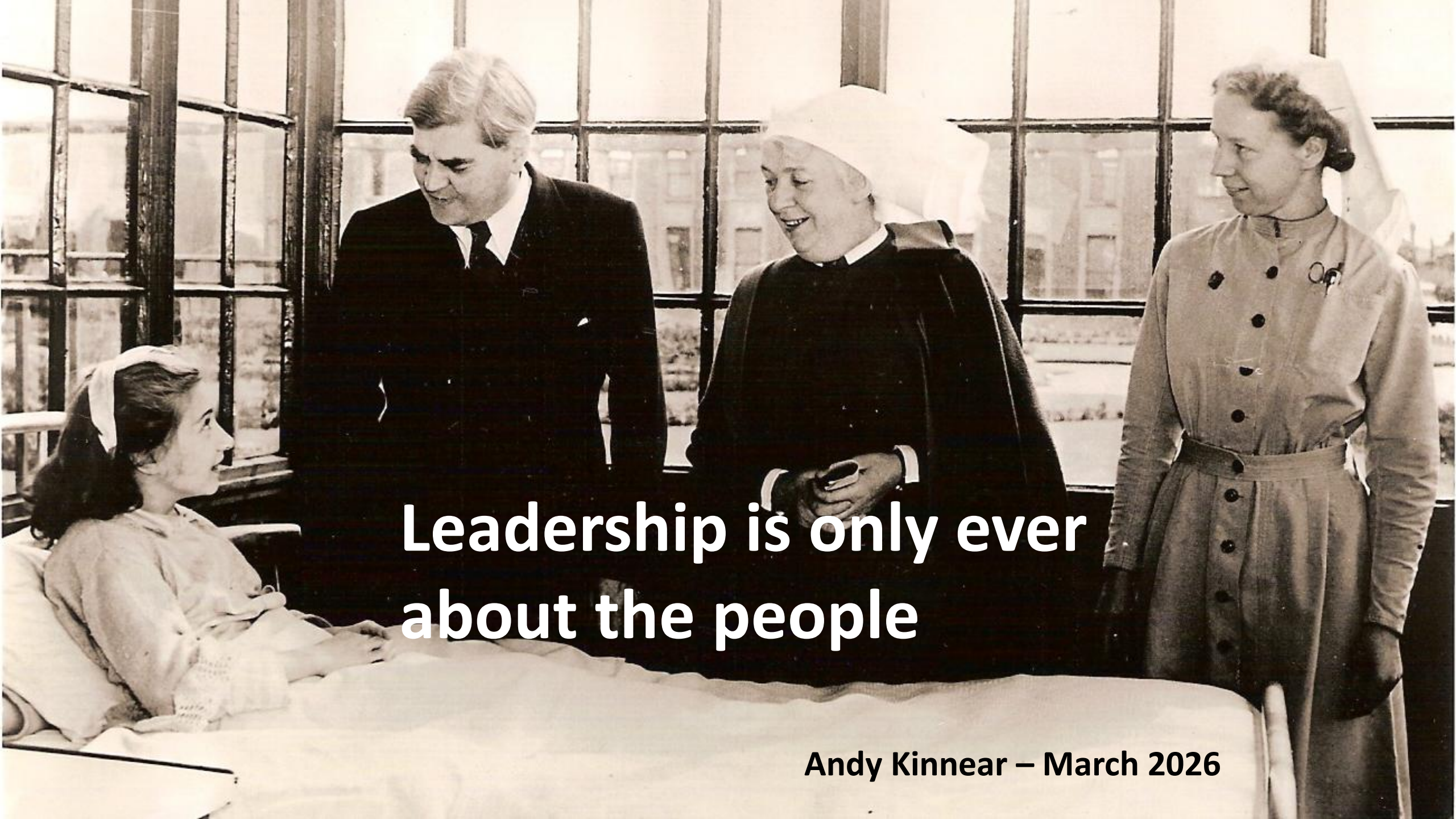
Lunch & Networking

Chair Afternoon Address

David Hancock
Director and Chair
INTEROPen

Leadership Lessons

Andy Kinnear
Executive Advisor
Andy Kinnear Consulting Ltd



Leadership is only ever about the people

Andy Kinnear – March 2026

Andy Kinnear

- **CIO in the NHS** – 30+ years NHS Service
- **Fellow** – BCS – The Chartered Institute for IT
- **Lead Professional –** Federation of Informatics Professionals (FedIP)
- **Certified Health CIO** – College of Health Information Management Executives (CHIME)
- **Fellow** – American College of Health Data Management (ACHDM)
- **Former:**
  - **Director of Digital Transformation** – NHS South, Central and West CSU
  - **Connecting Care Champion**– The Greater Bristol Digital Transformation programme
  - **Digital Health CIO Network Advisory Board member -** CIO Network
  - **NHS Digital Academy Steering group member –** NHS England
  - **Ex-Local Delivery Advisor** – NHS Digital

By what right am I here?

In 2010 I started <u>Connecting Care</u>

The Bristol, North Somerset and South Gloucestershire [BNSSG] LOCAL SHARED RECORD programme

The 2nd local shared record programme in the country after Hampshire Health Record and primary contributor of benefits analysis for the LHCRE business case in 2016

Connecting Care Partners – Olympic level cat herding!!

SCW | CSU
Building better care together

NHS
Blood and Transplant

NHS
Bristol, North Somerset and South Gloucestershire
Clinical Commissioning Group

University Hospitals Bristol NHS
NHS Foundation Trust

GOLDEN KEY

North Bristol NHS
NHS Trust

South Gloucestershire Council

BRISTOL CITY COUNCIL

addaction

Weston Area Health NHS
NHS Trust

North Somerset COUNCIL

bdp

dementia wellbeing service

Bristol Community Health

Sirona care & health

Weston Hospicecare
Bringing life to days

care UK

North Somerset Community Partnership
"Your Local Health Service"

St Peter's Hospice

St Mungo's
Ending homelessness
Rebuilding lives

BrisDoc Healthcare Services

NHS England

BritishRedCross

South Western Ambulance Service NHS
NHS Foundation Trust

West of England Academic Health Science Network

Avon and Wiltshire NHS
Mental Health Partnership NHS Trust

Connecting Care early timeline

- 2011 Original Vision
- 2012 Procurement
- 2013 Staged approach
  - First stage (pilot) started in March 2013. Key deliverables:
    - A working system for 500 users
    - Evaluation of benefits
    - Stage one themed on urgent & unplanned care

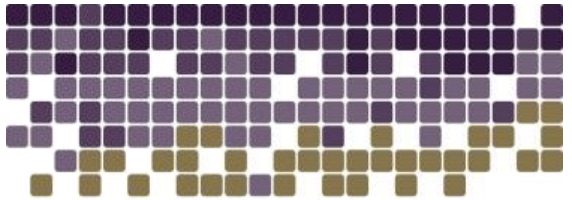
BAD

- 2014 A business case for the second stage

FYFV PUBLISHED

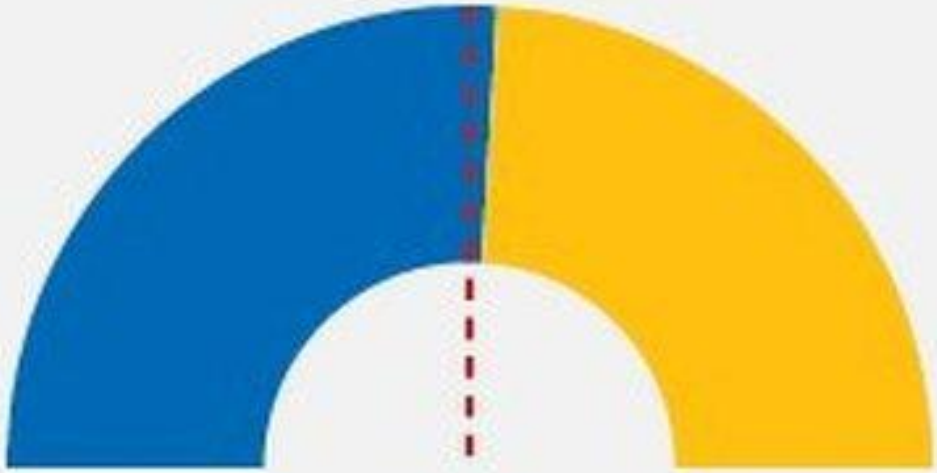
- 2015 Won awards
- 2016 Provided the BENEFITS CASE for the LHCRE programme
- 2017 onwards More Success

GOOD




2016

UK Votes Leave



Leave
51.9%

17,410,742
VOTES

Remain
48.1%

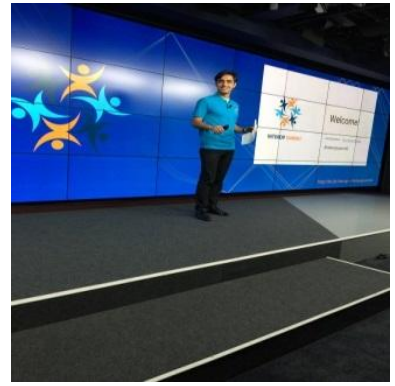
16,141,241
VOTES

Turnout		72.2%
Rejected ballots		26,033

2015/16 League One - Final Table (1st team)

	Club	P	W	D	L	F	A	GD	Pts
1	Wigan Athletic	46	24	15	7	82	45	37	87
2	Burton Albion	46	25	10	11	57	37	20	85
3	Walsall	46	24	12	10	71	49	22	84
4	Millwall	46	24	9	13	73	49	24	81
5	Bradford City	46	23	11	12	55	40	15	80
6	Barnsley	46	22	8	16	70	54	16	74
7	Scunthorpe United	46	21	11	14	60	47	13	74
8	Coventry City	46	19	12	15	67	49	18	69
9	Gillingham	46	19	12	15	71	56	15	69
10	Rochdale	46	19	12	15	68	61	7	69
11	Sheffield United	46	18	12	16	64	59	5	66
12	Port Vale	46	18	11	17	56	58	-2	65
13	**Peterborough United**	46	19	6	21	82	73	9	63
14	Southend United	46	16	11	19	58	64	-6	59
15	Swindon Town	46	16	11	19	64	71	-7	59
16	Bury	46	16	12	18	56	73	-17	57
17	Oldham Athletic	46	12	18	16	44	58	-14	54
18	Chesterfield	46	15	8	23	58	70	-12	53
19	Fleetwood Town	46	12	15	19	52	56	-4	51
20	Shrewsbury Town	46	13	11	22	58	79	-21	50
21	Doncaster Rovers	46	11	13	22	48	64	-16	46
22	Blackpool	46	12	10	24	40	63	-23	46
23	Colchester United	46	9	13	24	57	99	-42	40
24	Crewe Alexandra	46	7	13	26	46	83	-37	34

INTEROPen



@INTEROPSUMMIT

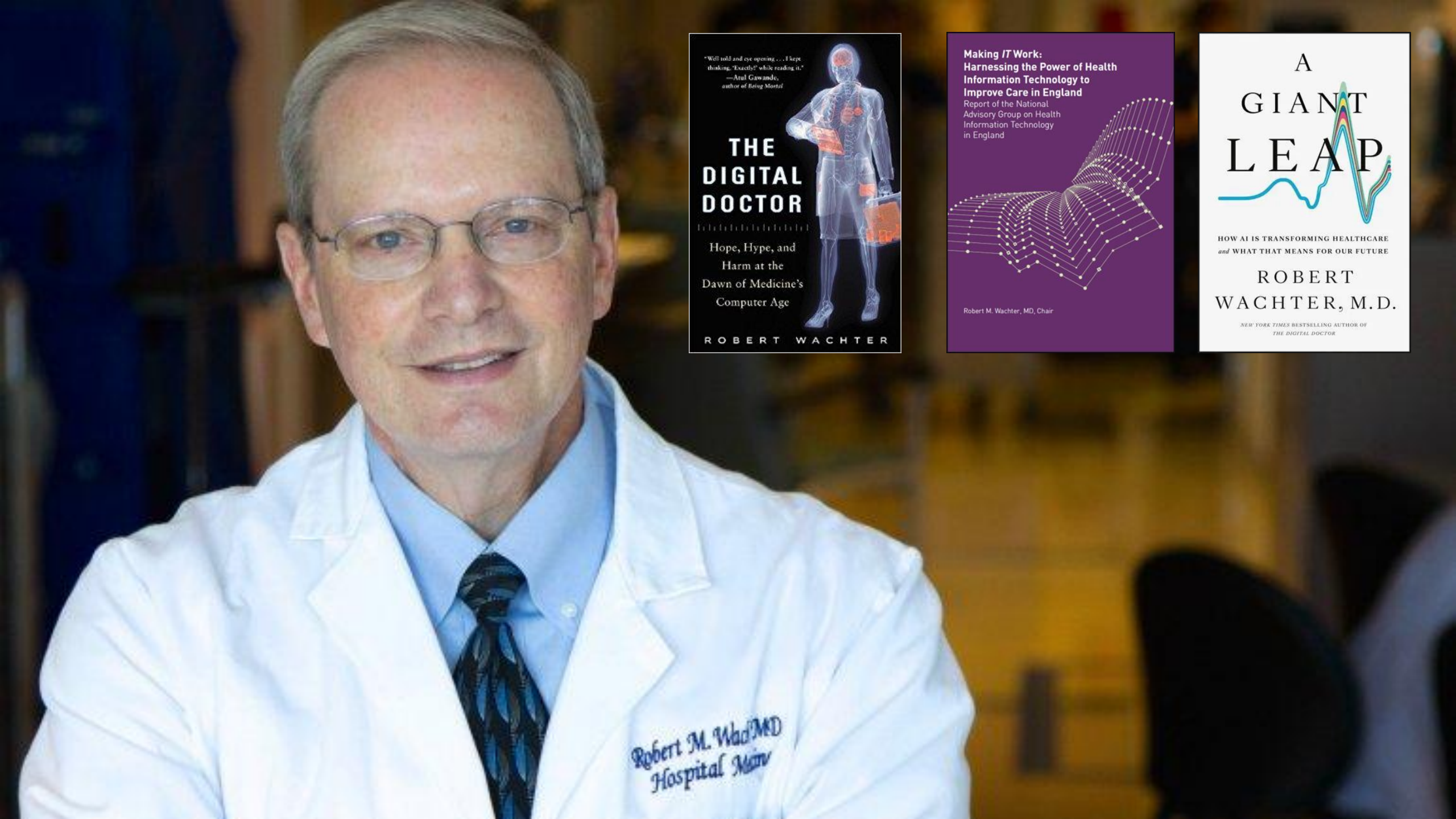
Where we create a common language for connecting our care system

March 2nd & 3rd 2017

DeepMind Health, King's Cross

INTEROPen

An Open Collaborative Leading Healthcare IT Interoperability


"Well told and eye opening . . . I kept thinking, 'Exactly!' while reading it."
—Atul Gawande, author of Being Mortal
THE DIGITAL DOCTOR
Hope, Hype, and Harm at the Dawn of Medicine's Computer Age
ROBERT WACHTER
Making IT Work:
Harnessing the Power of Health Information Technology to Improve Care in England
Report of the National Advisory Group on Health Information Technology in England
Robert M. Wachter, MD, Chair
A GIANT LEAP
HOW AI IS TRANSFORMING HEALTHCARE and WHAT THAT MEANS FOR OUR FUTURE
ROBERT WACHTER, M.D.
NEW YORK TIMES BESTSELLING AUTHOR OF THE DIGITAL DOCTOR

"To those who wonder whether the NHS can afford an ambitious effort to digitise in today's environment... the answer is clear:

the one thing the NHS cannot afford to do is to remain a largely non-digital system. It is time to get on with IT."

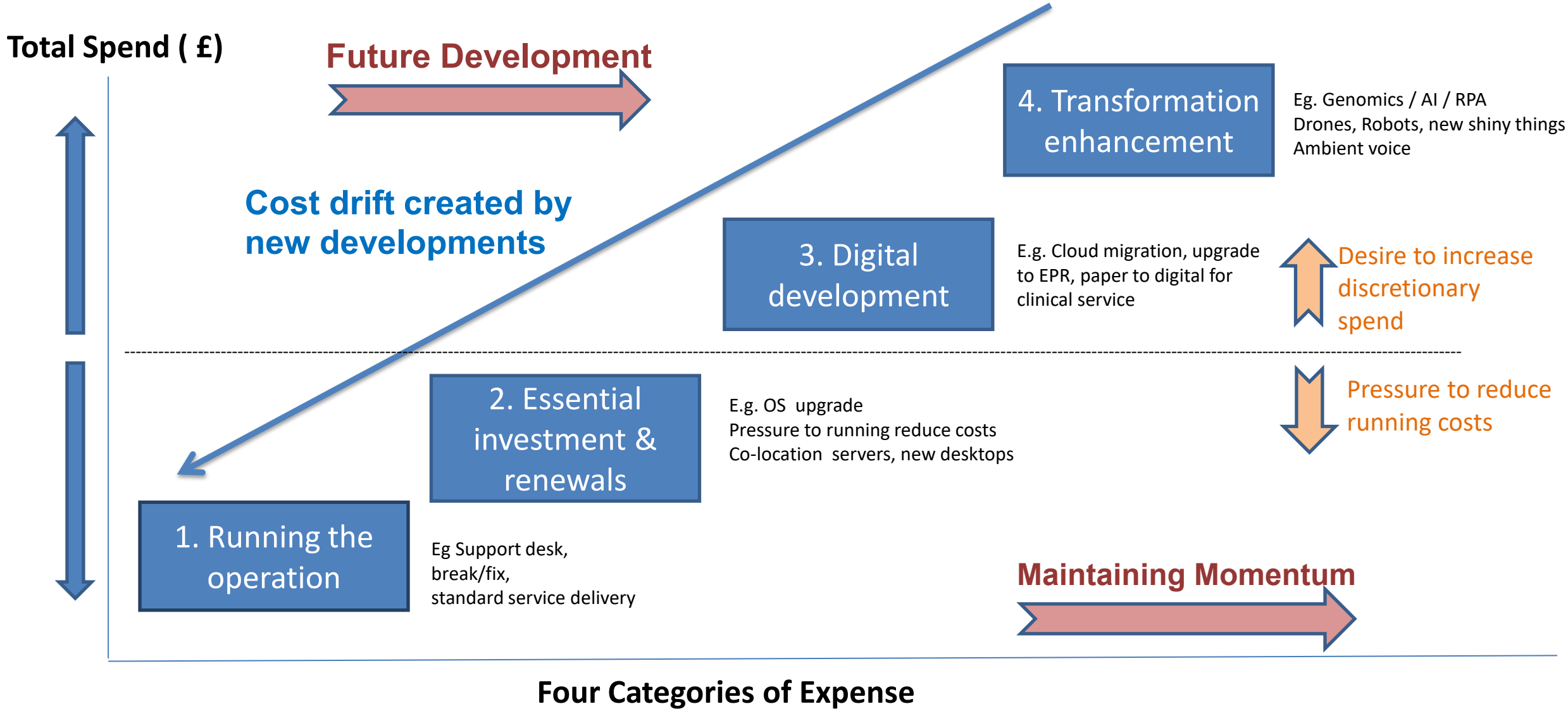
Wachter Review,
September 2016


Top 5
MUST-HAVE SLIDES
in your PowerPoint presentation

FLUVIAL GEOMORPHOLOGY

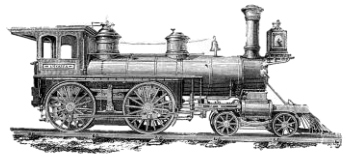

Choluteca.net

What does IT cost? How to explain to Execs.....



Leadership

Revolution Attributes:
1. Less Expensive
2. Easier to Acquire
3. Increased Quality



1st Industrial Revolution

18th Century

Steam-based Machines

2nd Industrial Revolution

19th-20th Century

Electrical Energy-based Mass Production

3rd Industrial Revolution

(1st Information Revolution)

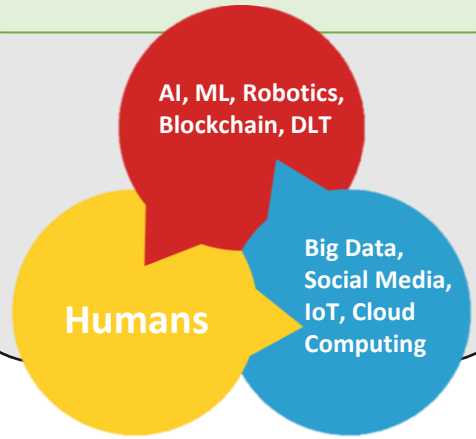
Late 20th Century

Computer and Internet-based Knowledge

4th Industrial Revolution

(2nd Information Revolution)

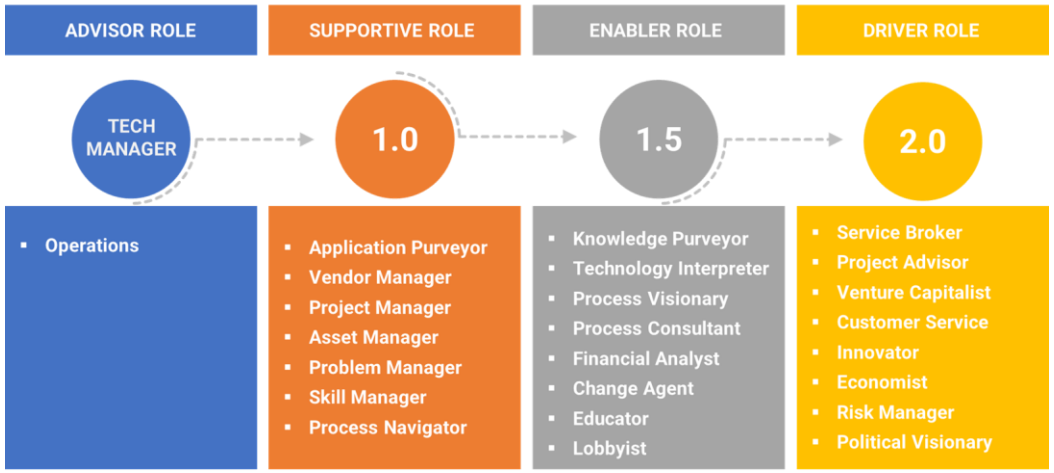
Early 21st Century



Confluence & Convergence of Emerging Tech

THE DIGITAL LEADER

FROM CRAWLING TO WALKING UPRIGHT TO CARRYING THE ORGANIZATION



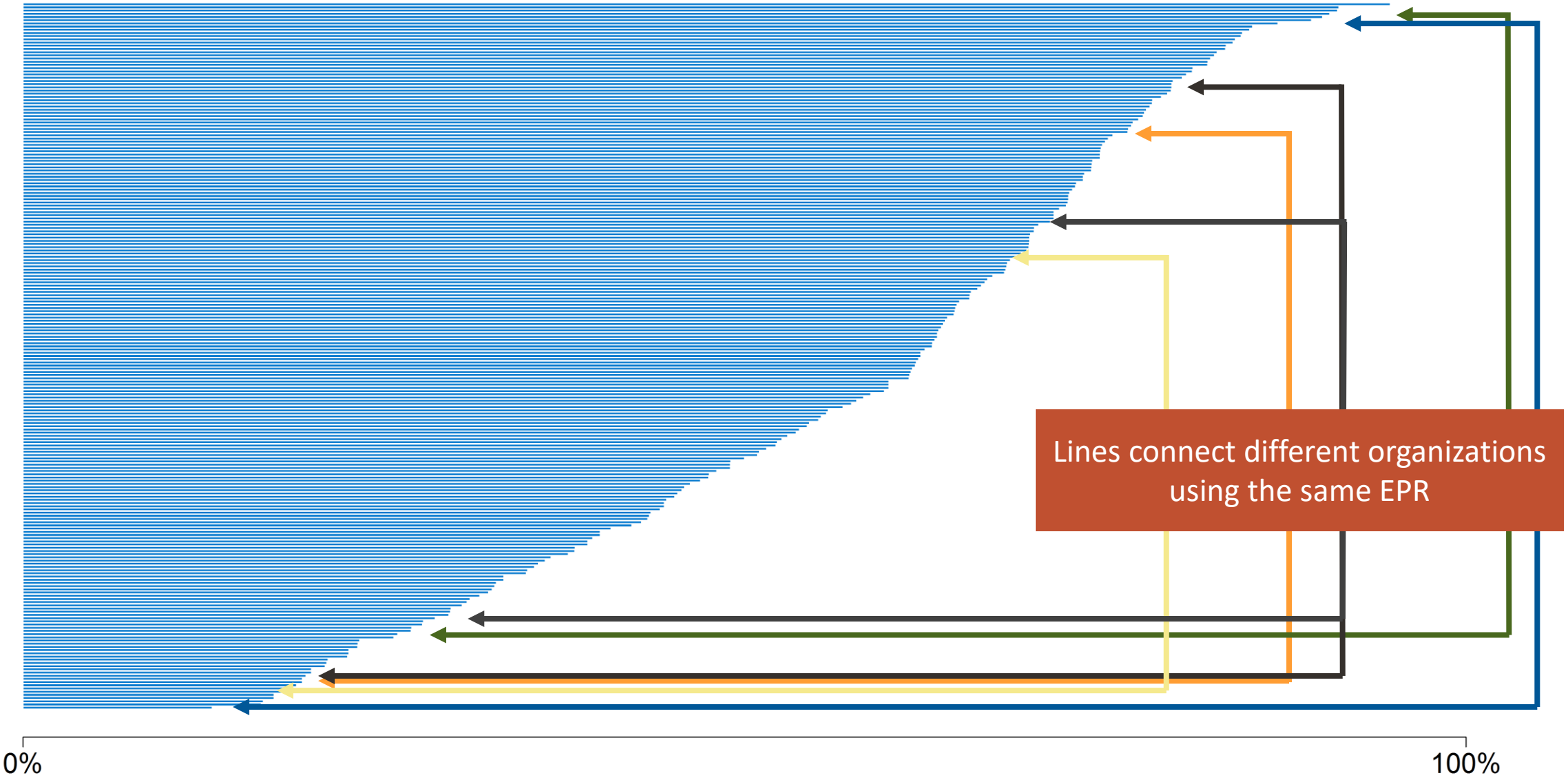
3.0 HIT LEADER

- Operational Management (2.0)
- Senior Management Leadership (Strategic)
- Change Leadership
- Innovation
- Talent Management
- Information Governance / Knowledge Management
- Relationship Management


ResMed India Pvt. Ltd.
Apollo 24|7
www.ciengine.com
The Future of Healthcare is Here!
Therapy Modes
CPAP
Apollo
Advancing healthcare with AI
VERTIPLANE X3
TECHEAGLE
Drone Deli

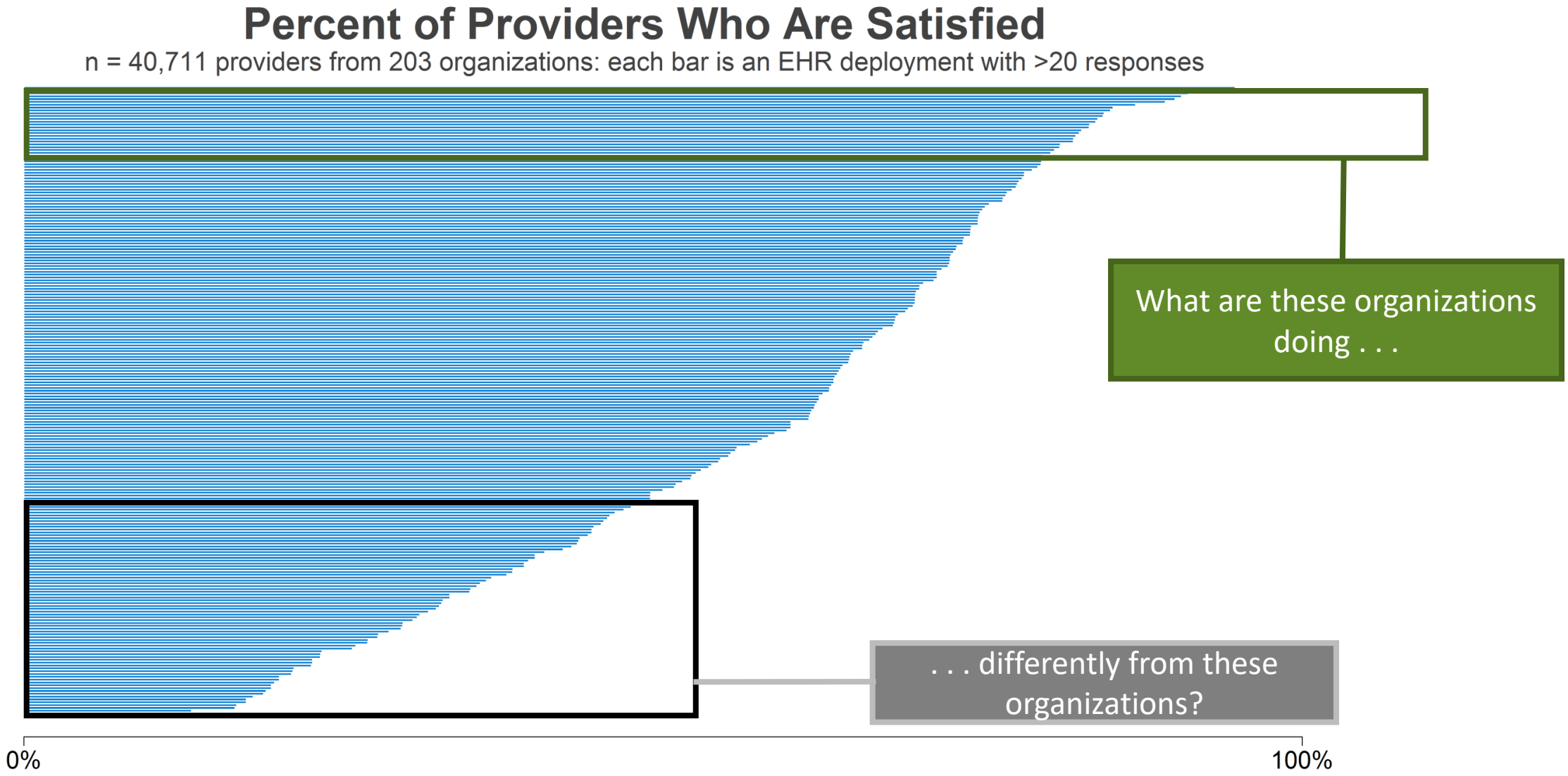
Percent of Providers Who Are Satisfied

n = 40,711 providers from 203 organizations: each bar is an EHR deployment with >20 responses



The Arch Collaborative
a KLAS initiative

Learn From the BEST!



5th July 1948 – Health Secretary Aneurin Bevan launched the NHS at Park Hospital in Manchester

The NHS is only ever about

PEOPLE

'Digital' is just a way for us to serve people better!

- Our Professionals
- Our Patients
- Our Public

NHS 70 YEARS OF THE NHS 1948 - 2018


FAIR PAY FOR NURSING!
Socialist Worker
STRIKE TO SAVE THE NHS
Kick out the Tories
HEALTH WORKERS NEED A PAY RISE
SAVE OUR NHS!
BUILD FOR A 24HR GENERAL STRIKE
socialistparty.org.uk
Open Your Fa
YOU CLAPPED NOW WE'RE CLAPPING BACK
Kerala Community Supports Nurses Strike
KAIRALI UK
Andrew
THE VOICE OF NURSING


Face Shield

Thank you

Slido

Please scan the QR Code on the screen. This will take you through to Slido, where you can interact with us.

SCAN ME

Main Plenary Skill Clinic

David Hancock
Director and Chair
INTEROPen

Dr Ian McNicoll
Former GP and Clinical Informatics Leader, Interoperability and Data Standards
INTEROPen

Into the weeds of Interoperability…

Usual Suspects, False Gods and Hidden Perils

Ian McNicoll

INTEROPen

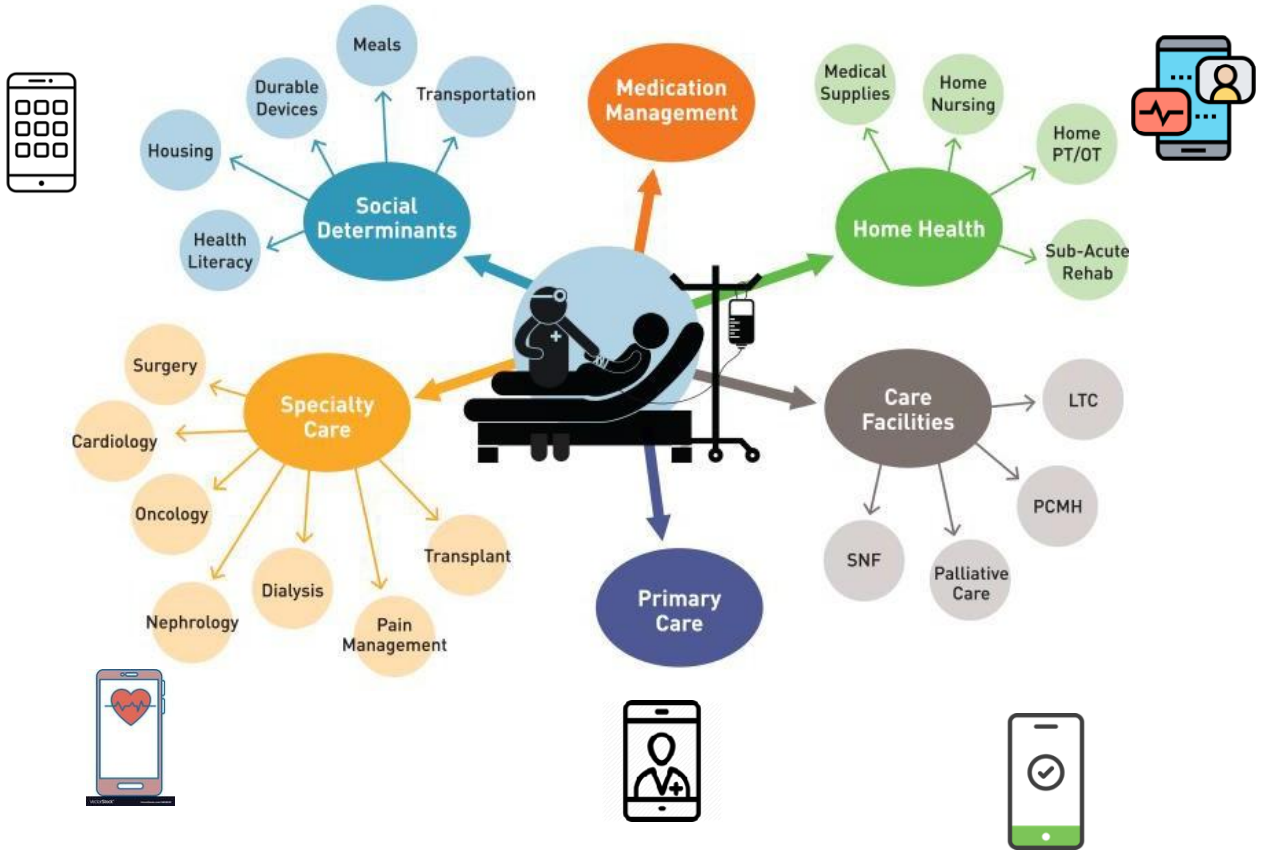
Dr Ian McNicoll

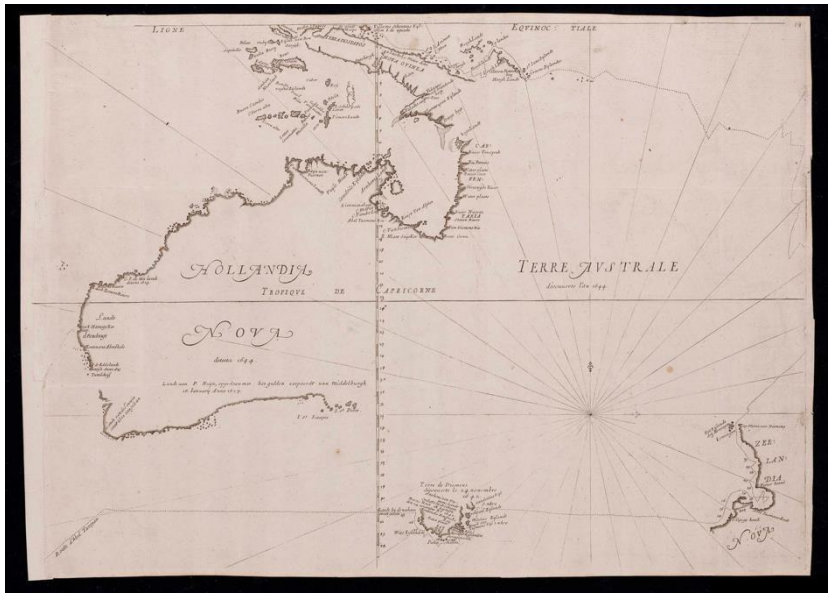
- Former Glasgow GP
  - in digital health since 1984
    - working on clinical information standards since 2002
    - INTEROPen Board
    - openEHR International Board
- freshEHR Clinical Informatics
  - Supporting standards-based digital health/care development
    - CEO / Founder -> Advisor
    - openEHR, HL7 FHIR, SNOMED-CT

openEHR
Recognised Educator

INTEROPen

The complexity of digitising/standardising healthcare

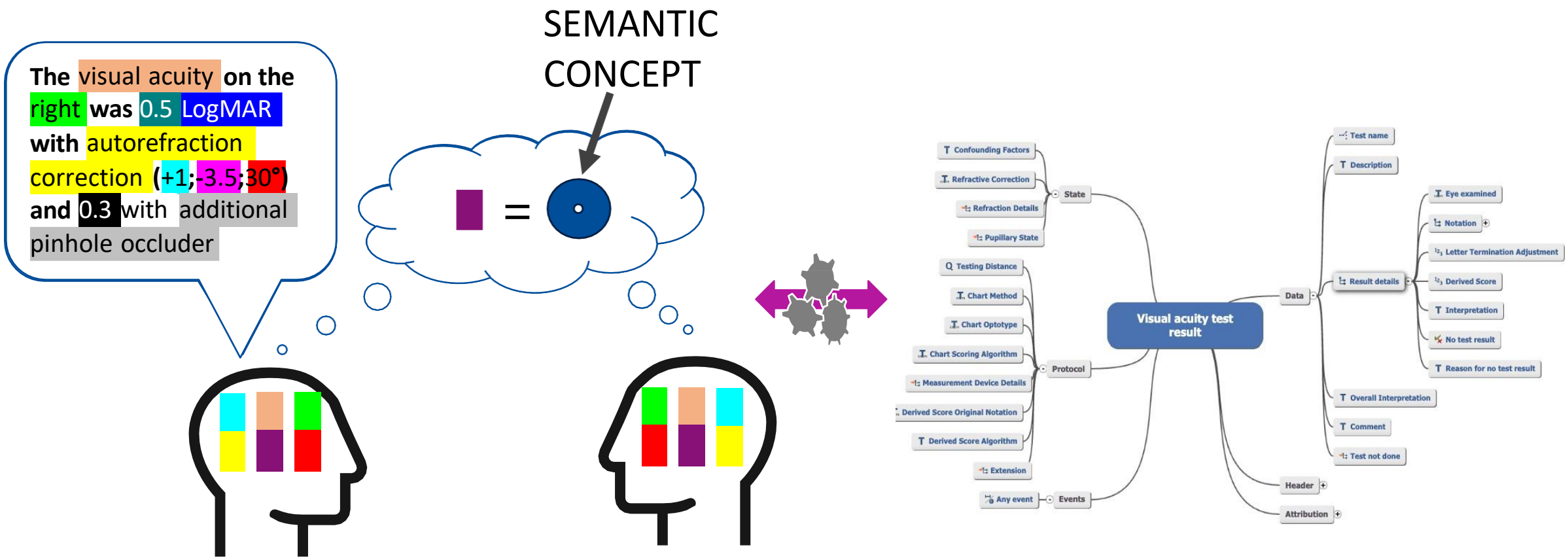




INTEROPen

Into the granular weeds….

credit Dr Lars Fuhrmann



…based on shared semantic (mental) models = shared clinical knowledge

Usual Suspects, False Gods and Hidden Perils

- Usual Suspects
  - Vendor lock-in
  - Not enough enforcement of standards
    - In legislation
    - In procurement
  - “It is not a technical problem”
- False Gods
  - Overreliance on SNOMED and ‘ontology’
  - Secondary-use data standards
  - User-centred design
  - ‘Clinicians in control’
- Hidden Perils
  - Legacy
  - Culture
  - Context

Health and Care Act 2022: information standards

Assessment of the impact of making information standards mandatory for public and private health, and adult social care providers in England.

Unlocking the future of health data in Europe

The European Health Data Space (EHDS) is a cornerstone of the European Health Union, and the **first common EU data space** dedicated to a specific sector as part of the European strategy for data.

EHR @dataspace

INTEROPen

Standardisation not standards

“.. the problem of making "meaning"
is that like "making babies" it takes time…

One can't do it by oneself-

someone else has to make a contribution…

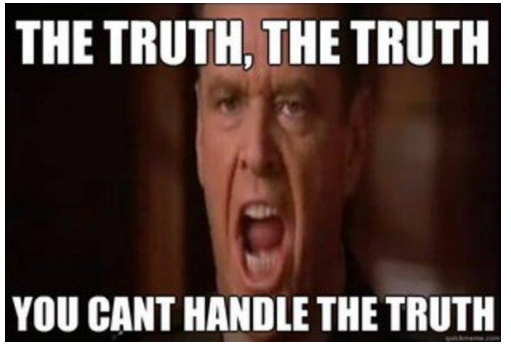
It doesn't happen all at once, and once born, it changes, grows and develops”

Terry Burridge,
Primary Care Complexity Group

Sparked
HL7 FHIR

openEHR
HL7 FHIR

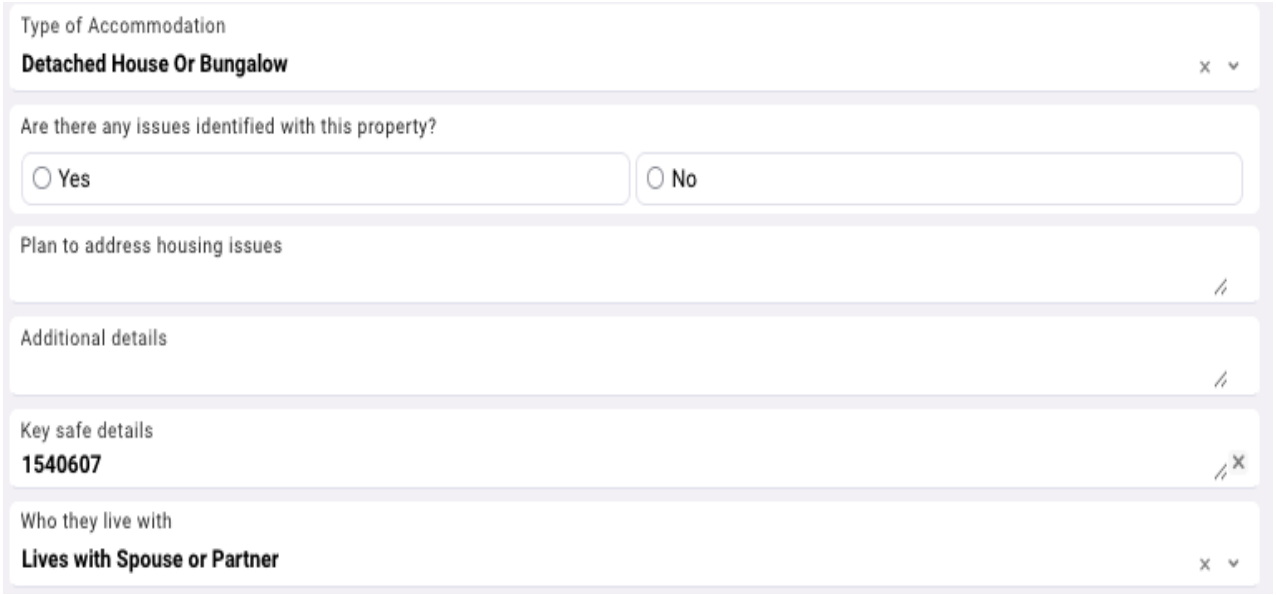
Work back from Secondary use?



- FDP
  - "Canonical data model"
- Registries
- Research

Accommodation Status	Represents a Subject of Care's current accommodation or living arrangement.	
Attribute	**Logical Data Type**	**Description**
Accommodation Status ID	id	Unique key for this record.
Accommodation Status Code	code	Code representing the accommodation type or status (e.g., own home, care home). [NHS Data Dictionary]
Effective From Date	Date	Date from which this accommodation status is valid.
Effective To Date	Date	Date on which this accommodation status ceased to be valid.

- Flattened, simplified perspective
- Frontline data is just too complex



Interop is ‘not a technical problem’?

A recent study of EHR interoperability found that **68% of data was “understood” when exchanged across different sites using the same vendor**, but only **22% was “understood” when exchanged across different EHR vendors.**

JAMIA
A SCHOLARLY JOURNAL OF INFORMATICS IN HEALTH AND BIOMEDICINE

AMIA
INFORMATICS PROFESSIONALS. LEADING THE WAY.

Article Navigation

Quantitating and assessing interoperability between electronic health records

Elmer V Bernstam ✉, Jeremy L Warner, John C Krauss, Edward Ambinder, Wendy S Rubinstein, George Komatsoulis, Robert S Miller, James L Chen

Journal of the American Medical Informatics Association, ocab289, https://doi.org/10.1093/jamia/ocab289
Published: 07 January 2022 **Article history** ▾

INTEROPen

Perils of SNOMED and ‘ontology’

Blood pressure (observable entity)

SCTID: 75367002

75367002 | Blood pressure (observable entity) |

en Blood pressure (observable entity)
en Blood pressure
en BP - Blood pressure

Inheres in → Structure of cardiovascular system
Property → Pressure (property)
Scale type → Quantitative value
Characterizes → Cardiac process

JURISDICTION
United Kingdom
ORGANIZATION
HL7 UK
PROJECT
HL7 FHIR® UK Core R4

UK Core Observation Vital Signs Blood Pressure

Defines the additional constraints and extensions on the UK Core Observation Vital Signs profile, for the recording of blood pressure observations

This is the collaborative project for the HL7 UK Core for FHIR R4. Please subscribe using the button above to re
changes and updates. The project contains multiple guides which are documented in the project guides sectio

type Profile on **Observation** | FHIR R4 | status Active | version 1.0.0

Canonical https://fhir.hl7.org.uk/StructureDefinition/UKCore-Observation-VitalSigns-B

Children (23)

- 24 hour blood pressure (observable entity)
- Arterial blood pressure (observable entity)
- ~~Arterial wedge pressure (observable entity)~~
- ~~Average blood pressure (observable entity)~~
- ~~Diastolic blood pressure (observable entity)~~
- ~~Intracardiac pressure (observable entity)~~
- Invasive blood pressure (observable entity)
- Lying blood pressure (observable entity)
- ~~Maximum blood pressure (observable entity)~~
- ~~Mean blood pressure (observable entity)~~
- ~~Minimum blood pressure (observable entity)~~
- Non-invasive blood pressure (observable entity)
- ~~Pulmonary artery pressure (observable entity)~~
- Self reported blood pressure (observable entity)
- Sitting blood pressure (observable entity)
- Standing blood pressure (observable entity)
- Systemic blood pressure (observable entity)
- Systolic blood pressure (observable entity)
- ~~Venous pressure (observable entity)~~
- ~~Wedge pressure - a wave (observable entity)~~
- ~~Wedge pressure - v wave (observable entity)~~

London Universal Care plan

Legacy, Culture and Context

Universal Care Plan content - quick guide

Non-clinicians and clinicians can submit

Only clinicians can submit

Click links (underlined text) to open examples from completed UCPs and external websites

How to use the UCP

Universal Care Plan System Training Video

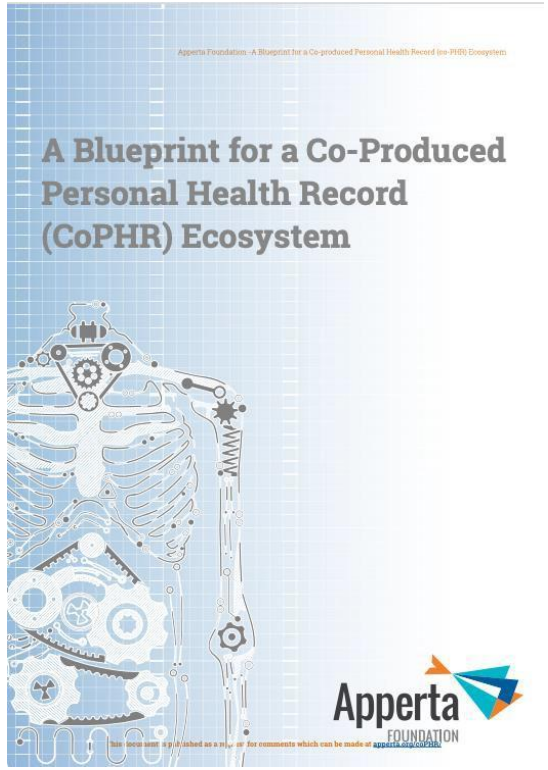
Need Help?

UCP Helpdesk

020 3880 0285
ucp.helpdesk@swlondon.nhs.uk

Frequently Asked Questions

UCP Form	Content		Directions / Tips
Personal Information	Preferred name Gender & pronouns	Patient contact details Personal details	Demographics will be imported (PDS)
Personal & Professional Contacts	Personal relationships & contacts Lasting power of attorney	Deputy for personal welfare People they care for Professional contacts	Parental responsibility guidance Carer contingency planning
Alerts	Medical alerts Mental health alerts	Personal alerts Social alerts	Shown in the banner of the care plan
Communication & Accessibility	Communication differences Support with communication	Supportive adjustments to access health and care services	Has the reasonable adjustment flag imported from GP system
What Matters to Them	Who they are Daily life & interests	Concerns and wellbeing Goals	NHSE guidance on involving people in their own health and care NHSE dementia good care planning guidance
Diagnosis & Prognosis	Current diagnosis Awareness of diagnoses	Other significant medical history Prognosis	The surprise question
Symptom Management Plan	Symptom management plan Crisis management plan	Day-to-day management plan Sickle cell pain management plan	Provide information for how to manage these in a crisis or non-crisis (day-to-day) situation
CPR & Treatment Escalation Decisions	Record CPR or treatment escalation decision	Capacity for involvement in decisions	Resuscitation Council UK
Thinking Ahead	Advance decision to refuse treatment (ADRT)	End of life care wishes Organ donation	Guidance of Advance Decision to Refuse Treatment Organ donation
Medications & Allergies	Current medications and allergies in GP record	Medications & MAAR chart locations in residence	The information is imported from GP connect directly and will appear as read only Medications and allergies cannot be entered manually
Daily Activities & Support Needs	WHO performance status Frailty score GMFCS	Support required with activities Lifestyle factors Driving and keeping safe	The Rockwood Clinical Frailty Score is a tool used to estimate individual's degree of frailty on a scale of 1 (very fit) to 9 (terminally ill)
Medical Devices	Feeding equipment Catheterization Stoma	Respiratory Cardiac Intravenous	Information about any devices currently in use to support care



openEHR

Perils of user-centred design?

1. HCD tends to lead to sampling bias
2. End-user input might be biased and limited
3. HCD tends to lead to over reliance on (fresh) end-user input
4. End-users are only a subset of the people who should be heard during eHealth design
5. Understanding the added value of HCD is complicated
6. HCD risks supporting the status quo
7. Traditional HCD and *Designing for Behavior Change* are not a good match
8. HCD tends to miss out on ethical, societal, and political aspects
9. HCD thinks about the beginning but not the end

The Limitations of User-and Human-Centered Design in an eHealth Context and How to Move Beyond Them

*...It is at the core of the Ce HRe S road map, and in recent years, many developers and researchers have reported their experiences with holistic design (and the Ce HRe S road map) in case studies (eg, the study by **van Velsen** et al [25]). Holistic design, in its turn, has disadvantages and challenges that design teams will have to deal with (such as ensuring the collaboration of health professionals [65] and ensuring proper expectation management among all stakeholders [66])....*

Lex van Velsen, Geke Ludden, Christiane Grünloh

J Med Internet Res 2022;24(10):e37341

New(ish) publication on the limitations of human-centered design (and the story behind it)

https://www.christianegruenloh.com/2023/05/17/newish-publication-on-the-limitations-of-human-centered-design-and-the-story-behind-it/

“I am a doctor and I want my sausages!!”

ALLAN WARDHAUGH CONSULTING

Clinical Leadership vs. Clinical Hubris

The clinical community have much to develop to ensure Clinical Networks can truly foster meaningful clinical engagement.

Entitled demanders.

Clinicians participating in Networks, and especially those leading them must avoid slipping into the ‘I’m a doctor and I want my sausages’ mode. The clinical perspective is important, but it is not the only one. There are wider system pressures, health outcome determinants and other clinical areas which may be blind spots for any given clinician. A degree of humility is required.

https://www.awardhaugh.com/post/clinical-networks-part-3-clinical-engagment-vs-clinical-endorsement

Legacy, culture and context … “Not for CPR”

London UCP

Clinical Recommendations

Please provide clinical guidance on specific interventions that may or may not be wanted or clinically appropriate, including being taken or admitted to hospital +/- receiving life support. Please select from the options below as appropriate.

Clinical recommendation *

- ○ Full active treatment including CPR
- ○ Full active treatment including in acute hospital setting, but not CPR
- ● **Treatment of any reversible conditions (including acute hospital setting if needed) but not for any ventilation or CPR**
- ○ Treatment of any reversible conditions but only in the home/hospice setting: keep comfortable
- ○ Symptomatic treatment only: keep comfortable
- ○ Other

Further details

CPR Recommendation

Do you recommend CPR? *

○ Yes ● No

Date *

10/04/2025 Today

Reasons why CPR would be inappropriate, unsuccessful, or not in the patient's best interests

GP system

- Resuscitation
- PPC
- PPD
- EHCP
- Carers

- **CPR Status not recorded**
- **Preferred place of care preference not recorded**
- **Preferred place of death preference not recorded**
- **No information about EHCP**
- **No Record of ADRT**
- **No recorded information about carers**

Finding of resuscitation status (finding)

SCTID: 365870005

365870005 | Finding of resuscitation status (finding) |

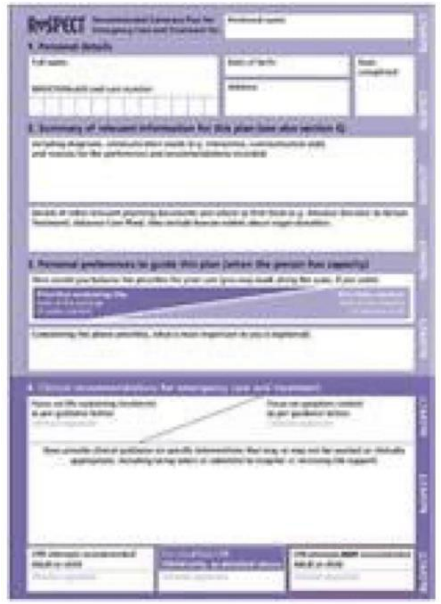
Finding of resuscitation status

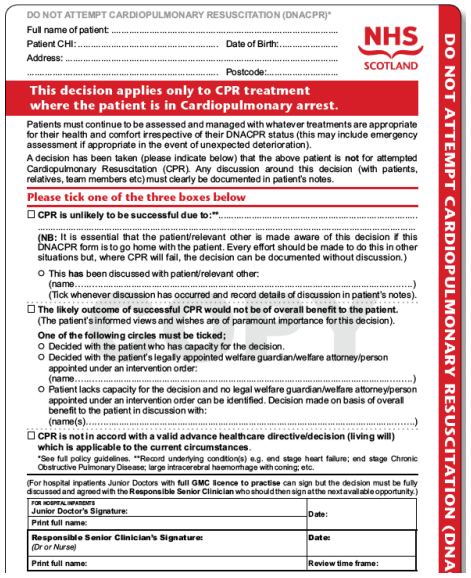
Finding of resuscitation status (finding)

Interprets → Resuscitation status

Children (2)

- For resuscitation (finding)
  - For cardiopulmonary resuscitation (finding)
- Not for resuscitation (finding)
  - Do not resuscitate status with supporting documentation (finding)
  - Not for cardiopulmonary resuscitation (finding)





DO NOT ATTEMPT CARDIOPULMONARY RESUSCITATION (DNACPR)*

Full name of patient: .....

Patient CHI: ..... Date of Birth: .....

Address: ..... Postcode: .....

NHS SCOTLAND

This decision applies only to CPR treatment where the patient is in Cardiopulmonary arrest.

Patients must continue to be assessed and managed with whatever treatments are appropriate for their health and comfort irrespective of their DNACPR status (this may include emergency assessment if appropriate in the event of unexpected deterioration).

A decision has been taken (please indicate below) that the above patient is not for attempted Cardiopulmonary Resuscitation (CPR). Any discussion around this decision (with patients, relatives, team members etc) must clearly be documented in patient's notes.

Please tick one of the three boxes below

☐ **CPR is unlikely to be successful due to:**** .....

(**NB:** It is essential that the patient/relevant other is made aware of this decision if this DNACPR form is to go home with the patient. Every effort should be made to do this in other situations but, where CPR will fail, the decision can be documented without discussion.)

○ **This has been discussed with patient/relevant other:**
(name .....)
(Tick whenever discussion has occurred and record details of discussion in patient's notes).

☐ **The likely outcome of successful CPR would not be of overall benefit to the patient.**
(The patient's informed views and wishes are of paramount importance for this decision).

One of the following circles must be ticked;
○ Decided with the patient who has capacity for the decision.
○ Decided with the patient's legally appointed welfare guardian/welfare attorney/person appointed under an intervention order:
(name .....)
○ Patient lacks capacity for the decision and no legal welfare guardian/welfare attorney/person appointed under an intervention order can be identified. Decision made on basis of overall benefit to the patient in discussion with:
(name(s) .....)

☐ **CPR is not in accord with a valid advance healthcare directive/decision (living will) which is applicable to the current circumstances.**

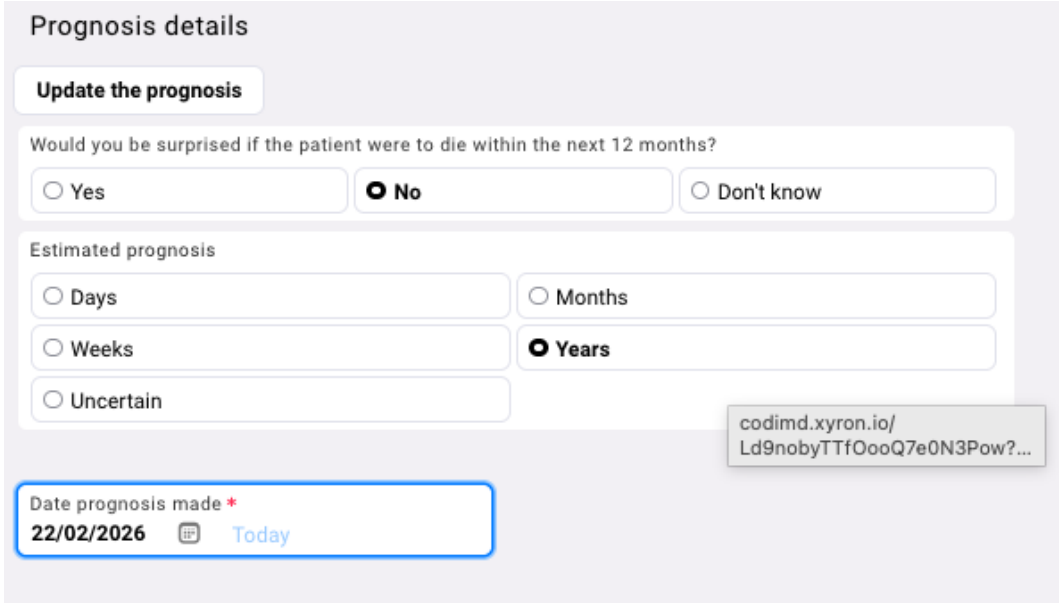
*See full policy guidelines. **Record underlying condition(s) e.g. end stage heart failure; end stage Chronic Obstructive Pulmonary Disease; large intracerebral haemorrhage with coning; etc.

(For hospital inpatients Junior Doctors with **full GMC licence to practise** can sign but the decision must be fully discussed and agreed with the **Responsible Senior Clinician** who should then sign at the next available opportunity.)

FOR HOSPITAL INPATIENTS **Junior Doctor's Signature:**	**Date:**
Print full name:	
Responsible Senior Clinician's Signature: *(Dr or Nurse)*	**Date:**
Print full name:	**Review time frame:**

DO NOT ATTEMPT CARDIOPULMONARY RESUSCITATION (DNA

Legacy, culture and context … “Years of life”



- Gold standards framework prognostic indicator stage A (blue) - year plus prognosis (finding)
- Gold standards framework prognostic indicator stage B (green) - months prognosis (finding)
- Gold standards framework prognostic indicator stage C (yellow) - weeks prognosis (finding)
- Gold standards framework prognostic indicator stage D (red) - days prognosis (finding)
- Gold standards framework supportive care stage 1 - advancing disease (finding)
- Gold standards framework supportive care stage 2 - increasing decline (finding)
- Gold standards framework supportive care stage 3 - last days: category B - months prognosis (finding)
- Gold standards framework supportive care stage 3 - last days: category C - weeks prognosis (finding)
- Gold standards framework supportive care stage 3 - last days: category D - days prognosis (finding)

Take-aways

- Standards-based development is the future
  - But no magic solutions
  - It is a team sport
  - The granular details matter
- Requires clinical informatics ‘architects’
  - Deep / broad informatics knowledge/expertise
    - Able to guide clinical engagement
  - Understand the bigger picture
    - Able to absorb risk
  - Make use of expertise/knowledge within suppliers
  - Driven from primary use, not secondary use
    - You can’t “Build the cow back from the sausage”

https://www.linkedin.com/in/ianmcnicoll

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Food, Drinks & Networking