

Swanwick

Heath Roberts  
Chair, London CIO Council  
T.CIO SLAM

Theresa Bicknell  
Chief Digital Officer  
for London

Information Lead  
UCL for NHS

Richard Wells

Richard Wells  
Director of Planning  
& Information  
NHS England London

Amanda Lyle  
NHS for London

Mark Hiley  
Director, NHS



Profile, UK  
An amazing effort for Londoners

Director of  
Informatics  
NHS CCS

# ONE LONDON LOCAL HEALTH & CARE RECORD EXEMPLAR (LHCR)

## RESPONSE TO INVITATION TO PARTICIPATE

With Peter, NHS CIOs  
Positive step for Londoners -  
great joint working  
25th April 2018

Geraldine Wingfield-Hill  
Director of Digital NHS LSP

Mike Par CIO NHS (London)  
connecting the capital

TOGETHER  
NHS! TOGETHER  
Healthier London  
Healthier Partnership

'Locally owned, locally driven, locally responsive'

Michael Marshall  
LSP PARTNER NWL

Jane Barnard  
NHS effort

Senior Responsible Officer:

Luke Readman, Chief Information Officer, East London Health & Care Partnership

Regional Clinical Lead:

Dr Jonty Heaversedge, Chief Clinical Information Officer, NHS England (London)

Tox Donnelly  
OEDITH for  
London NHS

Luke Readman  
A remarkable effort!  
A great future!

Amanda Lyle  
A remarkable effort!

Victoria Otley-Groom  
South West London  
West of London  
Health Partnership  
GO CAMPAIGN!

# Policy & National Context

## Accountable Care (FYFV Oct 14 & Mar 17)

- Provider Collaborative
- Population (Health, Care & Payment)

## Industrial Strategy (Sept 17)

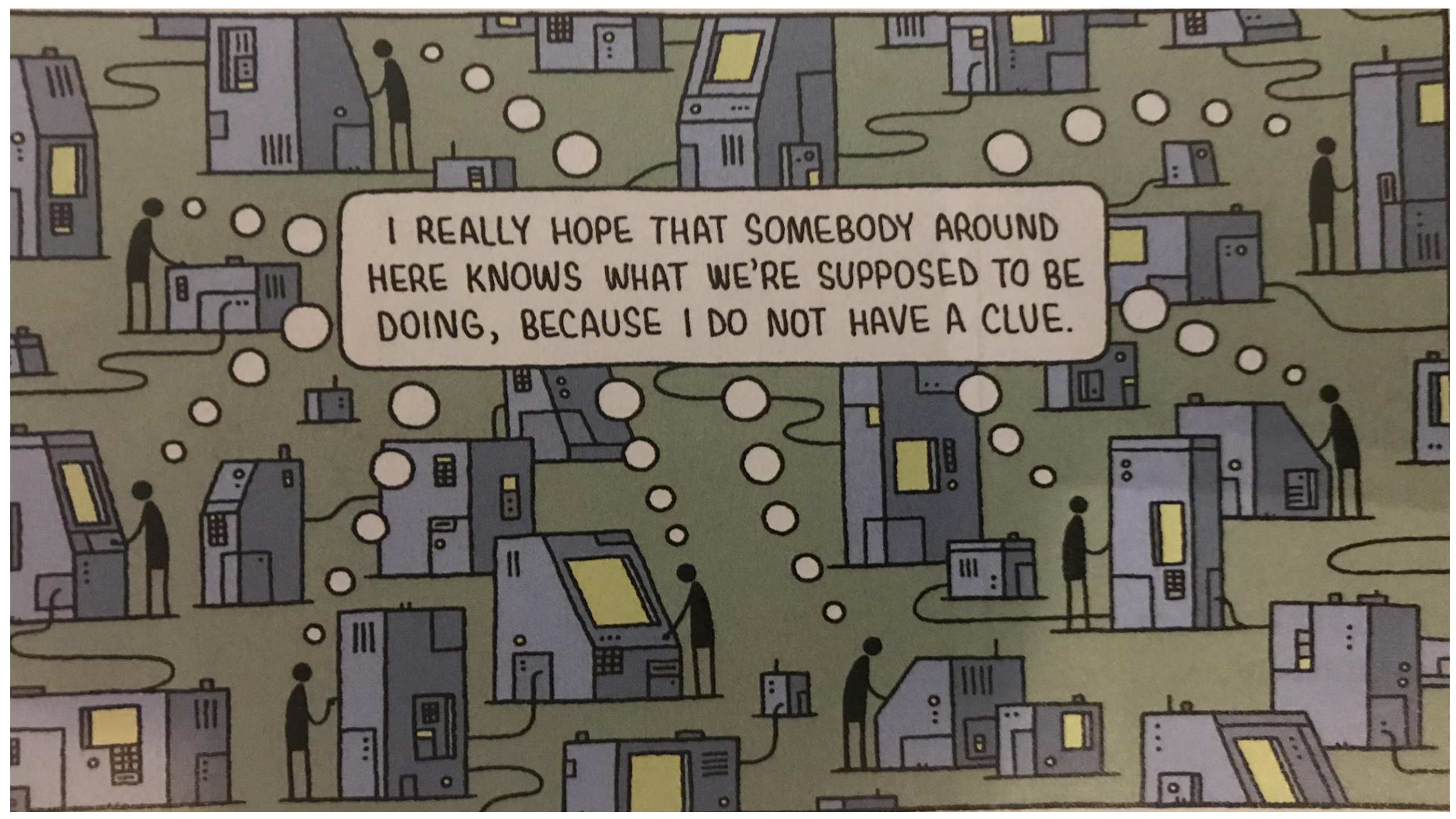
- Regional data sharing hubs of 3m to 5m pop (3 to 5 off)
  - Research
  - Service Improvement
  - Clinical improvement
  - Planning/Payment Reform

## National Institute of Health Research (Nov 17)

- Twelve actions to support and apply research in the NHS
  - Enhance our data infrastructure

## National IT Strategy (Sept 17)

Better Health, Better Care, Lower Cost				
Empower People	Enable Clinicians	Integrate the Health and Care System	Better Management Information	Build the Future
NHS.UK	Global Digital Exemplars and Fast Followers	Regional Interoperability Hubs	Single Source of Truth	Life Sciences and Research Platform
Apps Library	Digital Academy and Workforce Education	Urgent and Emergency Care	Frictionless Performance Management	Genomics and Precision Medicine
Developers' Ecosystem	GPSoc refresh	Elective Care	Population Health Dashboard	Machine Learning and AI
WiFi and Home Page	Extended Summary Care Record	Mental Health	Analytics Capability	Bioinformatics Institute
NHS Online	e-Prescribing	Women and Children	SUS for Transactions	
	Decision Support	Chronic/Co-morbid disease		
	Integrated Care Plans	Social Care		
← Foundational Infrastructure Projects →				
Patient Identity				
Information Governance and Transparency				
Interoperability and Enterprise Architecture				
Personal Health Record and APIs for Apps				
APIs / Standards				



I REALLY HOPE THAT SOMEBODY AROUND  
HERE KNOWS WHAT WE'RE SUPPOSED TO BE  
DOING, BECAUSE I DO NOT HAVE A CLUE.

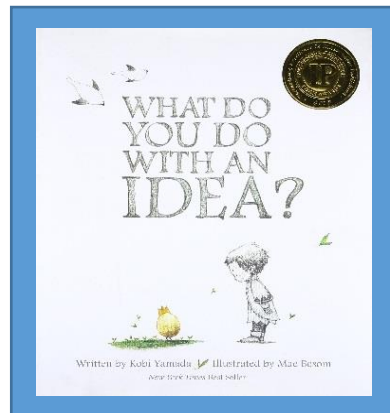
# London?

## What Do You Do With An Idea?

*Kobi Yamanda*

The story of one brilliant idea and the child who helps to bring it into the world. As the child's confidence grows, so does the idea itself. And then, one day, something amazing happens. This is a story for anyone, at any age, who's ever had an idea that seemed a little too big, too odd, too difficult.

- Complex
- Variation
- Tribal
- Opportunity
- Excellence
- Concentration
- Willingness



# A Learning Health System for London

....strive to become **learning health systems** by making **clinical data** research grade and lowering the cost of data acquisition and **knowledge generation**

Victor Dzau. *Transforming Academic Health Centres for an Uncertain Future* (2013)



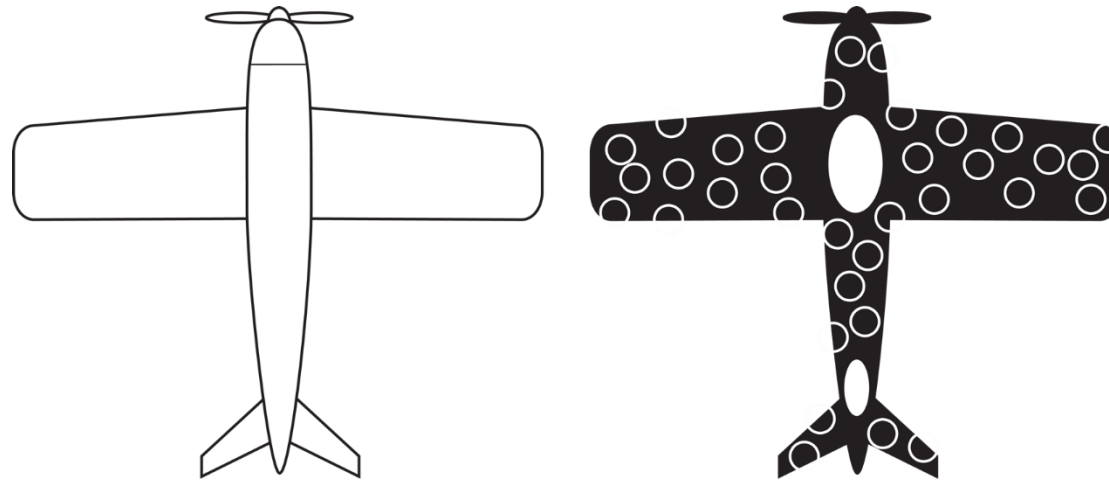
The NEW ENGLAND  
JOURNAL of MEDICINE

- Every **consenting** patient's characteristics and experience is available to learn from
- Best practice **immediately available**
- Improvement is **continuous**
- This happens **routinely and efficiently**
- This is part of a **culture**

Charles Friedman. *Toward Complete & Sustainable Learning Systems* (2014)



## Why I Like Unlocking Power of Data So Much



\*Source: Matthew Syed 'Black Box Thinking'

# Six Core Features of One London LHCRE



1. Extend and build upon a single approach to record sharing via federated exchange mechanisms both within STP footprints and pan London
2. Distributed actionable data service (in real time, linked, normalised, common information model) for 9M Londoners, plus those outside London where treatment is delivered via London providers.
3. Exploit significant opportunities to enable active patient participation by linking them to their data and providing an app ecosystem



4. Utilities that use the data service to provide population health and business intelligence (information service for a single version of the data)
5. To develop London-wide governance of trusted local clinical improvement methodology
6. To provide a single data approach for research pan London

## BENEFITS SHOWCASE

- Single point of access to a full view of an individual health and social care information

'I arrived for a planned visit at an elderly patient's home with the entry key code. I searched everywhere in the home and could not find the patient. The patient was not home! I left and went back to my car and logged onto the Clinical Portal. I was able to see that the patient had been admitted to Whipps Cross'

*Community Matron - Redbridge*

- Reduction of delayed discharges

'An echo scan is required before patients are discharged. If this is not received, it will delay discharge and reduce our capacity to accept new patients. I can now check the Clinical Portal for this information'

*Heart Failure Matron - Redbridge*

- Minimise clinical risk to patients by ensuring information is available at the point of care

'We can see on the discharge summary what treatment has been previously given at another hospital so it reduces the risk of over prescribing, mainly antibiotics. Patients do not realise over prescribing causes more harm than good'

*Barking Hospital Walk In Centre*

- Faster awareness of pre-existing care and improved decision making

'I checked the Clinical Portal and could see the history of her medical needs and that helps facilitate my health advice and communication. It is useful and makes my visit more pleasant and achievable'.

*Health Visitor – Waltham Forest*



**74% stated patient experience improved with regards to accessing history**



**80% stated patients were pleased clinicians can access information such as blood test results, hospital appointments, etc., saving DNAs**



**Ward pharmacists no longer phone practices to reconcile medicines on admission, saving an hour a day EACH**



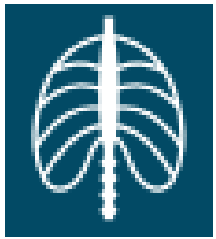
**74% stated their confidence in patient safety increased; 63% saying patients felt more confident**

## **Quantified Benefits**

<http://eastlondonhnp.nhs.uk/wp-content/uploads/2018/03/East-London-Patient-Record-2.pdf>

# INDIVIDUALS NEED ACCESS TO THEIR FULL HEALTH RECORDS TO ADDRESS INFORMATION GAPS

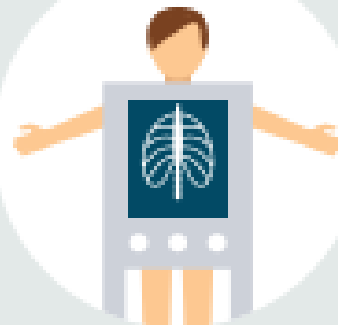
**1/3** who have seen a health care provider in the last year experienced at least one of the following gaps in information exchange.<sup>1</sup>



Had to bring an X-ray, MRI, or other type of test result with them to the appointment



Had to wait for test results longer than they thought reasonable



Had to redo a test or procedure because the earlier test results were not available



Had to provide their medical history again because their chart could not be found



Had to tell a health care provider about their medical history because they had not gotten their records from another health care provider

400,000

WE'RE HIRING A  
DIRECTOR OF CHANGE  
MANAGEMENT TO HELP  
EMPLOYEES EMBRACE  
STRATEGIC CHANGES.



OR WE COULD COME  
UP WITH STRATEGIES  
THAT MAKE SENSE.  
THEN EMPLOYEES  
WOULD EMBRACE  
CHANGE.



THAT  
SOUNDS  
HARDER.



Dilbert.com DilbertCartoonist@gmail.com

10-29-12 © 2012 Scott Adams, Inc. / Dist. by Universal Uclick

# One London – Demonstrator Projects

- Pan London emergency care with frailty alerting
- End of life & embed Coordinate My Care (provide clinical data interop)
- LTCs: Identification & management (Illustration: atrial fibrillation)
- Care Home Access & communication
- Population health analytics – WSIC functionality (sharing diabetes IP)
- Roll-out of IMPARTS – mind & body interface
- Digitally engaged Londoners & self management with PHR



# One London LHCRE – Demonstrator Projects (Egs.)

**Better health for older people living in nursing and residential care homes: enhancing access to electronic health records at the point of residential health care delivery**

## The problem

More than 300,000 older people live in care homes in England, most with complex physical and mental health needs. Their health care is often fragmented, reactive, lacking in continuity, and varying in quality. Care home residents have higher than average unplanned hospital admissions.

## Proposed approach

We will deliver an integrated electronic health record system, accessible at the point of delivery of residential health care

We will pilot access to by care home staff to their residents' primary care health records, enabling staff to annotate the record and to access quality improvement dashboards to optimise medicines management, annual reviews and **anticipatory care** (including flu vaccination).

## Who will benefit

Clinicians will be able to access records at the point of residential care, and enter and record data without duplication on paper records

Residents will be able to ensure their wishes in respect of urgent and emergency care and end of life care, including for resuscitation, can be accessed and respected by health care professionals involved in their care irrespective of geographies or setting.

## Where

South West and North East London initially

## Impact

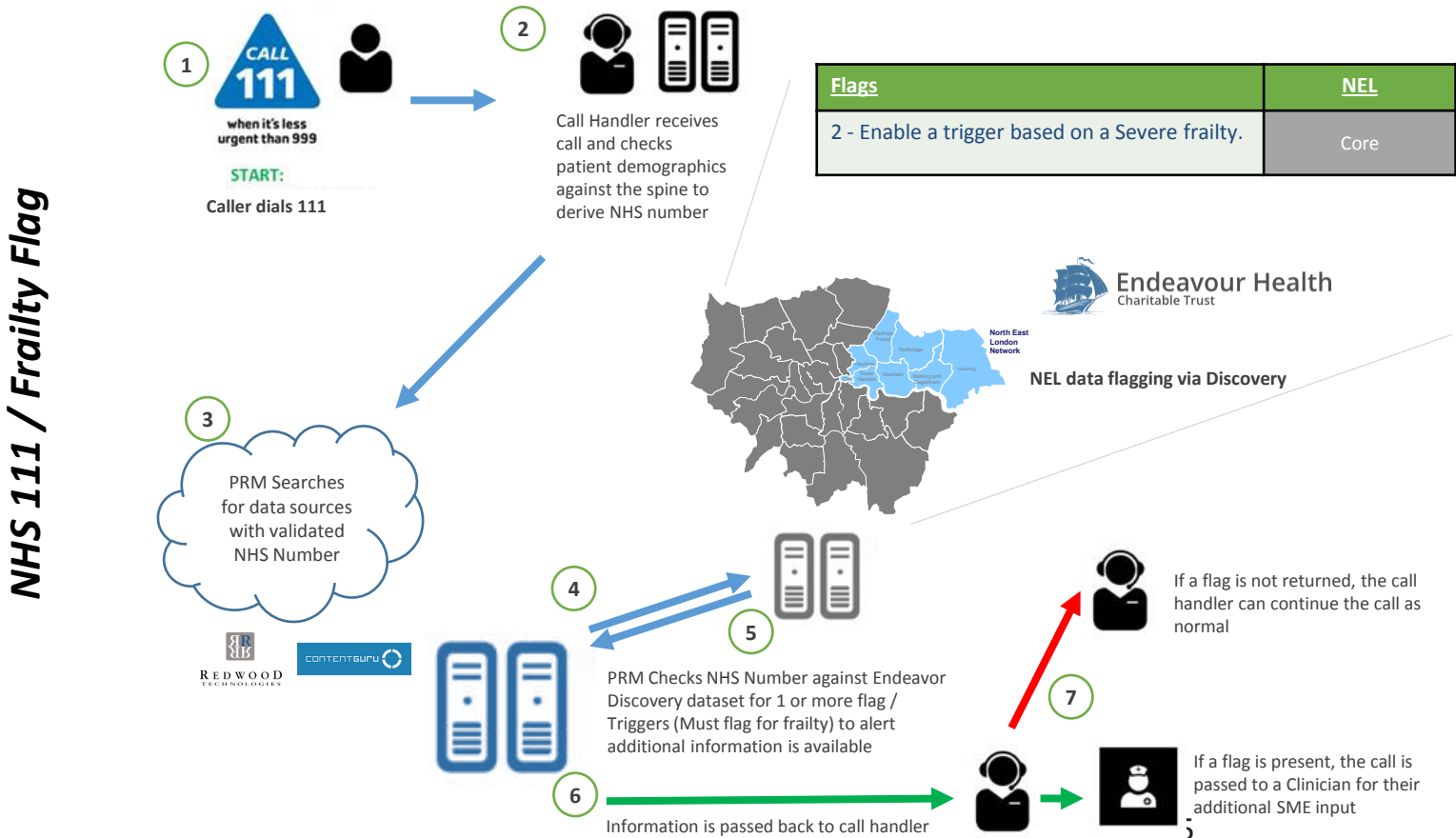
Delivers framework for enhanced health in care homes co-developed from NHS England vanguard sites

Supports CQC standards for care homes

Supports NICE guidelines: Managing medicines in Care Homes; Older People with Social Care Needs and Multiple LTCs



# One London LHCRE – Demonstrator Projects (Egs.)



# One London LHCRE – Demonstrator Projects (Egs.)

## Atrial fibrillation: Detect and protect to prevent stroke

### The problem

100,000 people in London have atrial fibrillation (AF) causing 1 in 6 of all strokes; 1 in 3 over age 80.

Treatment reduces stroke by at least 64% but 1 in 5 people with AF receive suboptimal treatment.

We aim to make London a city of international excellence for AF detection, management and stroke prevention – to match London's international pre-eminence in acute stroke care.

### Proposed approach

**Detect:** Earlier **detection of AF** is simply achieved by routine pulse regularity checks every 5 years in people over age 65 years. New **AliveCor hand held ECG devices** implemented across London improves efficiency.

**Protect:** Improved management of AF:

- End obsolete aspirin monotherapy and use appropriate anticoagulants
- Optimise blood pressure control and statin use.

These are achievable by digitally enhanced support for general practitioners and further enhanced by in-practice clinical pharmacists.

## Who will benefit

**Detect:** In London, pulse regularity checks will increase new cases by 4000 within 2 years

**Protect:** Increased AF anticoagulation and risk factor control by 10%.

An additional 8000 people each year will be better protected.

**Together detection and anticoagulation will reduce stroke in London by 250 every year - equivalent to preventing all of the strokes in one London Borough.**

## Where

All 5 London STPs have elements of these programmes which can be further enhanced with digital and better aligned support – digital visibility of London performance trends is a key objective.

## Impact

Create an internationally relevant step change in optimal care.

Supported by: NICE guidance, Atrial Fibrillation Association, British Heart Foundation, Stroke Association, AHSNs across London (Pan-London AF toolkit) and NHS Innovation for technology transfer and new medicines.



DO WE HAVE ANY  
ACTIONABLE ANALYTICS  
FROM OUR BIG DATA  
IN THE CLOUD?



Dilbert.com DilbertCartoonist@gmail.com

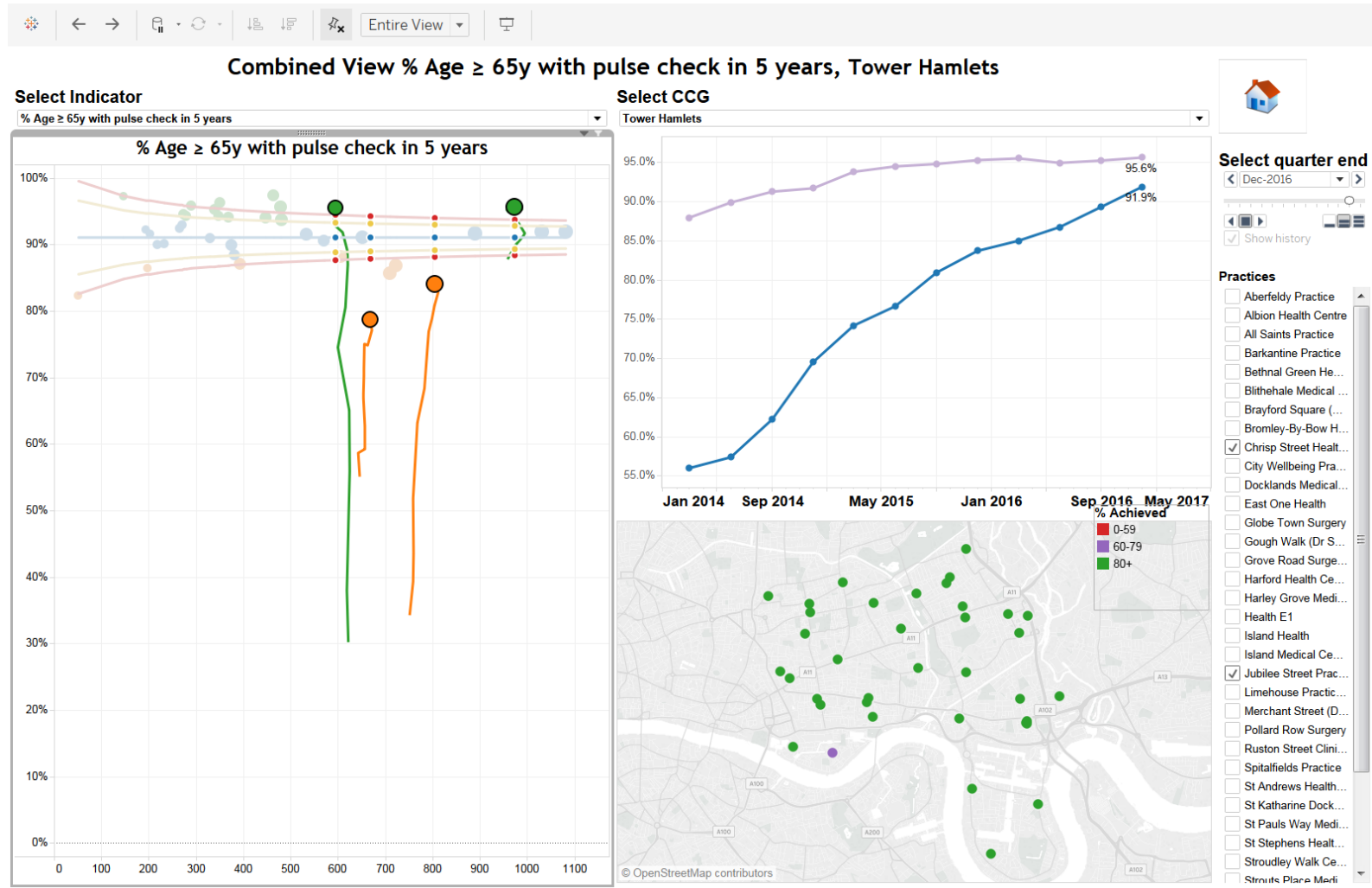
YES, THE DATA SHOWS  
THAT MY PRODUCTIVITY  
PLUNGES WHENEVER YOU  
LEARN NEW JARGON.



1-9-13 ©2013 Scott Adams, Inc./Dist. by Universal Uclick

MAYBE IN-MEMORY  
COMPUTING WILL ACCEL-  
ERATE YOUR APPLICA-  
TIONS.







FOUND AT VENTFUMPIKS.EU

Perspective...

# A patient story

My eight year old daughter Vanessa is an end-stage cancer patient in her fifth year of treatment.

Within minutes of receiving the data, I now routinely email the school to inform them that she's dehydrated and needs to drink,

Or I email St Mary's haematology unit and order platelets just in time to make the afternoon bike run to the blood bank

Or I email her primary treatment centre (GOSH) and ask for a GCSF booster to lift her immune function - especially if we are going away for the weekend.

As well as reducing my stress, and the time I have to spend chasing site practitioners, it has also allowed me to manage down her acute exacerbation and keep her out of your paediatric wards at night.

*Parker Moss, Oncology Dad*



'Any patient suffering from a long term condition like cancer... should have access to CIE.'

## Where we are now \*

**923,757** patient records

**15** services

**6** trusts

**4,118** registered patients



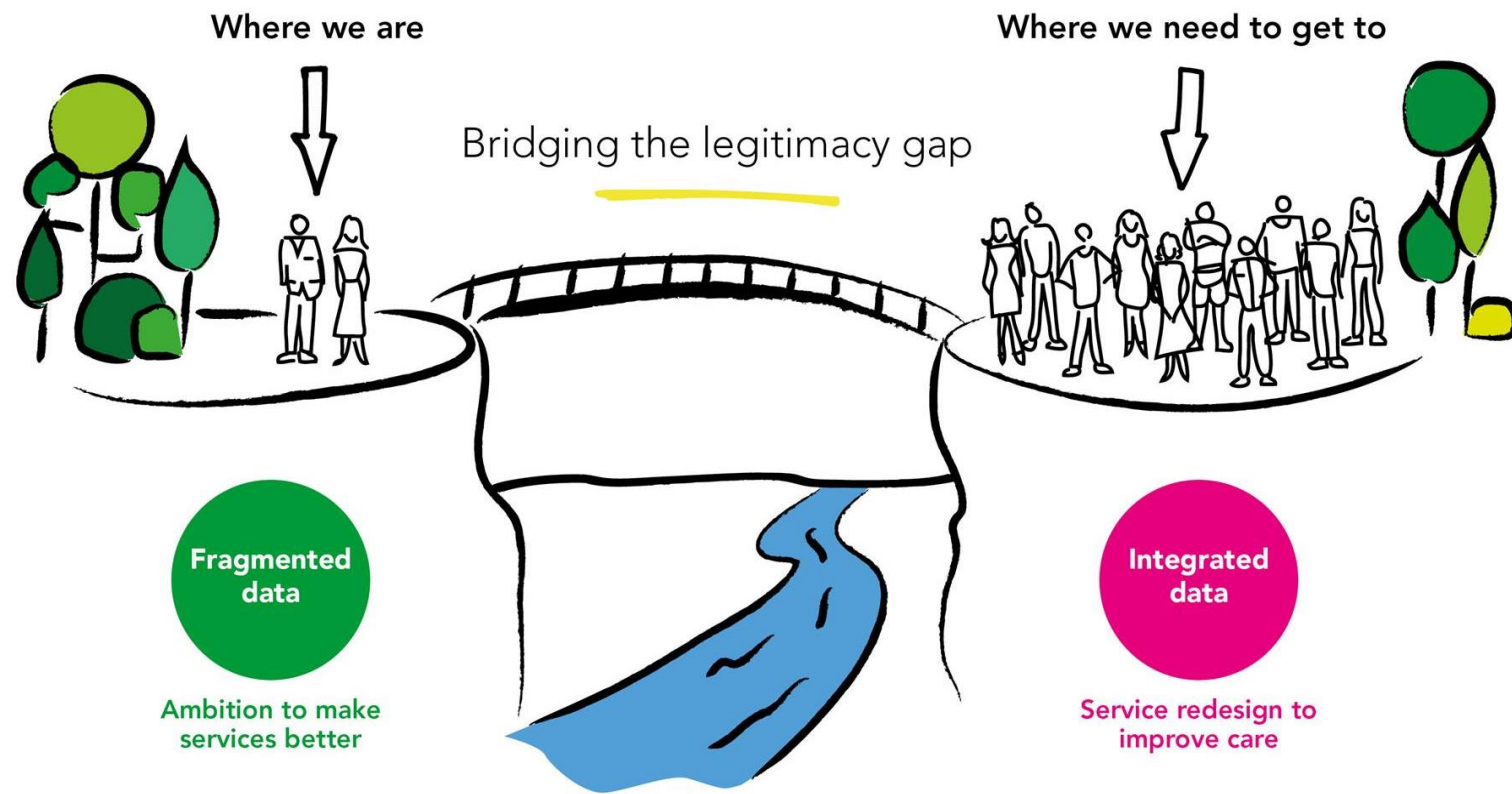
\* data taken on 07/03/18

Curators control  
only obfuscates

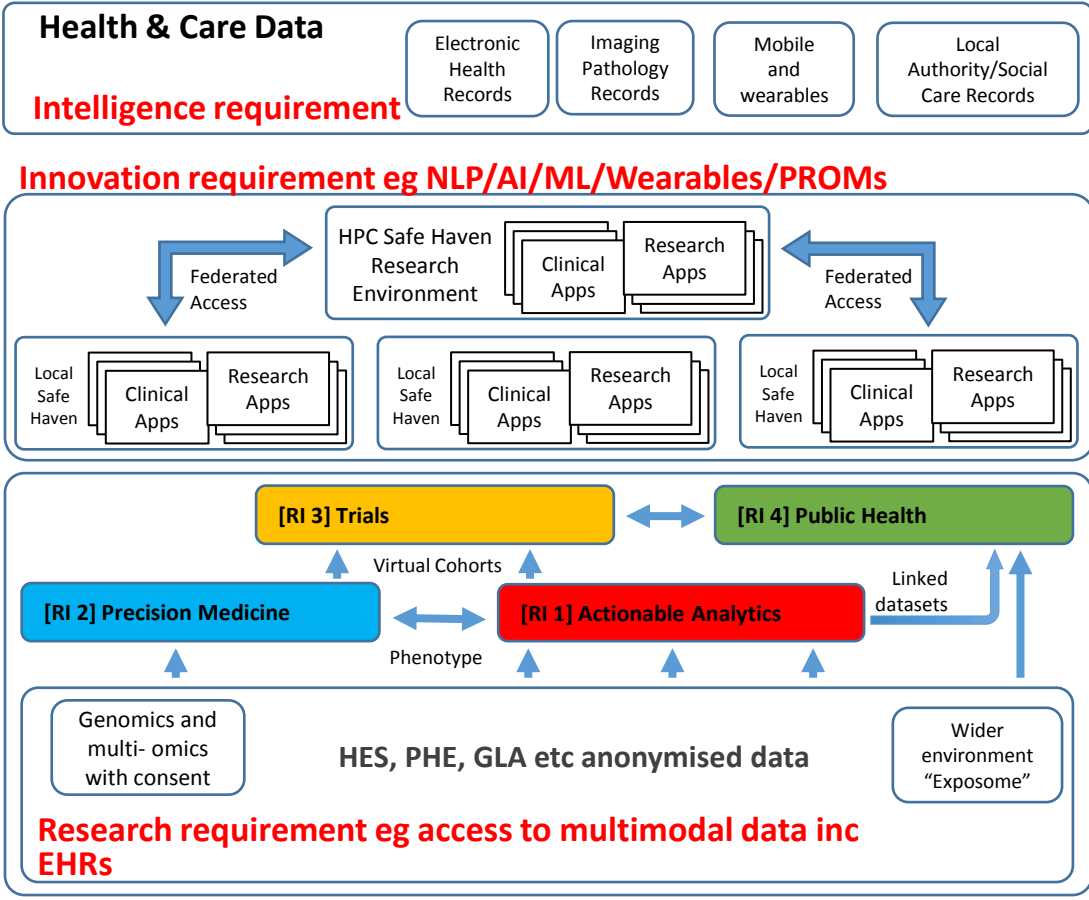
Robert DEVEREUX

**SOCIAL WORKERS &  
HEALTH VISITORS  
ENQUIRIES TO HUTS  
AT REAR OF BUILDING**





# LHCRE, HDR & DIH Infrastructure & Requirements



## LHCRE

Governance	Data	Infrastructure
PPI, NHS Trust, GP, LA havens with opt-out	Health, LA & Social Care	Federated Local safe

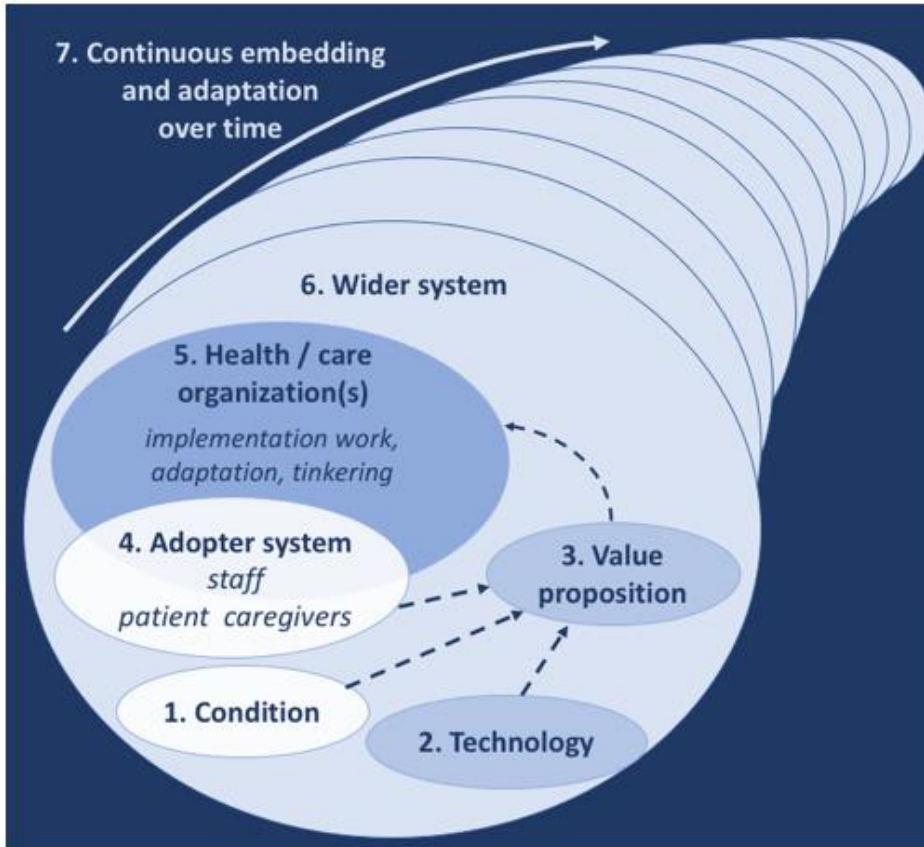
## DIH

## HDR

Informed consent Research subjects	Omics	High Performance Computing Safe Haven
Data sharing between hospitals	Small scale 2ndary clinical	Single Safe haven
National audit with opt-out	Large scale National Datasets	Single safe haven



7. EMBEDDING AND ADAPTATION OVER TIME  
7A Scope for adaptation over time 7B Organisational resilience



1. CONDITION  
1A Nature of condition or illness  
1B Comorbidities, socio-cultural influences

2. TECHNOLOGY  
2A Material features  
2B Type of data generated  
2C Knowledge needed to use  
2D Technology supply model

6. WIDER SYSTEM  
6A Political / policy  
6B Regulatory / legal  
6C Professional  
6D Socio-cultural

5. ORGANISATION  
5A Capacity to innovate (leadership etc)  
5B Readiness for this technology / change  
5C Nature of adoption / funding decision  
5D Extent of change needed to routines  
5E Work needed to implement change

4. ADOPTERS  
4A Staff (role, identity)  
4B Patient (simple v complex input)  
4C Carers (available, nature of input)

3. VALUE PROPOSITION  
3A Supply-side value (to developer)  
3B Demand-side value (to patient)

Works citing "Beyond Adoption: A New Framework for Theorizing and Evaluating Nonadoption, Abandonment, and Challenges to the Scale-Up, Spread, and Sustainability of Health and Care Technologies"

Trisha Greenhalgh, Joseph Wherton, Chrysanthi Papoutsis, Jennifer Lynch, Gemma Hughes, Christine A'Court, Susan Hinder, Nick Fahy, Rob Procter, Sara Shaw  
J Med Internet Res 2017 (Nov 01); 19(11):e367







