Welcome to the NHS Respiratory Transformation Conference

29th April 2026
15 Hatfields Conference Centre, London,
SE1 8DJ

LUNGVISION 2026

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- **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.
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SCAN ME

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Chair Opening Address

Mr Chris Sleight MSc BSc FIBMS
Chief Executive Officer of Sleight Insights
Formerly Chief Officer of the Greater Manchester Diagnostic Networks

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Keynote Presentation

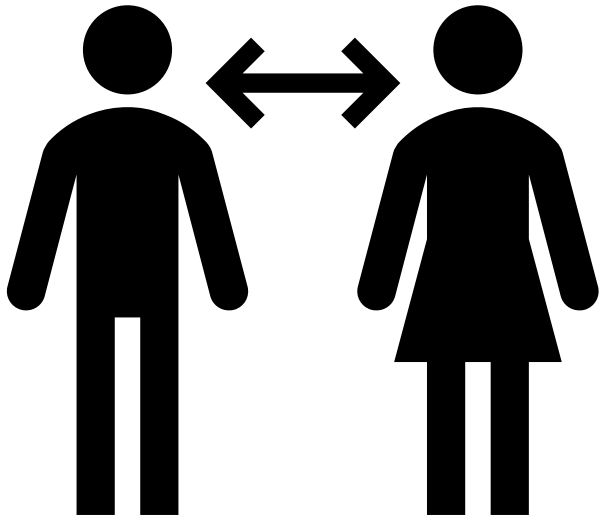
Krisnah Poinasamy
Head of Research and Innovation Advocacy
Asthma + Lung UK

Lung Research Grand Challenges: where next for respiratory diagnostics?

Krisnah Poinasamy
Head of Research + Innovation Advocacy

ASTHMA+ LUNG UK

Where were you five years ago?



“Everything about my COPD experience has been an absolute battle.”

people with asthma wait more than five years for a diagnosis.

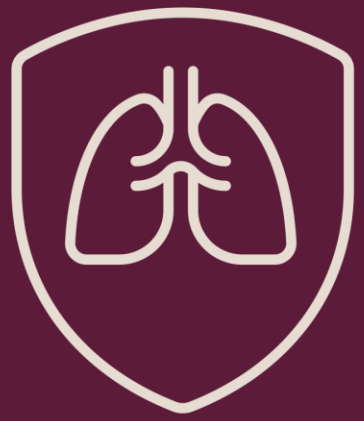
people with COPD wait more than five years for a diagnosis.

people with bronchiectasis wait more than five years for a diagnosis.

Can we move from years to minutes?

Lung Research Grand Challenges

DIAGNOSIS PREVENTION TREATMENT



Respiratory research is underfunded and undervalued.

Today, respiratory publications make up just **4.1%** of all research papers published – **a 50-year low**.

DIAGNOSIS

Halve the number of people living with an undiagnosed lung condition.

PREVENTION

Reduce preventable lung conditions and halve avoidable hospitalisation.

TREATMENT

Discover cures for lung conditions and new treatments that significantly reduce symptoms.

(Pott, Hendrik, Sykes, Dominic, Charriot, Jeremy, et al. 'Breathing Barriers: Bridging Lung Health, Research, and Awareness'. The Lancet 13, no. 8 (2025): P665-667).

1. DIAGNOSIS

Halve the number of people living with an undiagnosed lung condition.

people with asthma wait more than five years for a diagnosis.

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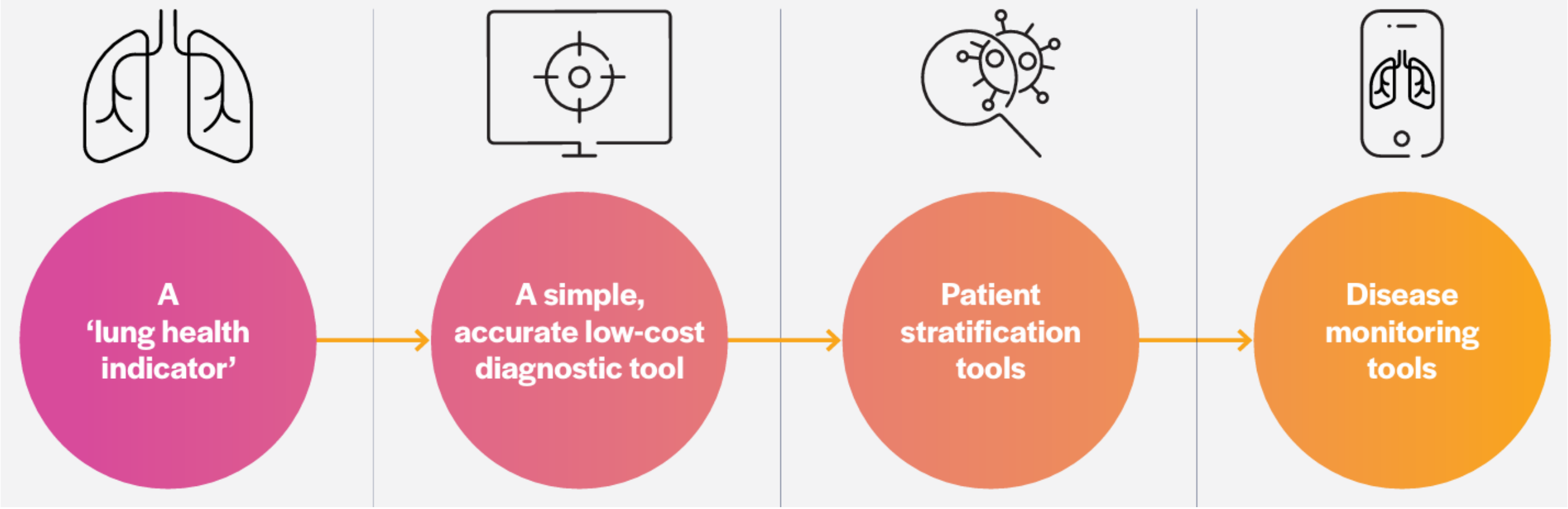
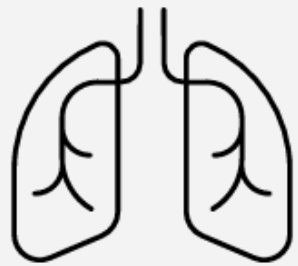
Transforming Respiratory Diagnostics: The way forward
Joint report prepared by
LifeArc
ASTHMA+ LUNG UK

Transforming respiratory diagnostics





A
‘lung health
indicator’

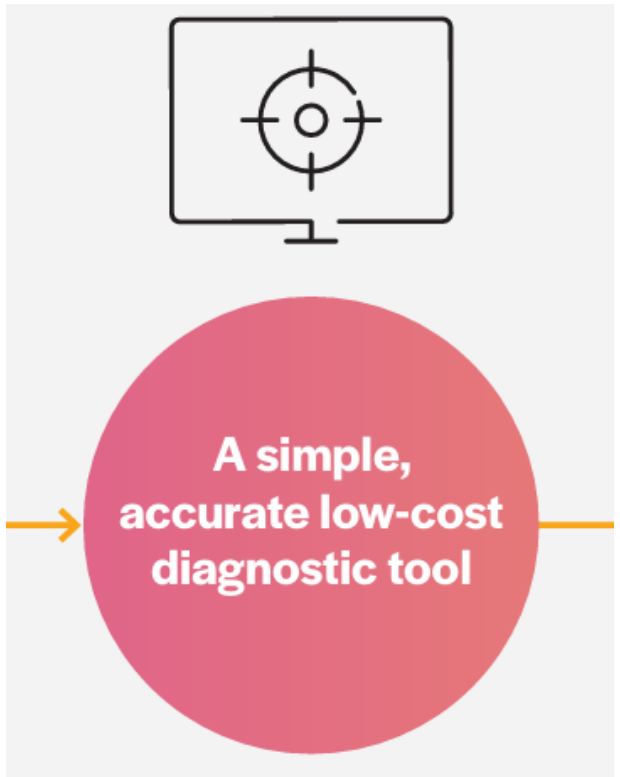
- £5.5m for new non-invasive techniques to monitor lung health and diagnose respiratory disease

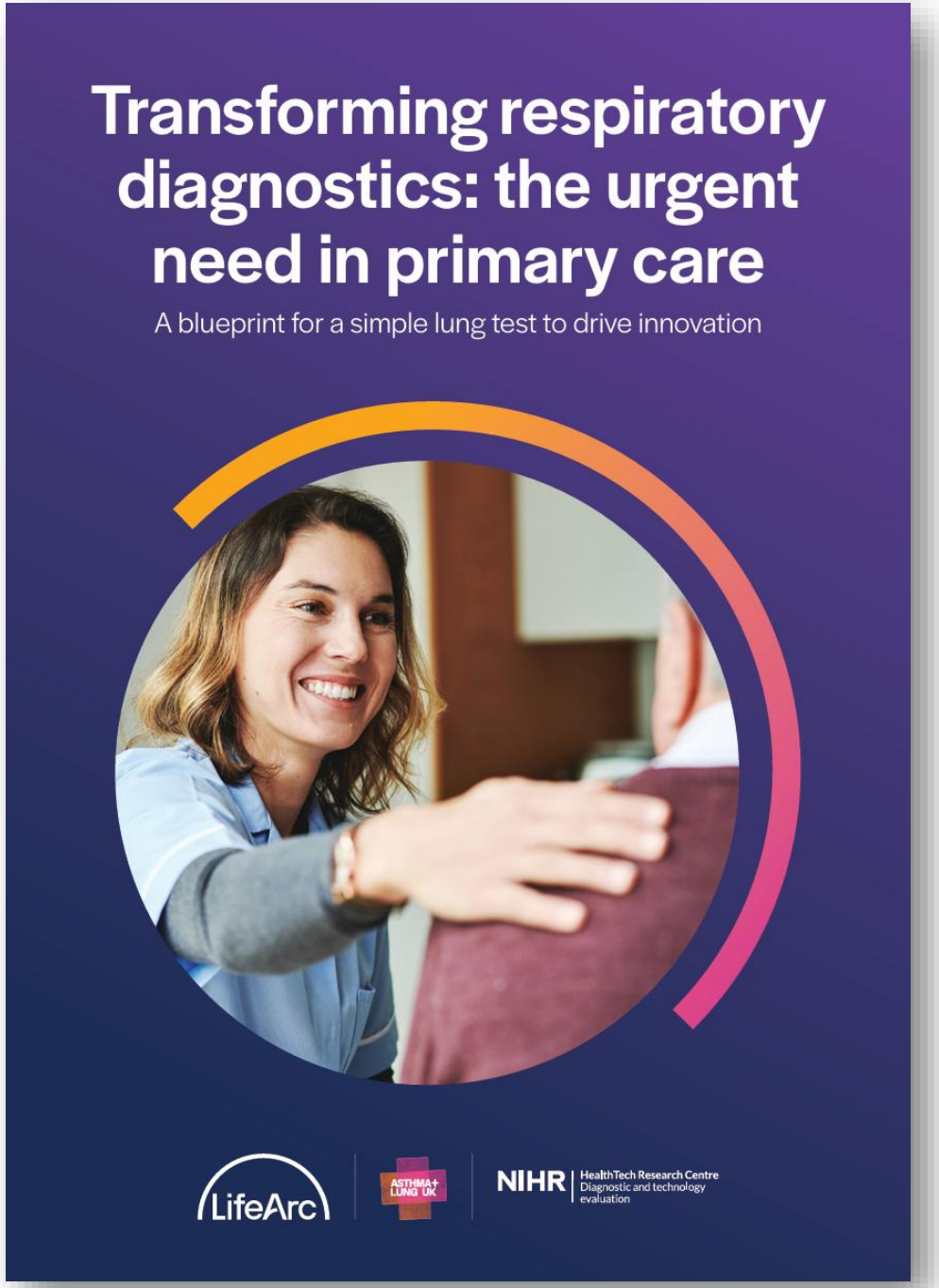
Engineering and Physical Sciences Research Council

Title	Institution	PI
AIRTIME: AI-Enabled Mobile First Screening for Early Respiratory Disease Detection	Manchester Metropolitan University	Liangxiu Han
LungSight: Visual And Acoustic Screening for Early Detection of Lung Disease	Manchester Metropolitan University	Moi Hoon Yap
Artificial Intelligence assisted earlier Respiratory Evaluation (AIRE)	University of Leicester	Rachael Evans
SoundCheck: A Low-Fi, High-Tech Revolution in Respiratory Diagnostics	University of Leicester	Himanshu Kaul

Manchester Metropolitan University

UNIVERSITY OF LEICESTER


A simple, accurate low-cost diagnostic tool



- **A 'blueprint' for developers, outlining the features a test should have to address a specific need.**
- **Designing a Simple Lung Test**: Patient-informed TPP to support chronic lung disease diagnosis
- **Landscaping**: The landscape of marketed and pipeline diagnostic tests for chronic lung conditions
- **Focus group report**: barriers and opportunities for diagnosing chronic lung disease in primary care: insights from patients and healthcare professionals

Target Product Profile for primary care respiratory diagnostics

Characteristics

- Scope
- Design
- Performance
- Product registration, access and cost
- Operational

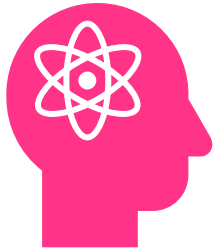
Key considerations for developers

- Clinical utility
- Diagnostic development
- Integration within the healthcare system

Category: Performance

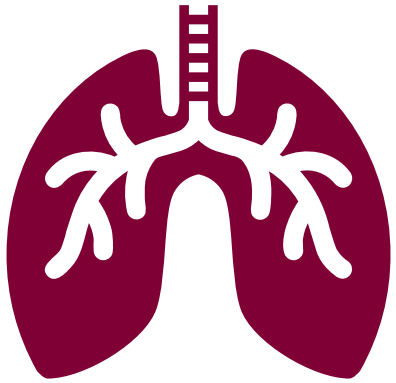
Characteristic	Minimal	Optimal
Diagnostic sensitivity	High sensitivity to identify individuals with chronic lung disease and provide confidence that a negative result rules out a diagnosis.	Very high sensitivity (>95%) for diagnosis of asthma and COPD. High sensitivity prioritised over specificity to provide confidence that all suspected bronchiectasis and ILD cases are identified for specialist referral.
Diagnostic specificity	High specificity to provide confidence that a positive result confirms presence of chronic lung disease.	Very high specificity (>95%) for diagnosis of asthma and COPD.
Time required to administer test	Less than 30 minutes, within extended appointment times. Consideration given to staff resource needed for test delivery (see target end user).	Less than 10 minutes.
Time to results	The time to results should be appropriate for the chosen test modality, the accuracy of the test and the clinical value of the result.	Minutes (less than 10 minutes end-to-end, test-to-results), results available within the same appointment.
Results output	Local printout/LIMS upload permissible only as part of a stepwise approach to EHR integration.	As minimal and EHR/NHS App integration.
Results interpretation	Results outputted in a way which is easy to understand by healthcare professionals with minimal training. Options for both simple and detailed displays depending on the user's expertise. Interpretation should be clear, standardised, and compliant. For AI/machine learning outputs must be transparent (“explainable AI”).	

Opportunity to collaborate with researchers and innovators to develop new diagnostics

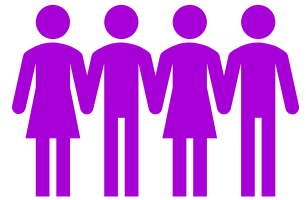


Researchers

New Diagnostics



Patients



Innovators

Clinicians

Respiratory Insights

Improving product development

- PPIE-Driven User Testing Service
- Engage real users and stakeholders early in development
- Delivers actionable insights for design and decision-making

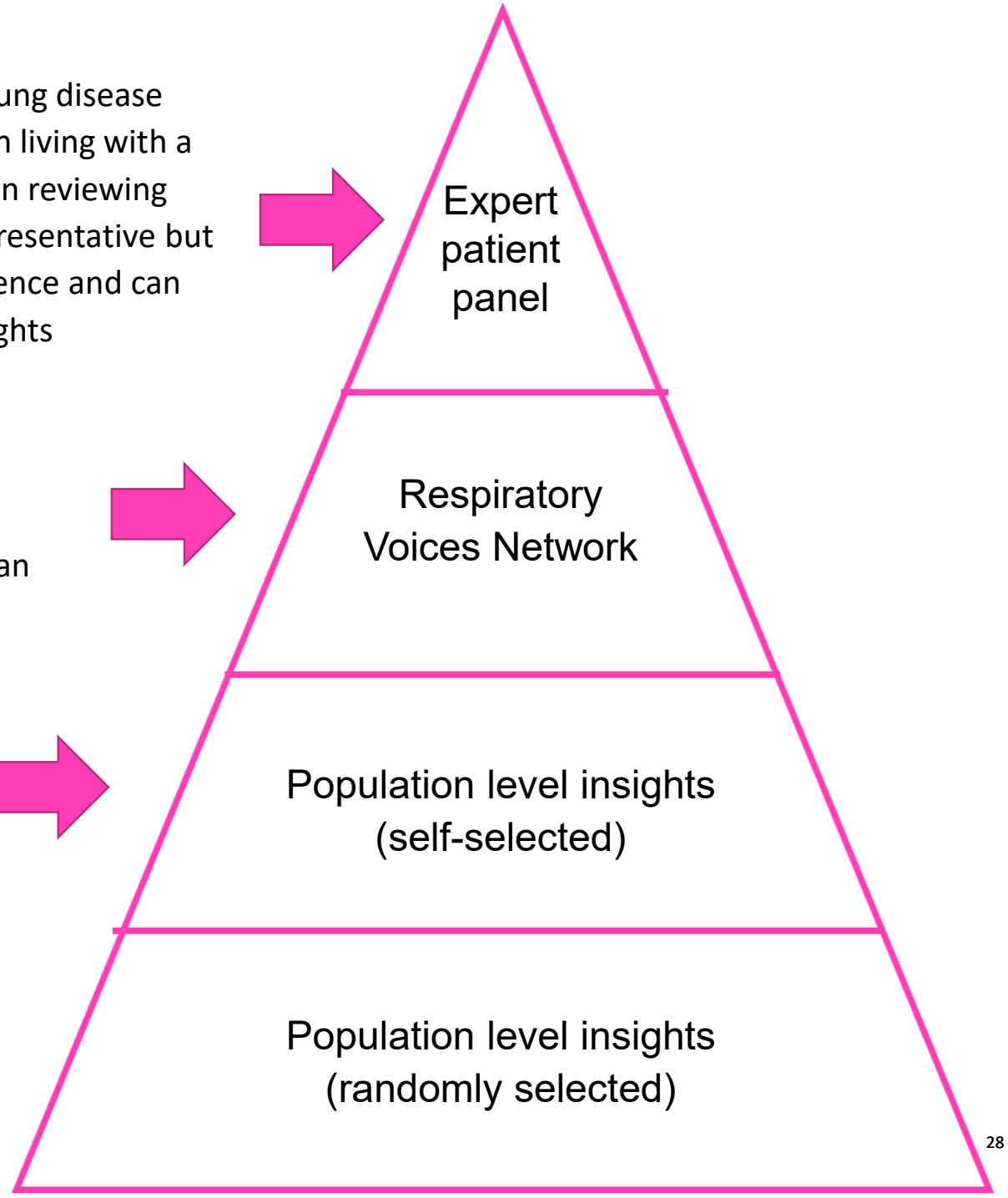
Gathering patient insight

Over 40+ years' history of supporting people with lung conditions

~25 people with lung disease who are experts in living with a lung disease **and** in reviewing research. Not representative but experts by experience and can contextualise insights

~1,000 people who have expressed an interest in involvement activities. A growing audience that we can tap into for testing and iteration of interventions

Our social media followers and mailing lists who offer insights that are more representative of the broader population. This may be through snap surveys, polls or social listening



Gathering patient insight

Developing your technology with patients and carers

1:1 Interviews	Gather fresh insights from ~ 6 patients that aren't biased by group dynamics and understand differences in users' perspectives.
Focus Groups	~2 h discussion with up to 10 patients suffering from specific or generic respiratory condition(s).
1:1 User Testing	~45 minutes with ~6 patients utilising the device/tools/app **in a controlled environment**, virtually or physically.
Beta Testing	~45 minutes with up to 20 patients, after user testing aimed at supporting to process of creating a prototype or minimum viable product (MVP).
User Testing with ethnographic	Test with up to 20 patients, using the device (uncontrolled environment), for 8 weeks, while sharing documentation of their activities.

ASTHMA+ LUNG UK

USER PERSONA

POOR PREVENTER

Hawli Anadlu

Age 25

Health Confidence:

Monitoring Skills:

Asthma Management:

Demographics & General Health

Hawli is a **25** year old female that **doesn't think too much about her health**. She is currently working in retail and **has medium health confidence.**

Support Seeking

- Prefers online support.
- Less sure about where and how to get help from a doctor or when symptoms flare-up.

General Asthma Beliefs/Management

- Asthma isn't a priority, especially when I don't have symptoms.
- I am unsure about the functionality and purpose of inhalers and I get embarrassed about using them in front of others.

Monitoring My Asthma

- What is a peak flow?
- I don't have the skills and find it hard to remember or make time — I wouldn't use my phone to monitor my asthma.
- I don't feel positive or relaxed when I monitor my asthma and I'm not sure how important or helpful it is.

Tech

- I prefer to seek information online rather than in-person from a doctor or nurse.
- I rarely use phone reminders for my asthma.

Using My Reliever

- I'm worried about relying on my reliever, as well as the side effects and long term use of a reliever.

Using My Preventer

- I find it difficult to use it everyday.
- I often forget.
- I don't have a routine for taking it, and don't have the time.
- I generally ignore my doctor's instruction about when I should take my preventer.
- I don't want to use my preventer inhaler everyday, especially when I'm well, I only take it when I have symptoms.
- I don't believe it helps.

COPD behavioural insights

Comfortable Calm

Uninformed Avoiders

Self-management Strivers

Solitary Strugglers

Where will we be five years from now?

- Your phone can detect **worsening** lung health
- Your GP can **diagnose** lung conditions in 30 minutes

- ➢ Faster diagnosis, quicker access to treatment, healthier lives
- ➢ On the road to halving those living undiagnosed

THANK YOU

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Skill Clinic

Nawaid Ahmad
Consultant Respiratory and Acute Physician
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Roger Harris
Director of Health Informatics
Guy's and St Thomas' NHS Foundation Trust

Michael Crooks
Professor of Respiratory Medicine
NHS Humber Health Partnership and University of Hull

Refreshments & Networking

Chair Morning Reflection

Mr Chris Sleight MSc BSc FIBMS
Chief Executive Officer of Sleight Insights
Formerly Chief Officer of the Greater Manchester Diagnostic Networks

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Case Study

GSK

Case Study

Michael Crooks
Professor of Respiratory Medicine
NHS Humber Health Partnership and University of Hull

Keynote Presentation

Anna McCall
Clinical Lead Virtual Wards
Sandwell & West Birmingham NHS Trust

Respiratory Virtual Wards: Delivering Integrated Community Care in Practice

Anna McCall (AHP) Clinical Lead – Virtual Ward

Sandwell & West Birmingham NHS Trust

LungVision 2026, London

Why Respiratory Virtual Wards Matter

Virtual Wards/Hospital @ Home, are a safe and efficient alternative to NHS bedded care; supporting patients who would otherwise be in hospital, to receive the acute care and treatment they need in their own home. This includes either admission avoidance or supporting early discharge from an acute hospital.

GIRFT
GETTING IT RIGHT FIRST TIME

NHS England
Virtual wards operational framework

- Rising demand for respiratory services
- High levels of emergency admissions
- Pressure on acute capacity and workforce
- Need to deliver acute-level care closer to home

From Concept to Reality

- Combined Acute/Community NHS Trust
- Existing provision – finding the real gaps
- One larger VW team versus separate VW speciality teams
- Started at pace: wrote the SOPs & recruited on-the-go
- Purist model- intensive Hospital @ Home, aiming for high acuity (not distance monitoring)

SWB Virtual Ward Capacity Overview	
	Capacity
Respiratory	20
Frailty	25
EPICENTRE	4
Cardiology	8
UCR VWs Total	57
Service Leads - UCRs Virtual Wards: A	
Paediatrics	8
Service Leads - Paediatrics: Ruth Hartl	
Palliative Care	10
Service Leads - Palliative Care: Laura P	
Overall Total	75

Virtual Wards

Sandwell and West Birmingham NHS Trust

Primary Objective

Reduce use of acute beds and increase patient flow through the hospital

Virtual wards support patients, who would otherwise be in hospital, to receive the acute care and treatment they need safely in their own home, combining face to face provision and technology. This includes either preventing avoidable admissions into hospital or supporting early discharge out of hospital. Expanding virtual wards is a key ambition in the "Delivery plan for recovering urgent and emergency care services", published Jan 2023,by NHSE

7 days / week 8am-8pm
Refer verbally via extension numbers below

Respiratory Virtual Ward Criteria extn 2664 (option1, then 4)

- ✔ 17 and over
- ✔ treatments /observations that would otherwise keep the patient in hospital e.g. nebulisers, oxygen, blood test review, completion of IV antibiotics.
- ✔ Any acute respiratory condition that shows evidence of an improving trajectory and likely to resolve within 1-2 weeks (e.g. COPD, ILD, stable Asthma, resolving pneumonia and viral LRTIs including COVID and influenza.
- ✔ General medical disease that has a clear treatment pathway (e.g. high blood sugar, heart failure, Cellulitis etc..)
- ✔ Select cases of Frailty such as Delirium, Falls
- ✔ Mild-moderate Electrolytes abnormalities that can be treated virtually (with stable improving trajectory)

Cardiology Virtual Ward Criteria extn 2664 (option1, then 4)

- ✔ An adult over 18 years old.
- ✔ Any primary diagnosis of cardiac disease, but deemed to be clinically stable with a NEWS2 of <3, with improving clinical symptoms and requiring post discharge monitoring (incl. NSTEACS, AF, Heart failure, Cardiomyopathy and Heart valve Disease, Postural/Orthostatic Hypotension, Syncope and Hypertension
- ✔ Infective Endocarditis
- ✔ No significant co-morbidities requiring on-going inpatient care, e.g. uncontrolled diabetes, renal failure or COPD.

Early emerging data shows that we will see similar reductions in hospital bed days and admissions as seen with the Frailty VW.

Frailty Virtual Ward Criteria extn 2664 (option1, then 4)

- ✔ Aged 65 or over
- ✔ Requirement for treatments/observations that would otherwise keep the patient in hospital e.g. blood test review for stage 1 AKI, hyponatraemia, medication review/ polypharmacy, rehabilitation, delirium, anxiety regarding returning home
- ✔ Any acute medical condition that shows evidence of an improving trajectory and likely to resolve within 1-2 weeks.
- ✔ Examples include infections such as UTI, falls +/- fragility fracture, delirium, constipation
- ✔ Supporting MIS/OPAT with completion of intravenous antibiotics at home with enhanced safety-netting whilst following early step down to oral antibiotic therapy.

The emerging data showsdue to the impact of Frailty VW, SDEC & FIT, hospital bed usage for frail patients has reduced by 14.6% compared to last year.

EPICENTRE Criteria

(Emergency Point of Care Testing and Treatment without Transfer To Hospital) extn 2664 (option1, then 1) Open 9am-5pm weekdays currently

Acute Hospital At Home service where patients are seen by an acute medical doctor and highly skilled nurses. The service is delivered by Acute Medicine.Providing bedside diagnostics including point of care bloods, POCUS and interventions including IV Fluids, IV antibiotics and many other interventions. The aim is to care for patients at home avoiding admission whilst still providing acute care. Taking referrals from Hospital, GP, WMAS and SPA. Typical conditions treated by Epicentre (but not limited to):

- ✔ CAP
- ✔ COPD
- ✔ Congestive HF
- ✔ volume depletions/ dehydration
- ✔ urinary tract infection/ urosepsis
- ✔ cellulitis
- ✔ suspected DVT

Palliative Virtual Ward Criteria extn 2664 (option 2)

The service is for adults (18 and above with specialist palliative care needs and aims to:

- ✔ Manage complex, unresolved symptoms
- ✔ Enable care to be delivered at home (avoiding admissions to a hospital or hospice unless it becomes necessary or preferable)
- ✔ Provide daily remote monitoring, e.g. virtual regular check-ins for symptom monitoring Please note that this service is designed for short term, focused management, i.e. an average of 8 days

Paediatric Virtual Ward Criteria 0797778688 or extn 2602

Age 0 - 18 years of age
Disease specific pathways:

- ✔ Asthma/viral induced wheeze – PRN wheeze plan training.
- ✔ Constipation – community disimpaction for 2 weeks
- ✔ Physiological Neonatal Jaundice – rebound bloods, home phototherapy, and direct referrals from midwives through SPA for phototherapy.
- ✔ Bronchiolitis – as a step down or step up bed.
- ✔ Nephrotic Syndrome – relapse or newly diagnosed (after a hospital stay. Vital signs monitoring, fluid input and output. Managed on Virtual Ward until in remission.
- ✔ Infected eczema aimed at hospital avoidance through education.
- ✔ Tonsillitis – pain management, fluid management/challenge.
- ✔ Hospital avoidance – a stand-alone pathway that incorporates the disease specific pathway but covers referrals from non-inpatient

Exclusion-Virtual Wards are not for: Enhanced primary care programmes i.e. patients that would otherwise be discharged to their GP for follow-up

The Dudley

ham NHS Trust

MP7450

SWBHT Respiratory Virtual Ward Model

- 7 days / 8am-8pm
- LOS up to 14 days
- Response: within 48 hours
- Broad criteria
- Integration across acute and community services
- Highly skilled MDT workforce
- Clear escalation pathways
- Step Down & Step Up
  - 59% direct from Respiratory Ward
  - 10% from other wards
  - 31% front door step-ups

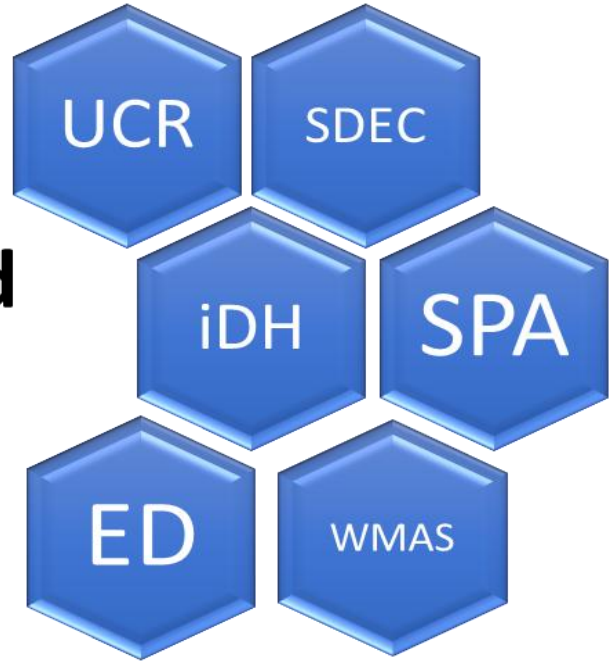
Aged 17 or over
Any acute respiratory condition that shows evidence of an improving trajectory and likely to resolve within 1-2 weeks. E.g. exac. of COPD, ILD, Bronchiectasis, resolving pneumonia and viral LRTIs including COVID and influenza
Requirement for treatments/observations that would otherwise keep the patient in hospital e.g. nebulisers, oxygen, IVs, blood test review, erratic blood sugar levels and its monitoring.
Any additional acute general medicine problem that has a clear treatment pathway and needs some input that can be met by providing hospital at home treatment. E.g. high blood sugar, heart failure, cellulitis, electrolyte abnormalities.
Combined cases of Frailty such as Delirium, Falls (this has to be Agreed with the Consultant and have clear Escalation to frailty VW)

Seamless Integration

Acute Speciality Medical Lead oversight & leadership:
daily virtual board rounds

Care delivered by an integrated team of acute care speciality consultants, medical registrars, Pharmacists, ACPs, Nurses and OTs

Aligned with



Intensive monitoring and care delivered by:
Phone Calls
Home Visits
(Digital Platform)

VW Clinical Provision

Initiate or continue Occupational Therapy for function & safety, ordering urgent equipment when required	Comprehensive holistic assessments within home	Use of digital monitoring where necessary	Prescribe and amend/titrate medications
Medicines Reconciliations	Onwards referrals to other community services	Oxygen & Nebuliser Weans	Take and review bloods and other results but NOT 'routine' bloods that would usually be safely managed by GP.
Act on abnormal blood results when necessary.	Early escalation to ACP or EPICENTRE registrar	Broad range of POCT	Ivs for step-up and step-down

Managing Risk, Deterioration & Escalation

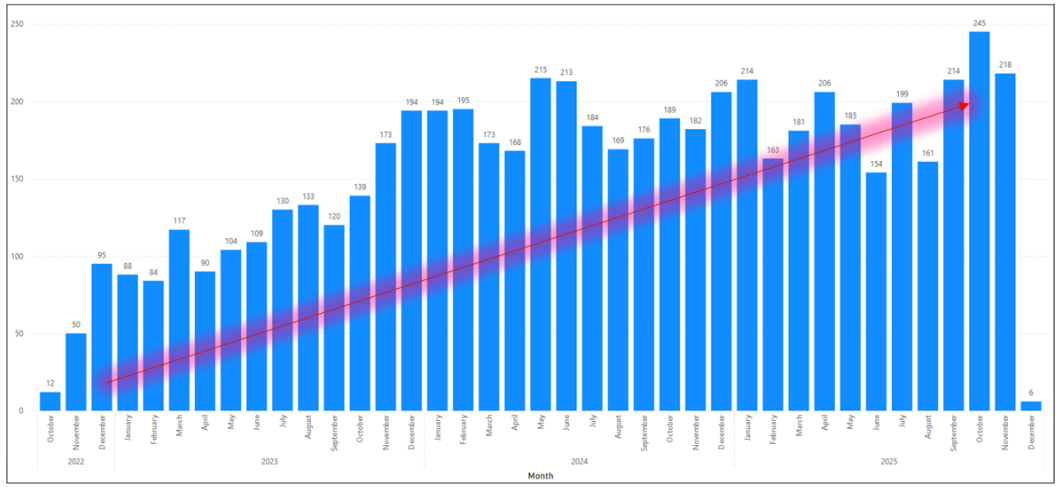
- Acuity Scoring – more complex than just NEWs2. Assessed through 5 dimensions
- Clear escalation pathways - community first:
    - VW ACP / UCR ACP
    - EPICENTRE Registrar,
    - VW Consultant
    - SDEC
- Out-of-hours considerations
- Close working with acute services

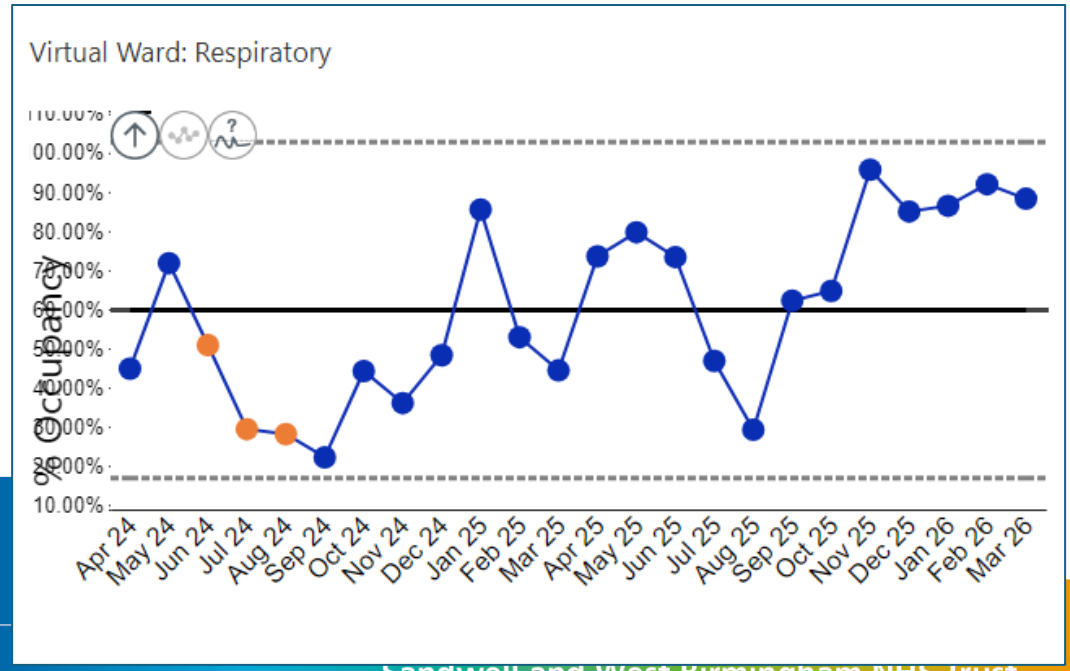
Digital Enablers in Practice

- Remote monitoring technologies – fit for your purpose. Does it add value or add workload?!
- Point of Care testing
  - Abbott iSTAT 1 Analyser: U&Es, Lactate, haemoglobin and haematocrit, arterial blood gases
  - Nova Stat Strip Xpress 2: Blood Glucose, Ketones
  - LumiraDx: CRP
  - Bladder Scanner
  - POCUS
  - ECG
- Access to acute and community EPR

Outcomes and Impact

- Referrals and utilisation seen consistent growth
- Respiratory VW – avg. 50 patients/month.
- Use of voluntary & charitable sector services to enhance delivery of care



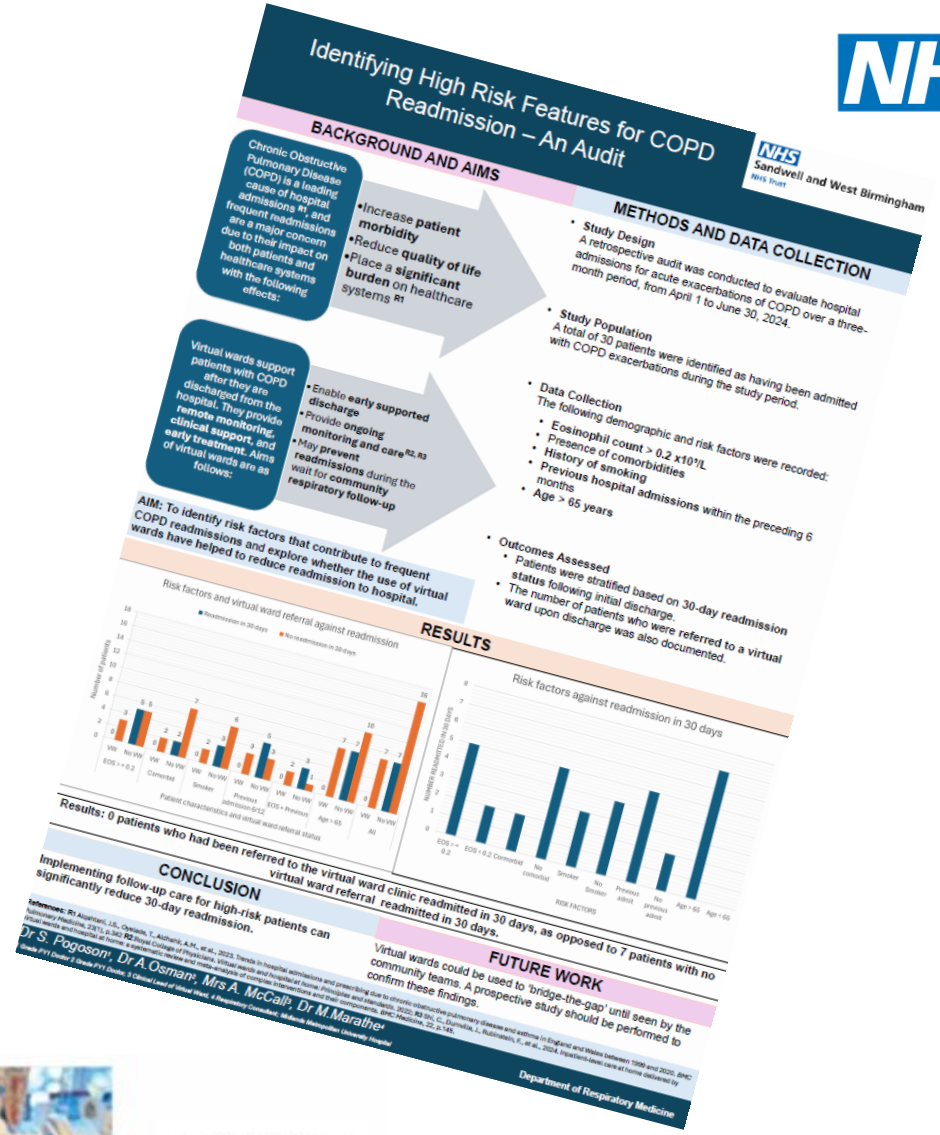


Outcomes and Impact

- Re-admissions reduction seen- retrospective audit evaluated hospital admissions for acute exac. of COPD over 3/12 period. Difference of 7 patient re-admissions in 30 days in the non-VW group compared to VW group who had no readmissions.

- Excellent patient experience

Excellent service
All the staff I spoke to were lovely, I could tell they were all caring and well informed a big thank you to them all.
I am totaly blown away by this wonderful scheme and all the staff involved who cared for me magnificently when I needed it after a heart attack and pneumonia. Thank you is not enough, there are no words.
I was very impressed with everything about this service excellent well done xx
You all done an excellent job with my mother-in-law



Scan to watch

Sandwell and West Birmingham NHS Trust

Outcomes & Impact - LD

NHSE 10 year plan: “A key target is to move care closer to home and away from unnecessary or long-stay inpatient settings for people with learning disability/autism”.

Analysis of SWB Admissions Data in Q1 2025: Respiratory Conditions - 3rd top admission reason for patients with LD (8.86%). However, these patients were not accessing VWs, among other services.

VW Project Aim: Reduce reliance on inpatient care for patients with learning disabilities through reducing acute length of stay, and concurrently reduce readmissions, whilst improving access to services for people with learning disabilities thereby narrowing health inequality in this population.

Method:

- The VW team gained access to the automatically populated patient list (using flag system) on acute EPR system that had been flagged as having a Learning Disability.
- VW team pulled suitable patients from this list, without the need for a referral.
- VW supported these patient post d/c - tailored to their needs, problem solving, for up to 14 days.
- Data was captured for 90 days before and 90 days after VW input for No. of admissions and No. of ED attendances

Results

Virtual Ward	Admissions (pre)	Admissions (post)	Variance
Virtual Ward: Cardiology	1	0	-1
Virtual Ward: Epicentre	8	8	0
Virtual Ward: Frailty	15	5	-10
Virtual Ward: Respiratory	19	11	-8
Grand Total	43	24	-19

ED Attendances (pre)	ED Attendances (post)	Variance
1	0	-1
11	9	-2
21	10	-11
32	14	-18
65	33	-32

Admissions

Estimated bed days saved from -19 admissions seen (using avg. LOS for LD patients):

117 bed days saved

Estimated to be 468 bed days annually.

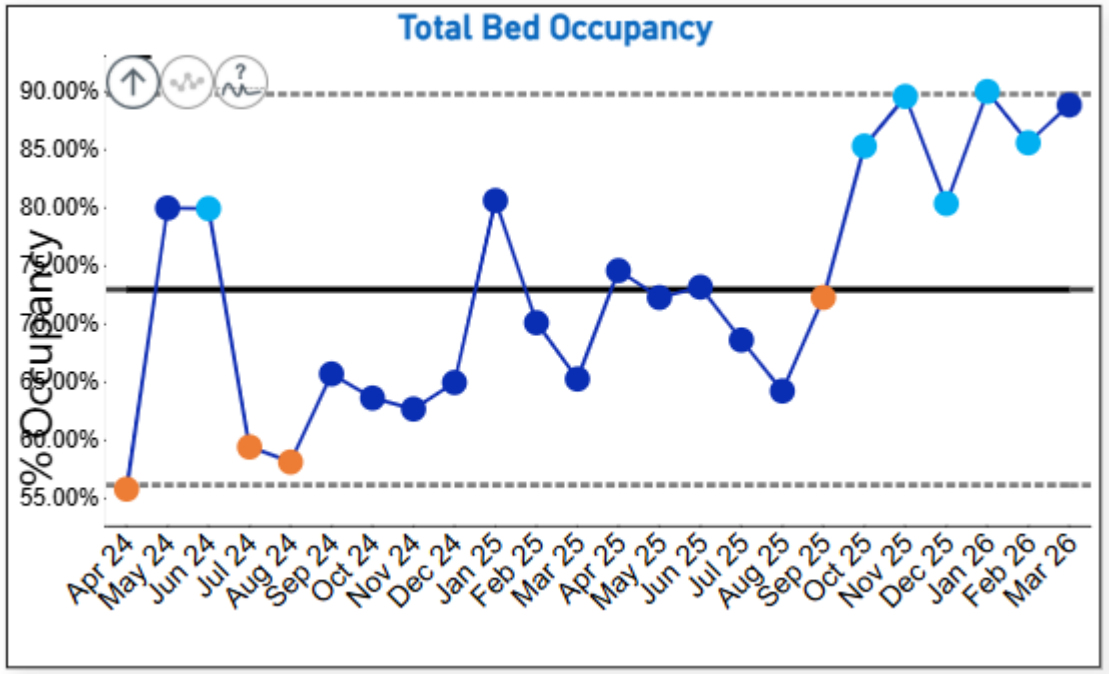
ED Attendances

Reduction of 32 ED attendances

Contributes greatly to patient flow, alleviating the pressure on our front door services and wait times in ED.

Ongoing Challenges

- Engagement – whole hospital behaviour change
- Consistently maintaining national target of 80% utilization
- Geographical/ICB challenges: split over 2 ICBs with differing referral criteria & treatments offered
- Workforce pressures – funding changes = unbalanced workforce
- Multiple POCT tech = multiple quality processes
- Digital and data challenges – EPR coding
- High volume of communication challenges across specialities and coordination
- Team require ++ CPD across multiple specialties



Key Takeaways/Future Opportunities

- Operational detail matters for ensuring efficiencies: collaboration with other services is key – UCR & SPA in particular
- Continual upskilling to increase uptake of higher acuity (Sub-cut fluids, ABGs, broader IV delivery
- Expansion with additional VWs – surgical VW, expansion of cardiology criteria, gen medicine VW.
- Frequent Attenders project
- Shift focus & move to majority step-ups (to 70-80% of caseload)

Thank you for listening

EPICENTRE – BBC news report

CONVENZIS

Slido

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SCAN ME

Keynote Presentation

Marjan Mohammadi
PhD Researcher
Birmingham City University

Beyond the Dashboard:

What Remote Monitoring Tools Miss in COPD Care and What Real-World Digital Twin Deployment Shows

PhD Researcher: Marjan Mohammadi

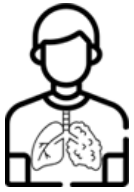
Director of Studies: Prof. Franco Cheung

Co-Supervisor: Prof. Chris Creed

School of Architecture, Built Environment, Computing, and Engineering

BIRMINGHAM CITY University

Why This Matters



Health Perspective

3M+

Approximately 3 million people in the UK living with COPD, but only around 1.2 million have been diagnosed.

People with COPD spend around 82% of their time indoors, making the home environment a critical determinant of health and wellbeing.

Respiratory diseases such as COPD are highly sensitive to indoor pollutants and environmental conditions.

GOLD 2025 explicitly identifies reducing indoor exposure as a modifiable management priority for COPD. Yet the home environment remains the least monitored part of the care pathway.

Housing Perspective

Damp and mould directly worsen asthma and COPD outcomes. Housing providers currently respond reactively because no proactive monitoring exists.

Awaab's Law mandates strict timelines for mould and health hazards but gives providers no practical tool to detect risk early.

Continuous indoor monitoring also reveals where ventilation is failing — a kitchen with persistent humidity, a bedroom with rising CO_2 overnight — turning a stock-wide problem into targeted, evidence-led facility decisions.

What This Approach Addresses

Three broad observations shape the design of HEAL-DT

Built With Users, Not Just For Them

Many digital home-health tools are designed without sustained input from patients, clinicians, and housing teams. Each audience brings a different question to the same data.

One System, Three Audiences

Patients, healthcare providers, and housing teams currently work from disconnected information sources. There is an opportunity to share one underlying data layer while showing each audience only what they need.

Beyond Instantaneous Alerts

Alarm fatigue is itself a recognised clinical risk. There is an opportunity to communicate sustained patterns of risk in calmer, more usable formats rather than streams of single-moment notifications.

The Approach: HEAL-DT: Digital Twin for Healthy Homes

AI-Enabled Digital Twin Indoor Environment Quality Management for COPD Patients

HEAL-DT framework **integrates IAQ and physiological data** to enable real-time monitoring, visualisation, cumulative exposure analysis, early mould-risk detection, and adaptive recommendations for healthy homes supporting residents with COPD.

The framework seeks to provide **actionable insights** for occupants, housing associations, and healthcare providers enabling proactive management of respiratory health risks and improved housing performance.

Validated in real homes, not just simulation.

One thread through this approach: how this changes what virtual wards can actually do.

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Co-Designed With All Stakeholders Not Just Built For Them

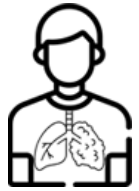
We are conducting interviews with housing providers and healthcare providers, co-designing a separate dashboard tailored to each group's specific needs

Healthcare Provider

- Physiological data trends and nocturnal patterns
- Morning summary reports
- Direct alerts on baseline deviation

Housing Professional

- Mould risk index (proactive warning)
- Property-level environmental data
- Compliance evidence reporting (Awaab's law)
- Targeted facility interventions, such as humidifiers, extractors, purifiers



Patient

- One clear morning action
- Room-by-room status, simple language
- Personal health trends
- Semi-automated home control

"We need simple traffic-light visuals, not complex charts"

"Morning summaries are better than overnight alerts"

Autonomy-focused: information, not control

Each stakeholder sees a different dashboard. The underlying data is the same.

Generic Thresholds aren’t Fit for COPD

Existing systems flag a "safe" bedroom at 18°C. For a COPD patient, that's the lower end of clinical risk.

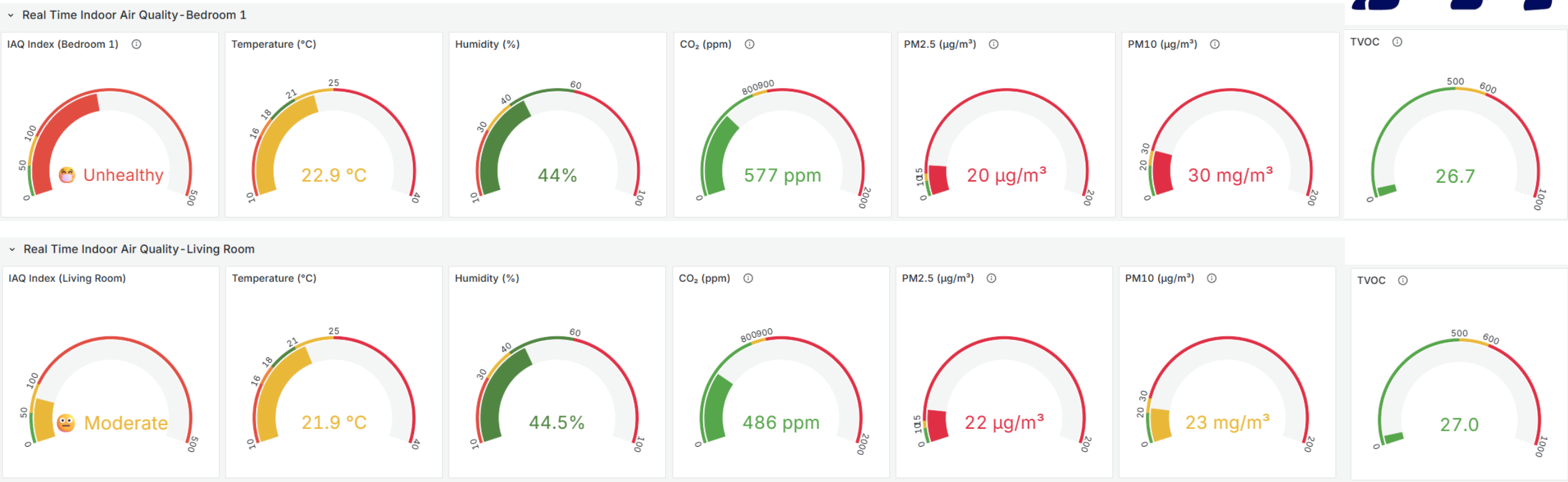
Generic thresholds were designed for healthy adults. HEAL-DT applies COPD-informed thresholds drawn from COPD guidelines and peer-reviewed exposure-response evidence.

Healthcare providers can personalise thresholds for each patient — both physiological and environmental parameters — based on the patient's clinical record and individual baseline.

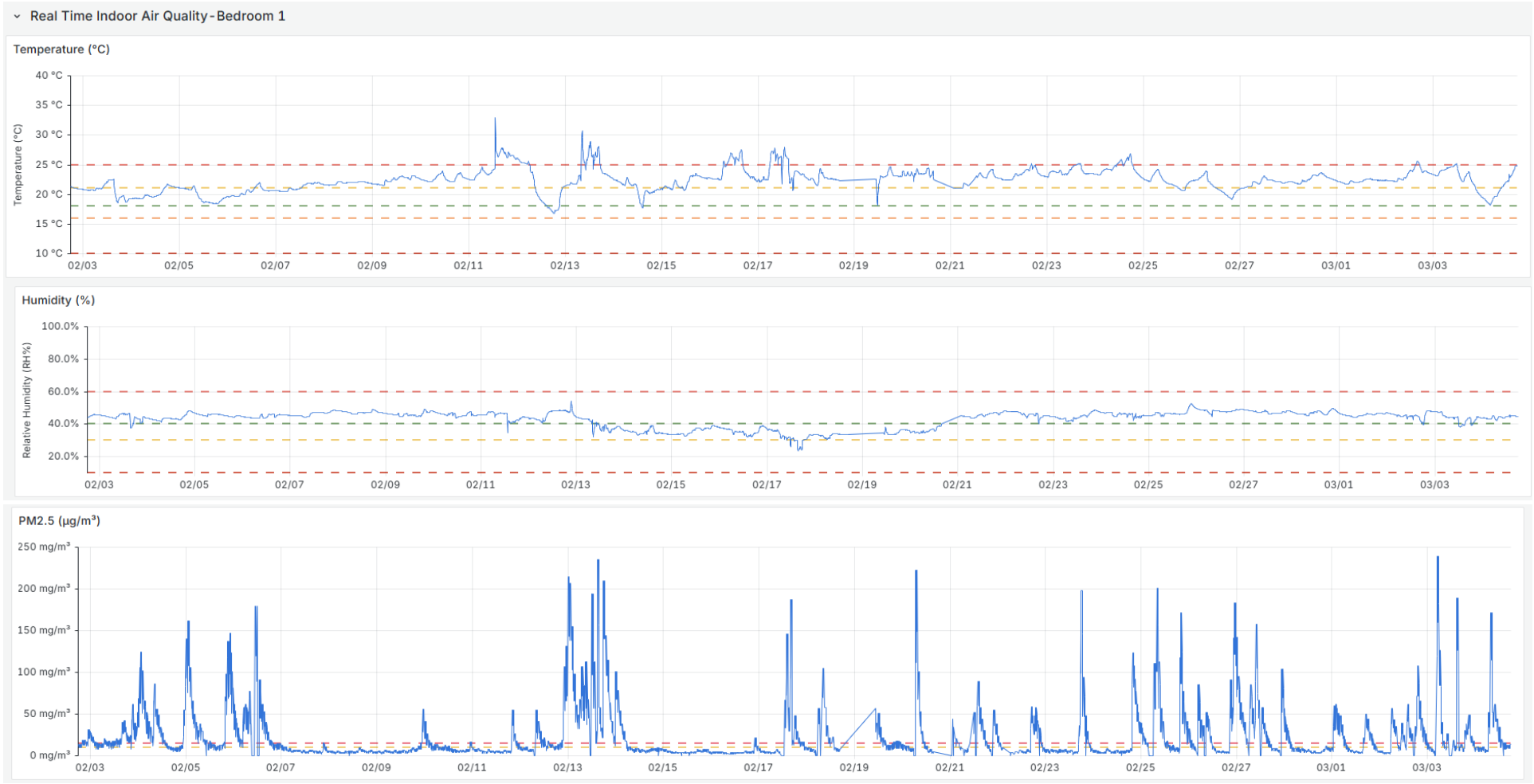
Each parameter is mapped to a three-band traffic light:

- **GREEN:** within safe ranges for COPD
- **AMBER:** sustained warning zone, action recommended
- **RED:** critical exposure, intervention required

COPD-Specific Thresholds: A Traffic-Light System (Real-Time)



Longitudinal Chart for IEQ (Trend Analysis)



Detecting Mould Risk Before It Becomes Visible

How Is This Different?

HEAL-DT uses continuous environmental modelling to estimate mould risk before contamination becomes visible.

What this changes in practice:

- Early-warning alerts give housing teams weeks, not days, to act
- Trend tracking shows whether risk is improving or worsening
- Continuous records evidence proactive Awaab's Law compliance

MOULD INDEX SCALE

0	No growth
1	Small amounts of mould on surface
2	Moderate growth coverage (>10%)
3	Visually detected, coverage ~50%
4	Significant, coverage ~70%
5	Plenty of growth, >70%
6	Very heavy and tight growth

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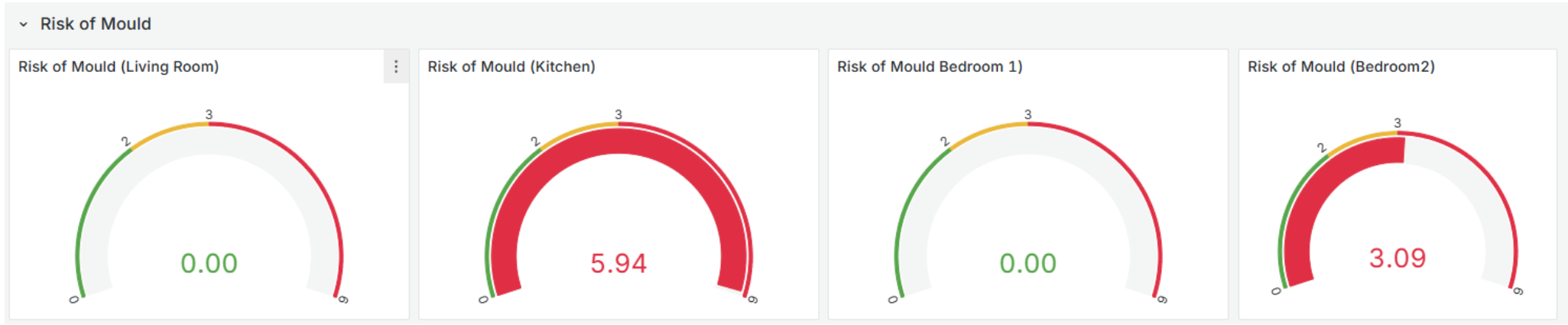
Visualisation of Risk of Mould



Intelligent Recommendations That Adapt to Your Home

Cumulative Exposure, Moving Beyond Instantaneous Alerts

INSTANTANEOUS THRESHOLD ALERTS

What current systems do

- Fires when a value crosses a fixed line at a single moment
- Floods the patient with notifications during normal daily peaks
- Hides hours-long unsafe exposure inside a daily average
- Cannot serve as compliance evidence, too noisy, too volatile

SUSTAINED EXPOSURE TRACKING

What HEAL-DT does instead

- Looks at exposure patterns over time, not isolated moments
- Focuses on what clinically matters for COPD, not raw sensor readings
- Communication designed to support patients, not overwhelm them
- Generates documented, defensible records for housing compliance

Worked example: a bedroom that drops dangerously cold for several hours overnight is clinically serious for a COPD patient, but a daily average can hide it entirely.

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One action a day, not fifty alerts

Personalised, Safe, and Once-a-Day Guidance

How Does It Work?

Alarm fatigue is itself a clinical risk.

Instead of constant alerts, patients receive one clear morning message telling them the most useful action to take that day (e.g., “Open the bedroom window”).

The system adapts to behaviour patterns in each home
it learns what actually works in a specific property and improves over time. what works in one property may not work in another.

We can also enable semi-automated intervention, patient can set temperature for each room remotely.

What the patient sees each morning

HEAL-DT • Daily action • 7:42 AM

Open your bedroom window for 10 minutes after you wake up.

Air quality in your bedroom dipped overnight. A short burst of fresh air will help it recover before you start the day.

Tap for room-by-room status

Instead of this…

- HIGH CO_2 ALERT • bedroom • 02:14
- HUMIDITY WARNING • kitchen • 06:02
- TEMPERATURE LOW • bedroom • 03:48
- HIGH PM2.5 • living room • 06:31

+ 47 more notifications today

Daily Morning Report

Daily Summary Showing Time Spent in Warning and Critical Zones

Daily Morning Report for Patients

Every morning, the system sends users a messenger report summarising the previous 24 hours:

- How many hours each parameter spent in Warning (amber) and Critical (red) zones
- Which rooms had the most exposure time above safe thresholds
- Simple, actionable guidance to improve conditions for the next day

This empowers patients to make gradual improvements rather than reacting to overwhelming real-time alerts.

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Semi-Automated Intervention

Thermostat Control

Thermostat Control

COPD-Safe Range: 18-21°C

Open Thermostat Dashboard

Thermostat Control

Living Room · COPD-safe range: 18–21 °C

CURRENT — 21.3 °C

TARGET —

QUICK SELECT

20 °C	20.5 °C	21 °C	21.5 °C	22 °C
22.5 °C	23 °C	23.5 °C	24 °C	24.5 °C

CUSTOM TEMPERATURE

e.g. 20.5 Set ▶

Select a temperature above to send to thermostat

Morning Reports — Last 14 days

Could not load reports. Check Node-RED connection.

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Monitoring the Patient's Body While They Sleep

Why overnight matters most for COPD.

For virtual wards: current monitoring relies on spot checks of vital signs. Continuous overnight physiology, compared against the patient's own baseline, is the next step.

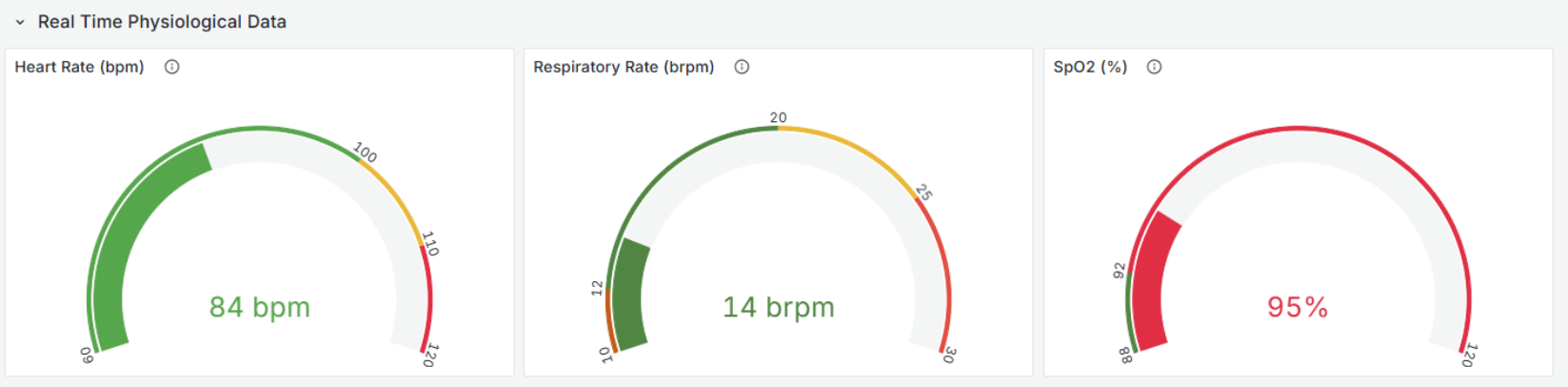
Night-time drops in oxygen are a sentinel signal: they often indicate that home conditions are causing measurable physiological stress before the patient experiences symptoms.

A consumer-grade wearable tracks SpO_2, heart rate and respiratory rate overnight. The system compares each night against the patient's own baseline, not a population average.

If something changes meaningfully, the clinician is notified, not the patient.

Why this is different

We don't compare patients to averages. Each patient becomes their own benchmark, which is what makes deviations clinically meaningful.



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Three Audiences, One Platform

The same underlying data, designed so each audience sees only what they need

NHS RESPIRATORY CARE

For the clinician

- **Adds home context to virtual wards**
  Distinguish exacerbations driven by home conditions from clinical deterioration, with no extra home visits.
- **Earlier signal, fewer admissions**
  Detecting overnight changes against the patient's own baseline creates a credible pathway to reducing preventable admissions.
- **A shared data layer with housing**
  Turns the home from a blind spot into a managed part of the respiratory care pathway.

HOUSING ASSOCIATIONS

For the housing team

- **Early warning, before damage shows**
  Acting at the warning stage costs a fraction of remediation after contamination is visible.
- **Targeted, evidence-led decisions**
  Stock-wide problems become specific facility actions where ventilation is failing.
- **Defensible Awaab's Law evidence**
  Time-stamped records move compliance from reactive paperwork to proactive evidence.

PATIENTS AT HOME

For the patient

- **One calm action a day**
  One useful morning message instead of a stream of alerts.
- **Plain language, room by room**
  Simple status in everyday English. No clinical jargon, no graphs to interpret.
- **Information, not control**
  The system advises; the patient stays in charge. Any automation is opt-in and reversible.

The home becomes a managed part of the respiratory care pathway, not a blind spot.

Thank You

Questions, challenges and collaborations welcome.

CONTACT

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Leadership Interview Session

Rachel Williams
Associate Chief Operating Officer
South Warwickshire University Foundation Trust

Lucy Marsden
Lead Respiratory Advanced Practitioner
South Warwickshire University Foundation Trust

Lunch & Networking

Chair Afternoon Address

Mr Chris Sleight MSc BSc FIBMS
Chief Executive Officer of Sleight Insights
Formerly Chief Officer of the Greater Manchester Diagnostic Networks

CONVENZIS

Keynote Presentation

Ms Yasmin Zobedey
Former NHS Health Economics Lead (HInM) |
Part-time NHS Pharmacist | System Partnerships
Senior Manager at GSK

Measuring Impact and Demonstrating Value of Innovation in Respiratory Care

Yasmin Zobedey

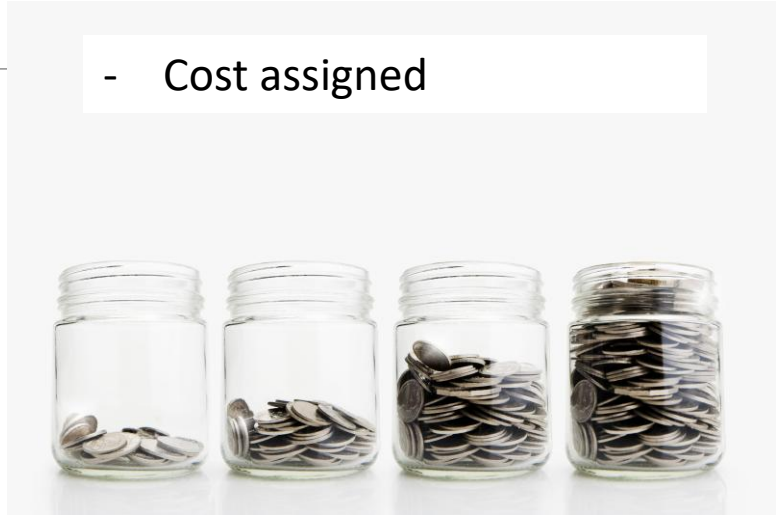
Former Health Economics Lead
NHS Pharmacist
System Partnership Senior Manager at GSK

My presentation today is based on my NHS and Health Economics experience, and is completely independent of my role at GSK

What is Value for Money?

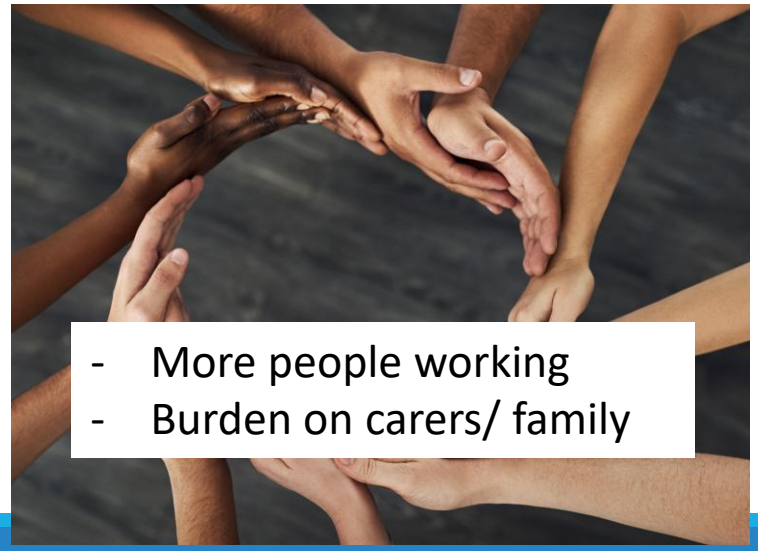
- Fewer exacerbations
- Avoid disease progression

- Reduced emergency HCU
- System Flow



- Cost assigned

- Reduced workload
- More efficient use of time



- More people working
- Burden on carers/ family

Value for Money defined HM Treasurys Green Book

The balanced judgement about the optimal use of public resources to achieve the objectives of a proposal, based on:

- Fulfilment of objectives
- Impact on different social groups and different settings
- Any risk and uncertainty
- Costs vs monetisable & unmonetisable benefits

Benefit = A measurable improvement resulting from change considered to be advantageous by at least one stakeholder that contributes to an organisational change.

Why we need to demonstrate value in the NHS ?

- Increasing demand + Limited resources + Limited funding
- Resources are finite → funding one intervention means not funding another (opportunity cost)
- Innovation often comes with higher upfront cost, need to identify short/ medium/ long term benefits
- There is a strong push towards evidence-based commissioning.
- The 3 shifts:

  Hospital → Community

  Treatment → Prevention

  Analogue → Digital
- Innovation requires clear evidence of system-wide impact

How to identify benefits

1. Create a logic model
2. Engage clinicians & patients
3. Run benefits workshops
4. Identify dis-benefits
5. Use prior evidence / case studies

Monetisable vs unmonetisable benefits




Monetisable	HCU linked to exacerbations, Patient QALY	Clinician time	A&E attendances, re-admissions, LOS, GP appointments	Productivity, absenteeism
Unmonetisable	Patient experience using the system or confidence in system	Clinician burnout and experience	Reduced waiting times	Patient independence

Collecting data on monetisable benefits

Fingertips | Public health profiles

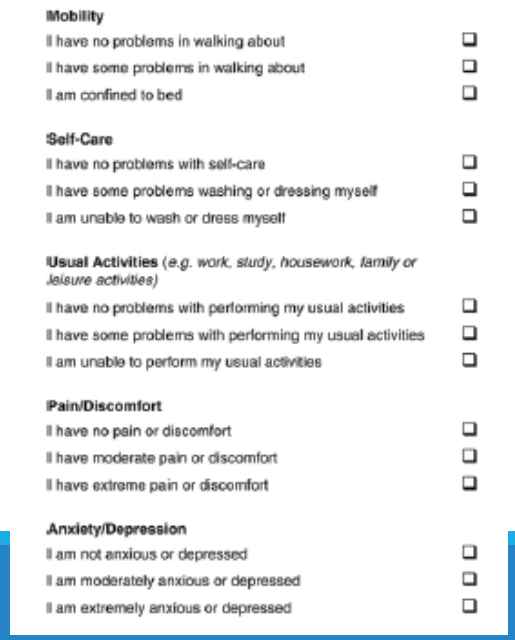
UK mortality rate linked to resp conditions, **ED / hospital admissions**, smoking rates, QOF Prevalence = recorded disease prevalence from GP registers

General practice data dashboards

Quality and Outcomes Framework

GP appointments, prevalence of resp conditions, workforce, fit notes issued, and practice achievements.

PROMs such as **EQ-5D**
Patient Reported Outcomes Questionnaire – used to calculate QALYs



Mobility
I have no problems in walking about ❑
I have some problems in walking about ❑
I am confined to bed ❑

Self-Care
I have no problems with self-care ❑
I have some problems washing or dressing myself ❑
I am unable to wash or dress myself ❑

Usual Activities (*e.g. work, study, housework, family or leisure activities*)
I have no problems with performing my usual activities ❑
I have some problems with performing my usual activities ❑
I am unable to perform my usual activities ❑

Pain/Discomfort
I have no pain or discomfort ❑
I have moderate pain or discomfort ❑
I have extreme pain or discomfort ❑

Anxiety/Depression
I am not anxious or depressed ❑
I am moderately anxious or depressed ❑
I am extremely anxious or depressed ❑

NHS England public data gateway

Acute provider performance comparison – data on certain measures and prevalence of conditions across different geographical regions.

Taskforce for Lung Health

Waiting lists for resp treatment, burden on A&E, **outpatient trends**, referral routes and patient demographic

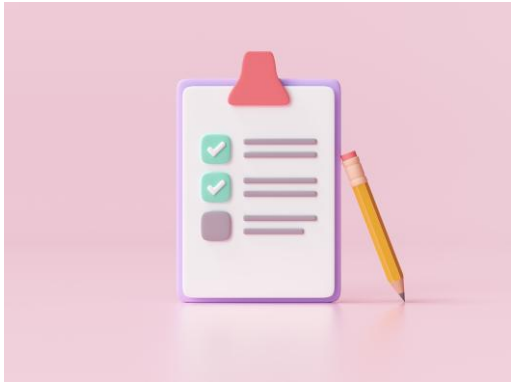
National Respiratory Audit Programme (NRAP)

Reports across different respiratory conditions and diff regions

OpenPrescribing

ICB/ Hospital / GP level **data on prescribing**

Collecting data on unmonetisable benefits



Surveys - Broad feedback at scale

Focus groups –
Shared experiences and themes

Interviews - In-depth, qualitative insights

Questionnaires - Structured PREMs tools

Digital tools / apps - Real-time patient-reported data

Why does demonstrating value in respiratory care matters now more than ever

- **One of the biggest cost pressures on the NHS** – respiratory disease drives billions in spend across urgent and long-term care
- **Winter pressures** – respiratory exacerbations are a major driver of winter admissions and bed occupancy
- **Emergency demand crisis** – respiratory is a leading cause of non-elective admissions and A&E attendances
- **Readmission burden** – biggest cause of 30-day readmissions signal pathway gaps
- **Inequalities** – worst outcomes in most deprived populations - widening gap
- **Policy mandate to act now** – strongly aligns NHS guidance

Next steps – Get mapping!

Set up a workshop

- Map pathway – as is and will be
- Identify the costs and benefits to different settings (then bring them in!)
- Decide how you will measure benefits
- Decide what data to collect
- Identify risks and dis-benefits

NHS Resources

- HM Treasury - The Green Book
- HM Treasury - The Magenta Book
- NHS Evaluation Toolkit

CONVENZIS

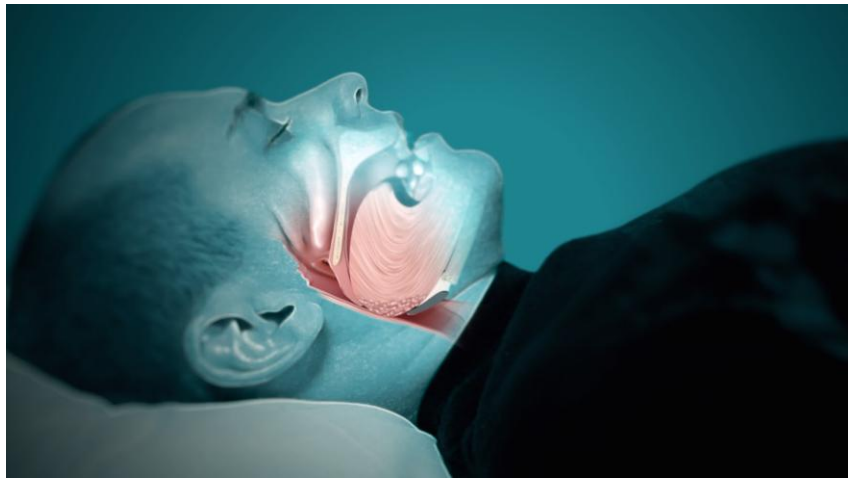
Keynote Presentation

Claire Allen
Managing Secretary
Sleep Apnoea Trust

Sleep Apnoea Trust:
the independent patient voice
www.sleep-apnoea-trust.org

Sleep Apnoea Trust: Supporting patients and health professionals

Sleep Apnoea Trust: The independent patient voice
Claire Allen, Managing Secretary
29 April 2026



Sleep Apnoea Trust:
the independent patient voice
www.sleep-apnoea-trust.org

Covering today (a quick tour!):

- The Sleep Apnoea Trust.
- Supporting patients.
- Supporting healthcare professionals.
- Q&As / discussion.

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Why is a patient support charity needed for sleep apnoea patients?

- Estimated between 600,000 & 700,000 diagnosed patients.
- Estimated ~8 million undiagnosed – noting this includes mild cases that may not require treatment (Benjafield 2019).
- Co-morbidities associated with OSA e.g. cardiovascular events, stroke, diabetes, high blood pressure = burden on NHS.
- Long waiting lists at some sleep clinics.
- Awareness is raised due to media coverage.

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Typical patients?

- Typical patients used to be seen as male, over 60, overweight…
- No longer!

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Particular issues for women
(Often not the typical patient)

- Present differently (tired vs sleepy).
- Incidence increases in and post menopause
- Different distribution of weight post menopause.
- Hormone changes.
- Migraine/headache.
- Stress and anxiety.

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What about children and teenagers?

(Clearly not the typical patient)

- No specific support charity.
- Difficulty in transitioning to adult care.
- We can support this community but need input from paediatric sleep specialists.
- Often sleep apnoea is familial so there's a job of work in education – making CPAP familiar and part of the family.

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And those with disabilities?

(Again, definitely not the typical patient!)

- No specific support charity.
- We want to work with those organisations who know best what their community need
- For example, Down Syndrome and Sleep Research Network are developing a sleep study resource pack – which we hope will be available from our website for both families and health professionals alike.

About The Sleep Aponea Trust

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- Founded in 1996 as the Sleep Apnoea Trust Association, a charitable incorporated trust.
- First, a patient support charity, latterly also providing materials/guidance for healthcare professionals.
- 1 July 2021: former charity closed and relaunched as The Sleep Apnoea Trust with CIO status.
- Board: 6 patients, 2 medical advisers.
- Mission: working to improve the lives of sleep apnoea patients, their partners and families.
- Independent.

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Funding: The Sleep Aponea Trust

- Membership fees.
- Donations.
- Legacies.
- Fundraising.

- One member of paid staff.
- No office.

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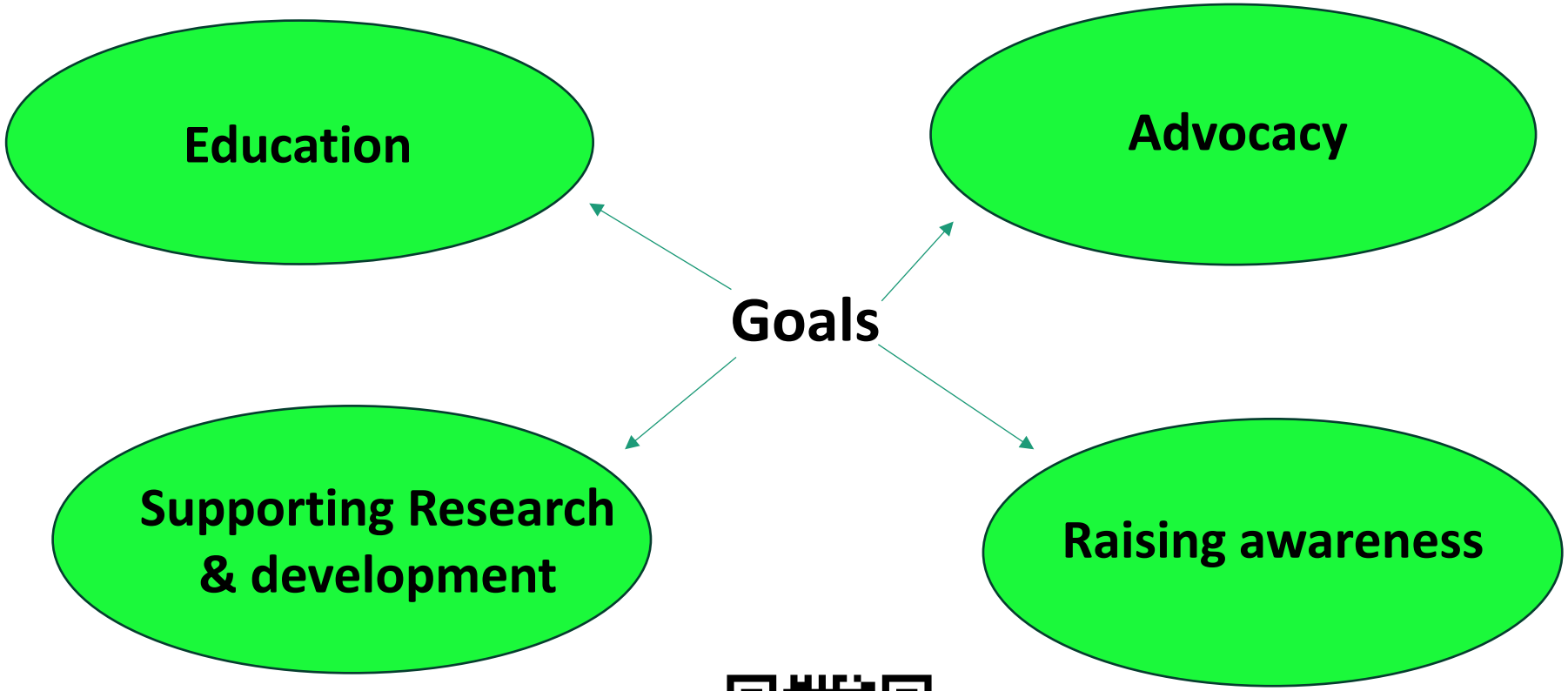

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Education:

- Website.
- Newsletter: Sleep Matters.
- Information leaflets.
- Annual (currently online) conference - SATAday.
- Email helpline.

Advocacy:

- Liaising with the DVLA.
- Asking the NHS to recognise that OSA is increasing driven by the obesity epidemic.
- Participating on NICE Committees to widen the remit of patients receiving treatment.
- Ensuring the patient is at the centre of attention.

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Raising awareness:

- Working with other organisations.
- Project based work around specific areas.
- Responding to press and media enquiries.
- Social media presence.
- Short talks (e.g. Rotary, hospitals).

Research and Development:

- Members listed on our database are consulted for approved research projects.
- Patient representation for clinical trials.
- Ensuring the patient voice is heard.

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Supporting both diagnosed and undiagnosed patients!

For everyone:

- A wealth of information on the website.
- E-mail helpline.
- Newsletter.

For members (in addition to above)

- Medical alert card.
- Invite to online conference.
- Opportunity to be involved in research.

Sleep Apnoea Trust website

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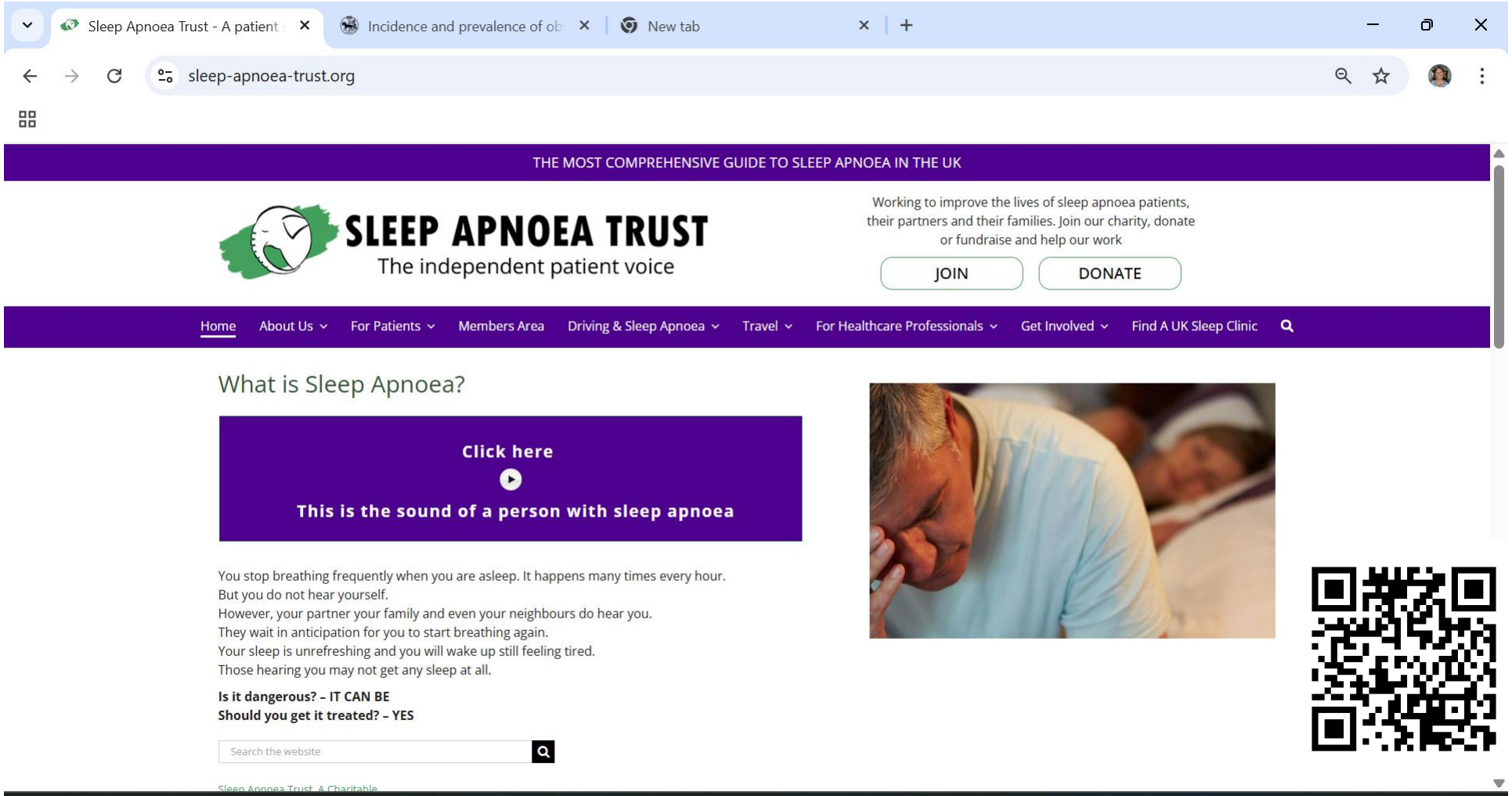

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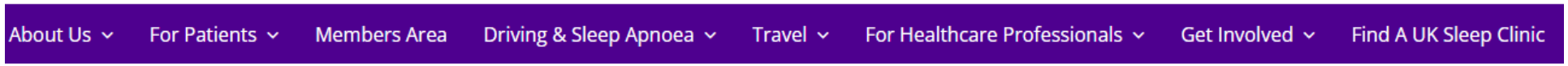

- For patients includes explanation of sleep apnoea, diagnosis, treatment, leaflets, FAQs, NHS rights.
- Driving includes DVLA guidance for both patients and healthcare professionals.
- Travel includes a comprehensive airline guide as well as practical tips for other kinds of travel.
- For healthcare professionals includes leaflet ordering, NICE, OSA Alliance, ARTP, BSS and BTS, GMC and Commissioning
- Find a sleep clinic – details of all NHS sleep clinics.

All feedback welcome!

Supporting healthcare professionals

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- Leaflet ordering form.
  - ✓ Living with your CPAP - Your FAQs
  - ✓ What is Obstructive Sleep Apnoea
  - ✓ Weight Loss & Sleep Apnoea
  - ✓ Snoring & Sleep Apnoea
  - ✓ Hospital Admissions & Sleep Apnoea
  - ✓ Join the Sleep Apnoea Trust
  - ✓ CPAP Claustrophobia & Panic Attacks

https://sleep-apnoea-trust.org/healthcare-professional/nhs-sleep-clinic-leaflet-orders/

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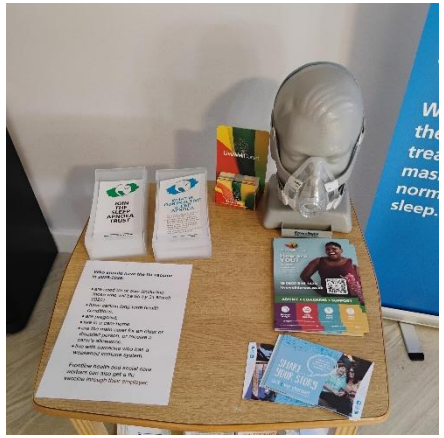
Attending events at sleep clinics and other locations in the community



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Supporting Sleep Clinics

- Sleep Apnoea Trust **facilitates** volunteers.
- Working with sleep clinics and volunteer services.
- Generic job description already developed.
- Do you need additional hands?
- Might you be able to identify anyone who might volunteer?

Helping healthcare professionals by supporting patients

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Through responses to our helpline, we help patients navigate through their diagnosis. Some common questions relate to:

- How to ask for a referral from a GP.
- Frustration about waiting lists (and subsequent anxiety).
- Understanding a diagnosis.
- Intolerance to CPAP.
- Alternatives to CPAP.
- Practicalities of CPAP (e.g. mask fit, air leaks).
- Driving and travel.
- Helping with complaints.

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To access the Sleep Clinic, patients need to go through the gatekeeper:
Their GP

2-3 hours training makes it challenging for GPs to link symptoms with sleep apnoea.

Epworth Sleepiness Scale/ Stop Bang Questionnaire… Fit for purpose?

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Should GPs ask different questions before referral e.g.

At night…	During the day…
Difficulty falling asleep	Feeling tired after a full night of sleep
Trouble staying asleep	Morning headaches
Snoring	Difficulty concentrating
Choking or gasping for air	Trouble remembering
Others saying you stop breathing	Dozing off (even if only a second)
Overwhelming urge to move legs/arms	Daytime sleepiness
Twitching or jerking of legs/arms	Feel sleepy while driving
Nocturia	Fall asleep at work
	Stress, anxiety or sadness
	Nasal problems

To ponder…

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www.sleep-apnoea-trust.org

I had a long discussion with Dr Jonathan Sunkersing recently. We discussed questions relating to the patient journey which we thought we'd share with you and we'd invite you to join the conversation…

How do we remove the barriers for patients and work together more closely; from the patient's initial symptoms, seeing a GP, referral to a sleep clinic, to diagnosis and successful treatment; what systems do we need to implement?

Sleep Apnoea Trust:
the independent patient voice
www.sleep-apnoea-trust.org

Our ask of you…

- Let your patients know
  - about the Sleep Apnoea Trust.
  - they are supported once they leave the clinic.
- Give our leaflets to patients.
- Leaflet feedback please – you are the best people to know what's missing!
- Contact me if we can help with volunteering or patient events.

Sleep Apnoea Trust:
the independent patient voice
www.sleep-apnoea-trust.org

Thanks for listening!

claire.allen@sleep-apnoea-trust.org

Sleep Apnoea Trust:

the independent patient voice

www.sleep-apnoea-trust.org

NHS Deep Dive

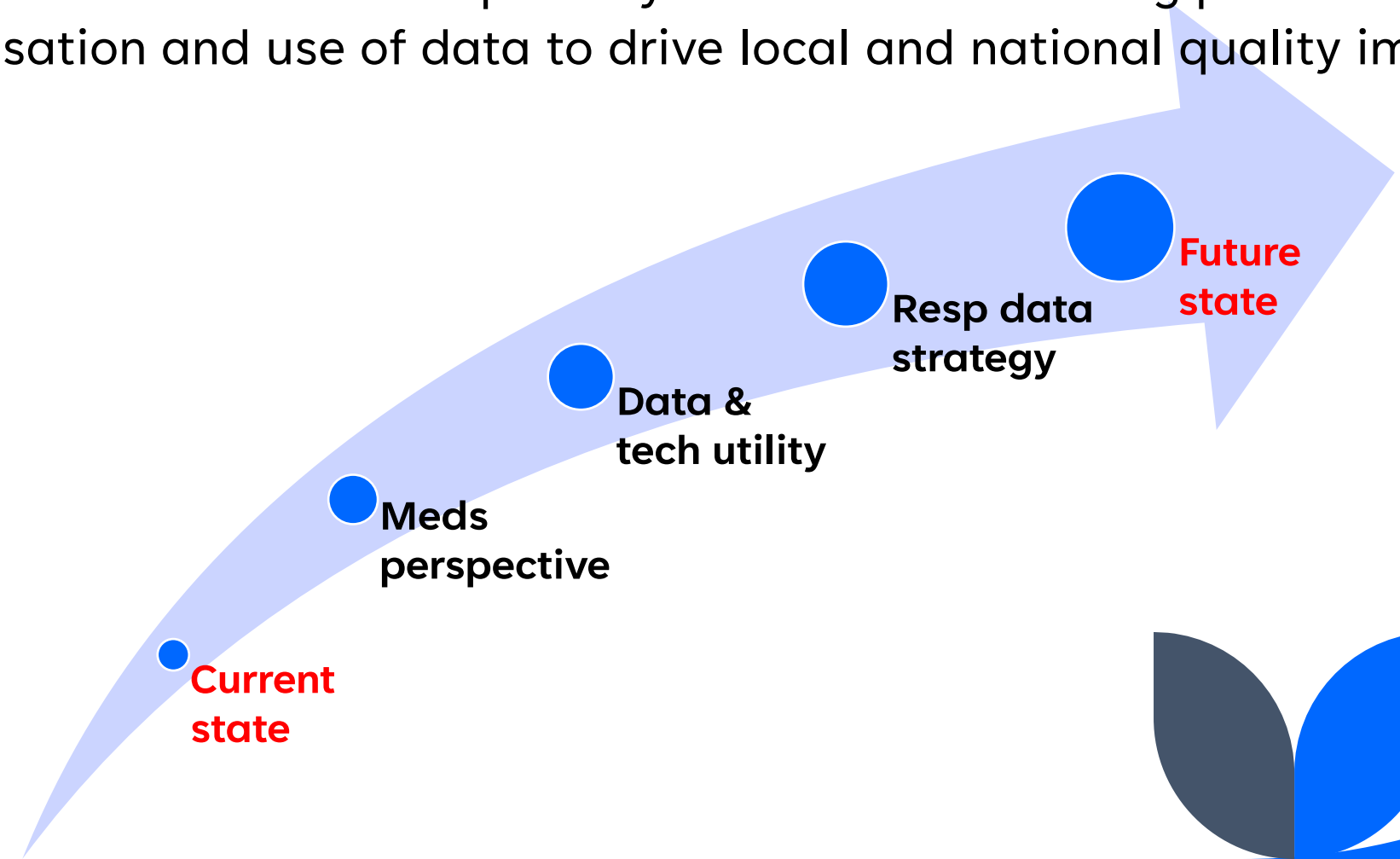
Ms Ravijyot Saggu
Lead Pharmacist, Medicine & Respiratory
NHS Portfolio Role/Chelsea and Westminster Hospital, NHS Trust London

Medication, Prescribing & Digital Data in Respiratory Management

Ms Ravijyot Saggu,
Respiratory pharmacist, NHS portfolio role,
London

Session outline

A focused exploration of how medicines prescribing, data/tech can be harnessed to transform respiratory outcomes. Discussing prescribing optimisation and use of data to drive local and national quality improvement.



Current state

Medicines perspective,
data quality & case for change

Prescribing (medicines) optimisation

‘a patient-focused approach ensuring safe, effective, and cost-effective use of medicines to improve health outcomes. It involves collaborative, multidisciplinary efforts to ensure patients receive the right medication, stop unnecessary treatments, reduce waste, and engage in shared decision-making regarding their care.’ NHSE

Everyone’s responsibility

NHS medicines spend England

Breakdown of the £21.6 billion (2024/25, before rebates)

According to NHSBSA:

£10.3 bn – Medicines prescribed in primary care and dispensed in the community

£11.1 bn – Medicines issued in hospitals

£110 m – Medicines prescribed in hospitals but dispensed in the community

£32.3 m – Medicines prescribed by dentists

£27.8 m – Medicines in the Adult Secure Estate

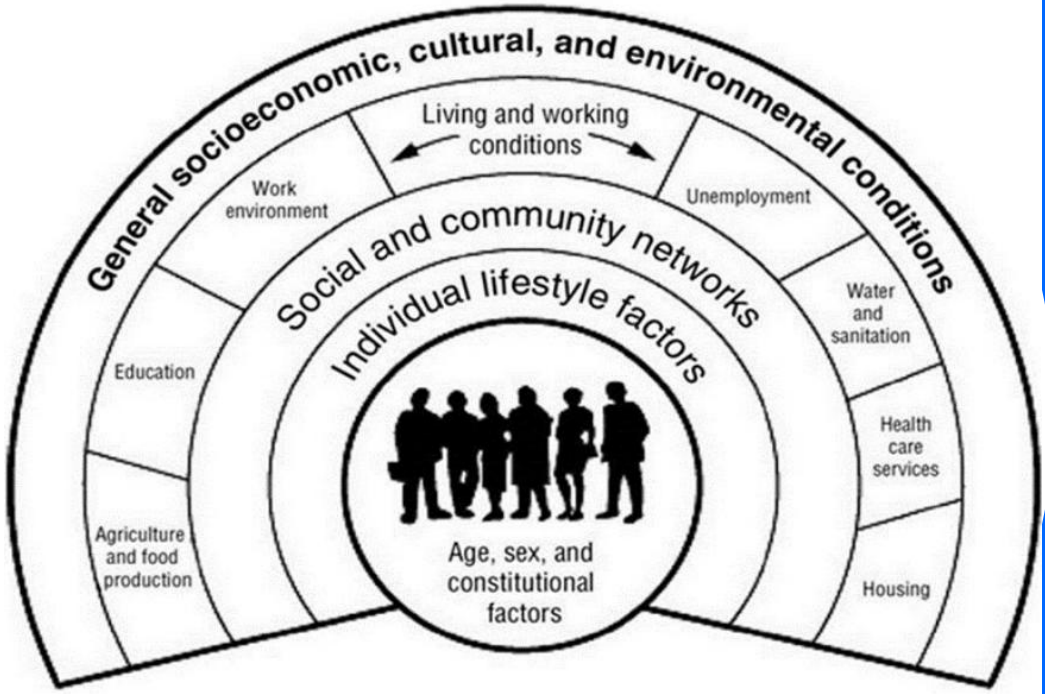
- **Gross spend (before rebates): ~£21.6 bn**
- **Net spend (after rebates from pharmaceutical companies): ~£20.9 bn**

Resp medicines issues → GIRFT!

Over/under prescribing, adherence, exacerbations disease control
SABA, OCS, ABX, rescue packs & nebs stewardship

Side effects, polypharmacy, waste, HRU, £ & environmental impact

Variation, impacted by deprivation, health literacy, climate & wider factors

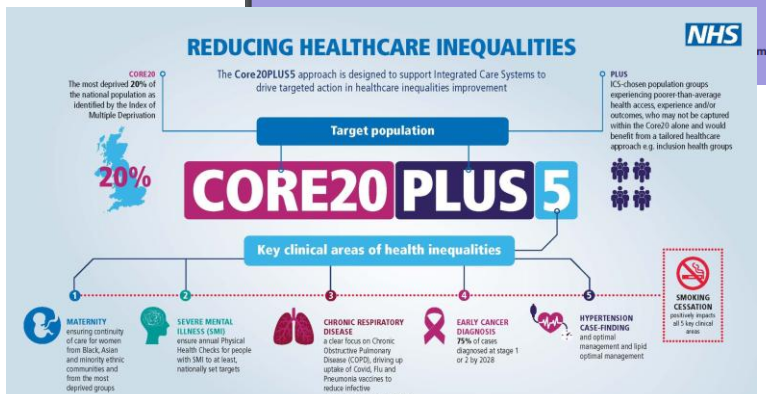


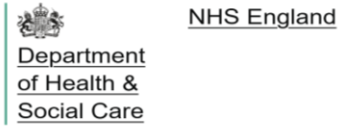
Dahlgren & Whitehead model 1991

SABA – short acting beta agonists, OCS – oral corticosteroids, ABX – antibiotics, HRU – health resource utilisation

Landscape & drivers for change

- Ageing population, unhealthy behaviours + life years → morbidity/mortality, unwarranted variation, inequalities
- £ & health burden, environmental impact
- Darzi 3 shifts, NHS & commissioning change, Resp Transformation Partnership





Data – what it tells us v what we want?

Global, patient reported, trials, registries, audits, surveillance

Raises awareness - patterns, expenditure, activity, pt experience, clinical response

Prescribing cost/vol primary v secondary care datasets, carbon emissions

Don’t look in isolation – model, overlay, relate to outcomes & SDOH

Population health level, integrated dashboards, triangulation

Consider: quality, pipeline, availability, validity, cadence inclusion/exclusion, currency Limitations – not disease/pt level, aggregated data, assumptions

SDOH social determinants of health

Sources of data?

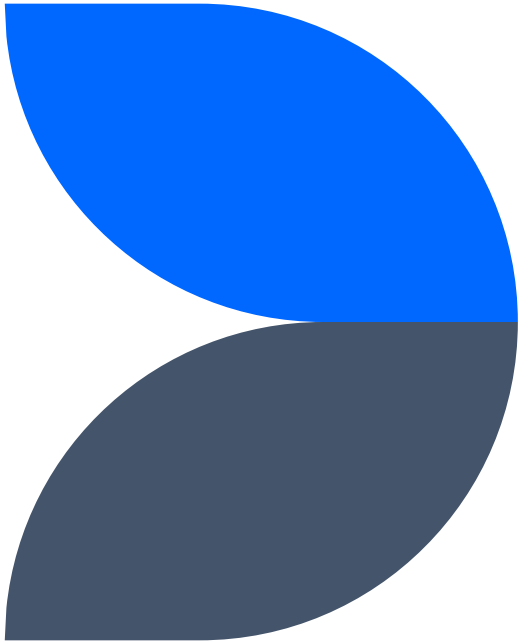
- Usual suspects → depends what lens we apply – setting, mortality, prescribing etc ONS, HES, NHSBSA, FINGERTIPS, Open prescribing, Digital health passport
- Many sources/versions of truth, challenges – GP connect, read access
- Lots of raw data gets collected currently
- For RTP aim is to standardise data at point of collection & provide templates rather than trying to move data to different places
- Without mandate for this all to be standardised we will still have variation e.g. Ardens templates

Future state

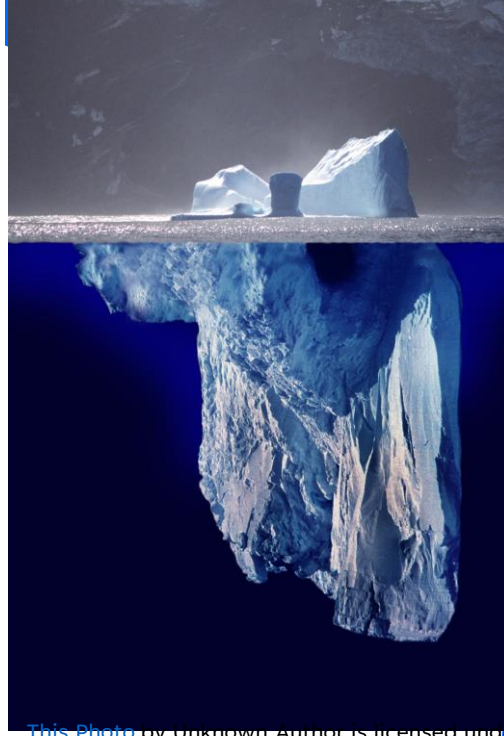
Aspirations

The roadmap – tech, medicines &

Resp data strategy



RPS publishes Digital Skills and Capability Resource for pharmacy teams

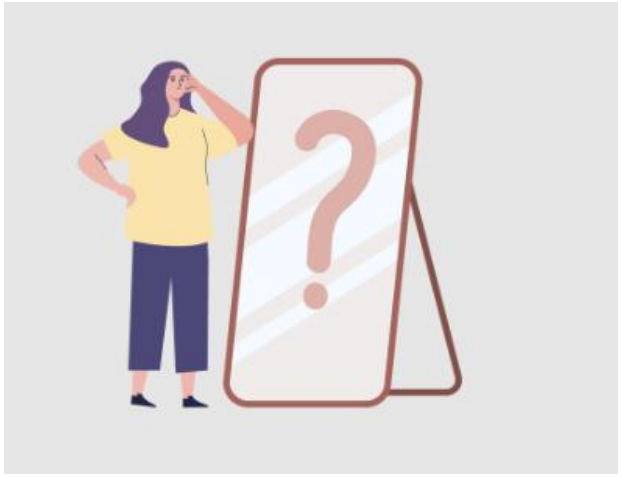


Digital innovation – the aspiration

- **Slick, secure, accurate, tech/data utility & easy to use**
  →Improvements (outcomes, quality, adherence, experience etc)
- **End of pilot??? Research + recommendations, system readiness…**
- **Tech can change where & how care is delivered → harness potential, human need**

- Services & staff need to be digitally enabled
- AI limitations inc English language (AI virtual hub FutureNHS)
- RCPharm position statement for AI, digital skills capabilities resource
- FDP, EPS, Single national formulary

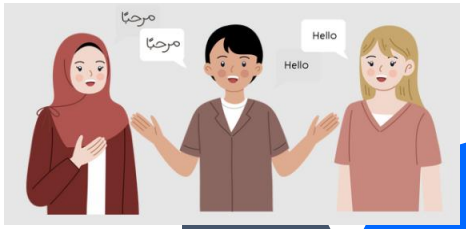
Barriers to uptake



Digital Literacy / Confidence

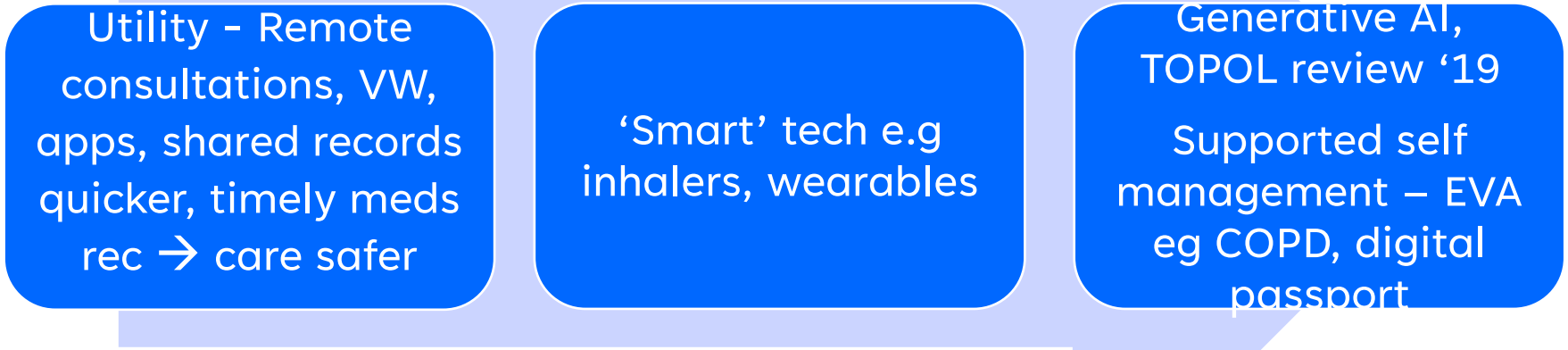
Security Concerns

Perception of benefit

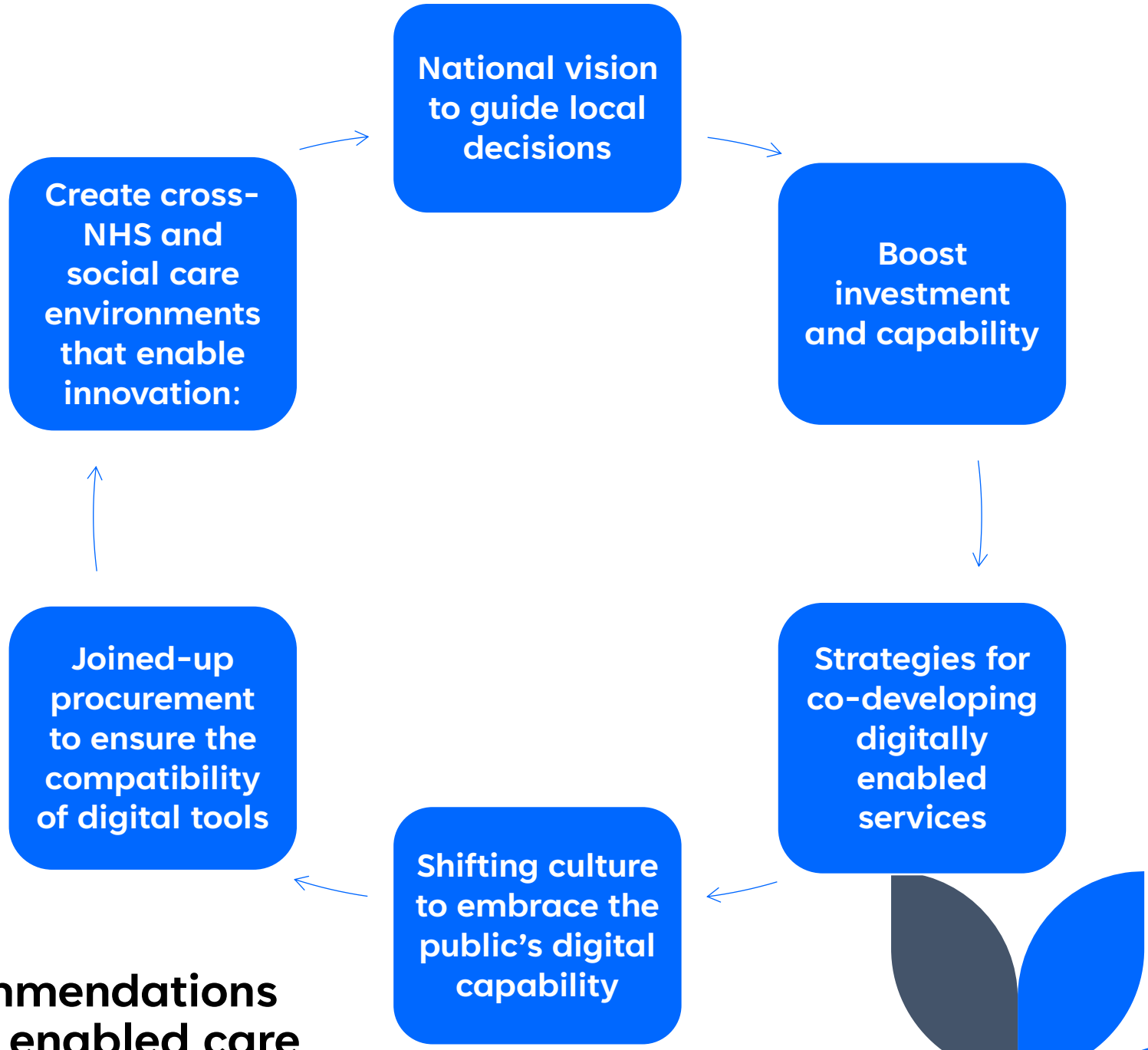


Cultural or language barriers

Various tech is available



- Diagnostic tools – imaging, capnography
- Therapeutic devices – ventilation &NIV
- Remote monitoring and telemedicine – home monitoring, wearables
- AI and data analytics – predictive analytics
- Rehab and long-term care – virtual PR
- Advanced research and development – genomics, 3D print



Kings Fund recommendations Aug '24, digitally enabled care

Digital by default

- No shortage of data → how harnessed, interoperability
- Governance & data sharing agreements
- How data is stored, security, who owns, updates, legal responsibility for in/action?
- Federated data platform (FDP)
- Digital exclusion risk atlas (DERA)

Federated data platform

- Doesn’t replace – sits on top of existing systems, securely connecting them across the NHS
- Enabling hospitals & ICBs to use and build digital solutions
- One secure data environment (SSO)
  - Some data from GP sources – de-identified
  - In/out-patient waiting lists, hosp tracking
  - Patients can request their data

Digital Exclusion Risk Atlas (DERA)

Understanding and addressing digital exclusion in health and care

What is DERA?

- A **national NHS analytical tool** to identify and understand patterns of digital exclusion across England
- Combines multiple indicators into a **single, geospatial risk index**
- Uses **LSOA-level data** to provide detailed local insight

Why it matters

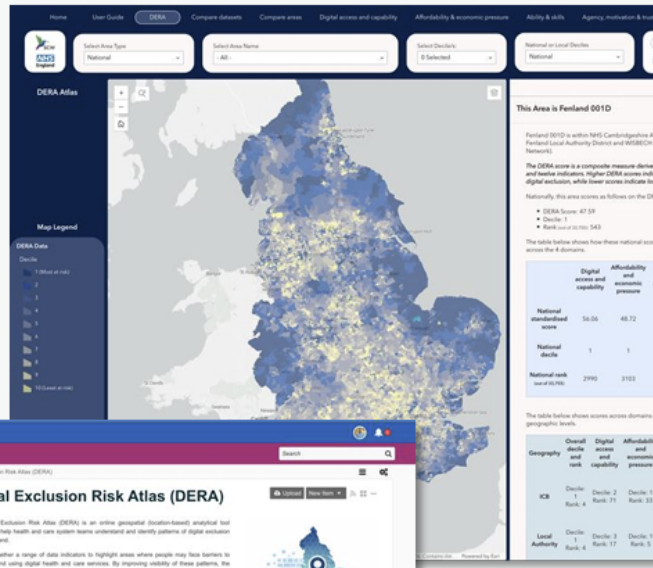
- Digital exclusion is a **key driver of health inequalities**
- As services move from analogue to digital, there is a risk of **widening access gaps**
- Supports the **10 Year Health Plan** and **CORE20PLUS5 approach**

What DERA enables

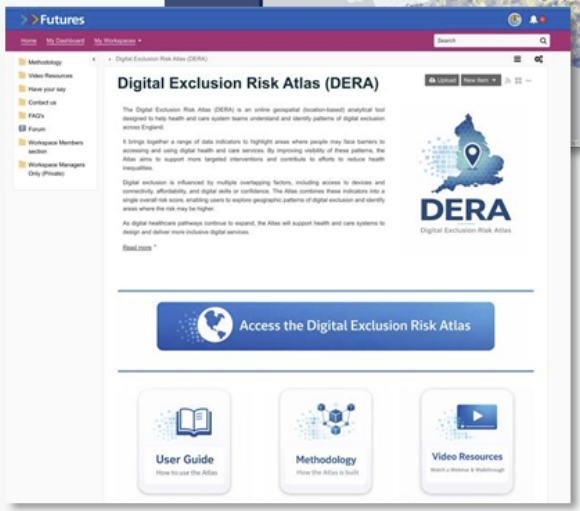
- Identifies **areas where the risk of digital exclusion may be higher**
- Informs **targeted interventions and resource prioritisation**
- Supports **inclusive digital healthcare pathway design**
- Strengthens **evidence-based decision making across systems**

How it works

- Combines **4 domains**:
  - Digital access and capability
  - Affordability and economic pressure
  - Ability and skills
  - Agency, motivation and trust
- Uses **12 indicators** to generate a composite score
- Higher scores = **greater risk of digital exclusion**



Access the



Access the Futures page

Use DERA to support more inclusive digi health services

Department of Health & Social Care

Policy paper

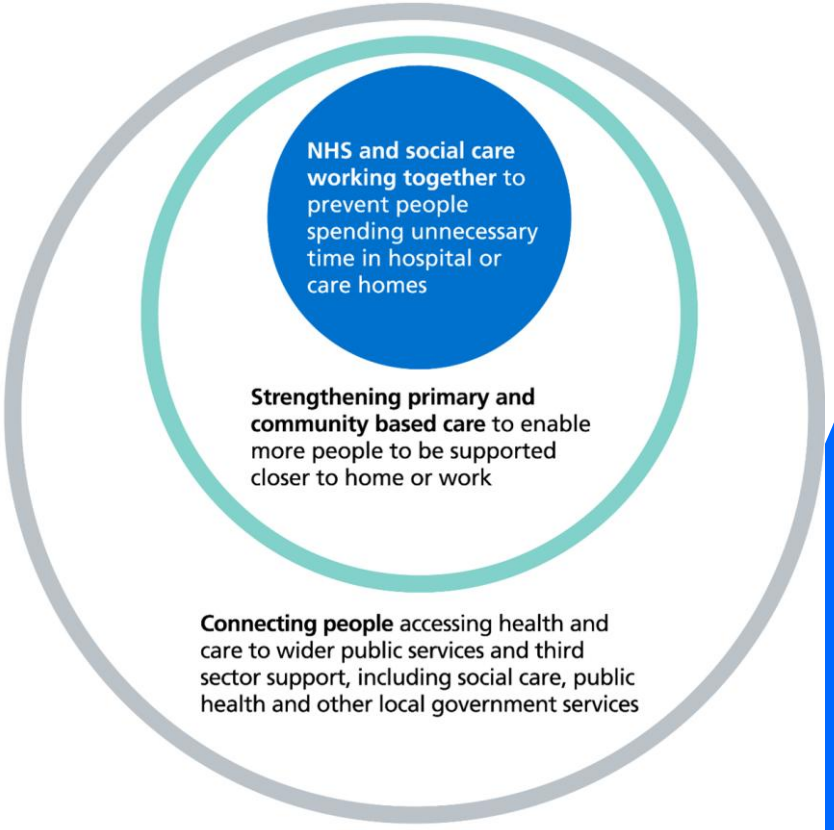
A cyber resilient health and adult social care system in England: cyber security strategy to 2030

Published 22 March 2023

NHS Medium Term Planning Framework 2026-29

Hospital to community	Analogue to digital	Sickness to prevention
• Accelerating progress on the Neighbourhood Health model • Same-day appointments for urgent cases in general practice • Increasing community service capacity and productivity • Greater use of community pharmacy • Delivering 700k extra urgent dental appointments a year	• Making full use of the NHS App to communicate with and support patients to better access and manage the care and services they need • Using the NHS Federated Data Platform to improve care through better use of data • Deploying ambient voice technology and digital therapeutics	• Reducing obesity, including continued rollout of weight loss medicines and weight management services • Supporting a 25% reduction in CVD-related premature mortality • Implementing opt-out models of tobacco dependence in routine care • Reducing antibiotic use and polypharmacy

Transforming our approach to quality: Plan for the introduction of a **Single National Formulary, prioritising the following efficiency savings in 2026/27 to create headroom for adopting innovations**: use of best value DOACs, SGLT-2 medicines and the wet AMD Medical Retinal Treatment Pathway.



National Respiratory Data strategy

The collective vision is to improve respiratory health outcomes through a consistent set of respiratory data measures which will allow data to tell the story of care for people with lung problems and inform what is needed to improve care and reduce health inequalities, progress towards ambitions and impact on patients.

HDRUK, A+LUK, BTS, RCP, NRAP, NICE, DHSC

National Respiratory Data Strategy

Improve	Aid	Use	Break down	Work
Improve way in which we use data by agreeing specific code sets & common definitions to be used within NHSE	Aid translation of clinical trial results into clinical practice by adoption within clinical pathways	Use data to facilitate real world evaluation of new technologies including drugs and digital tech	Break down barriers & concern over the use of accuracy of data through communication	Work with CVD Prevent and Diabetes audit for respiratory primary care data collection - Establish a primary care audit for respiratory

National Respiratory Data Strategy cont.

- Incorporate regional solutions with exemplar regions
- Understand impact of the unintended consequences of policy changes
- Ensure all registries and audits associated with respiratory disease are in single NHSE platform for easy cross linkage and use of data → will enhance & improve quality of data usage. **Aiming to be able to look at complete patient pathways end to end pathway work**.
- Collate up to date diagnostic information around spirometry testing – e.g. how many people are waiting
- Aim for near real time analyses to minimise outcome variation, improve shared decision making.

Data registries?

Royal College of Physicians | National Respiratory Audit Programme (NRAP)

- Severe asthma registry to be absorbed into NRAP
- No COPD registry
- COPD biologics data to be collected as part of NRAP audit rather than a registry
- Streamlining and harmonisation

COPD – Chronic obstructive pulmonary disease, NRAP – National respiratory audit programme

Today’s Reality

Medicines reveal where fragmentation, risk and inefficiency are most visible to patients and staff

Patient

- Medicines information does not reliably follow patients between settings
- Patients are unsure which medicines to take after changes in care
- Poor experience undermines trust, adherence and outcomes

Nurses and AHPs

- Medicines administration relies on manual transcription and workarounds
- Different systems and workflows increase risk and consume time
- Productivity is lost due to medicines availability

Prescribers

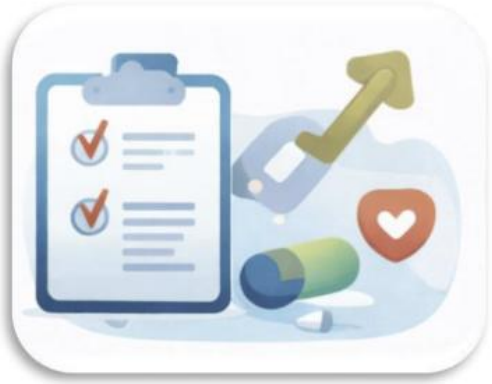
- Prescribing systems can allow sub-optimal decisions to proceed
- Safety ultimately depends on individual vigilance rather than built-in checks
- Errors are usually detected after harm, not prevented at source

Strategic Intent

Delivering safe and effective medicines use in a digital first NHS

Prevent harm, not just record care

- Use automation and decision support to prevent errors and contraindications
- Reduce unsafe variation through standardised digital workflows
- Build safety into everyday prescribing, dispensing and administration



Reduce avoidable work

- Eliminate manual transcription and duplication between systems
- Reduce reconciliation burden and rework for clinical staff
- Improve productivity as a driver of quality, not a trade-off

Strengthen accountability and trust

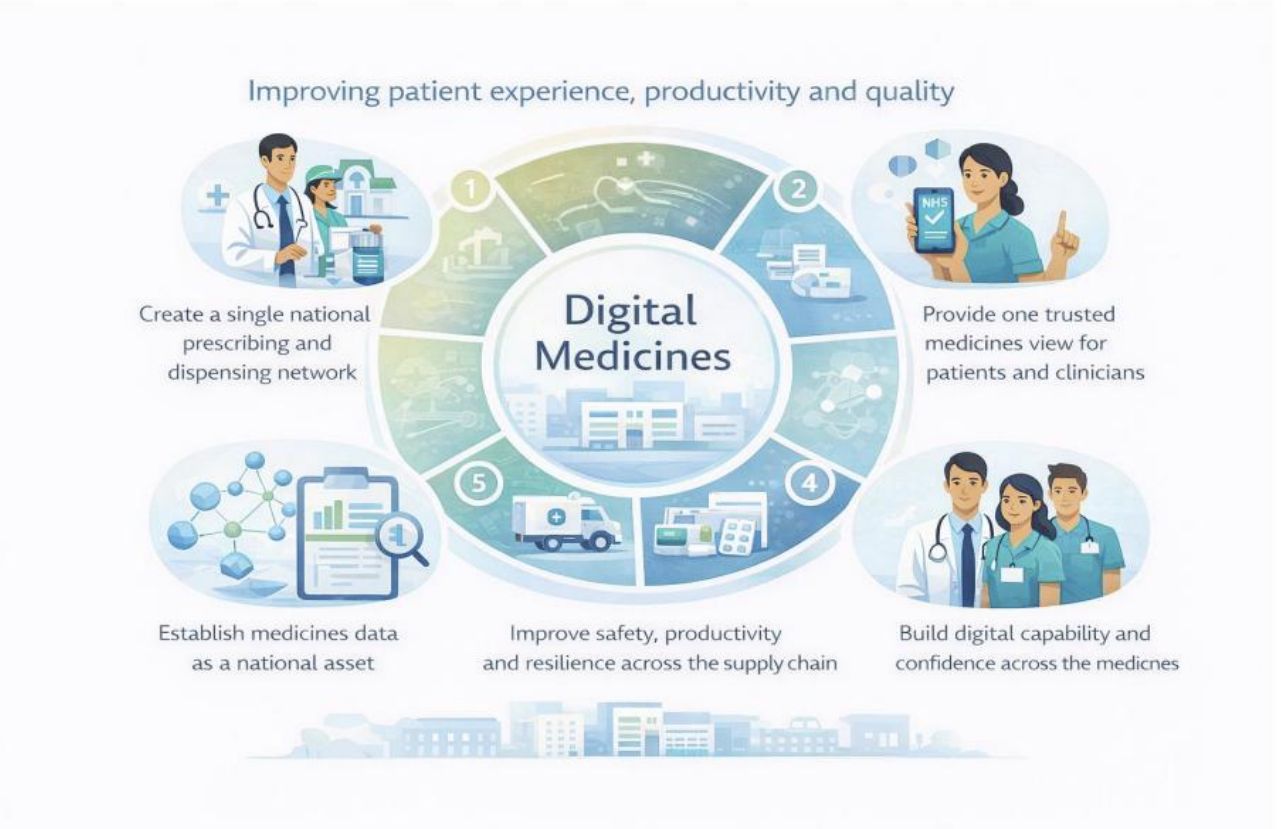
- Use medicines data to support quality oversight from board to frontline
- Give clinicians timely feedback linked to practice
- Support patient trust, adherence and self-management

What are we doing about it

Improving how medicines are used is one of the fastest, most tangible ways to demonstrate how technology can improve patient experience, productivity and quality at national scale.

Objectives:

1. Create a single national prescribing and dispensing network
2. Provide one trusted medicines view for patients and clinicians
3. Enable patients to manage medicines as part of daily life
4. Establish medicines data as a national asset
5. Improve safety, productivity and resilience across the supply chain



Ambition for Darzi changes not new

Macro & micro, interdependencies

Moving parts, many unknowns

Take home messages - change underway!

- Start and end with the patient (meds part of holistic care)
- Data driven, pop health equity approach = informed → quality care
- Many data sources/platforms – discern, triangulate, overlay
- Be aware of limitations of sources, data currency/validity etc disaggregate ‘invisibility’ & digital exclusion

Thank you

with thanks to:

- Professor Jennifer Quint - Professor of Respiratory Epidemiology Imperial College London
- Mr Karol Kuczera - Senior Healthcare Policy manager, Health inequalities programme, NHSE
- DHSC, NHSD

Ravijyot.saggu@nhs.net

Model ICB Strategic commissioning approach – from vision to operational reality

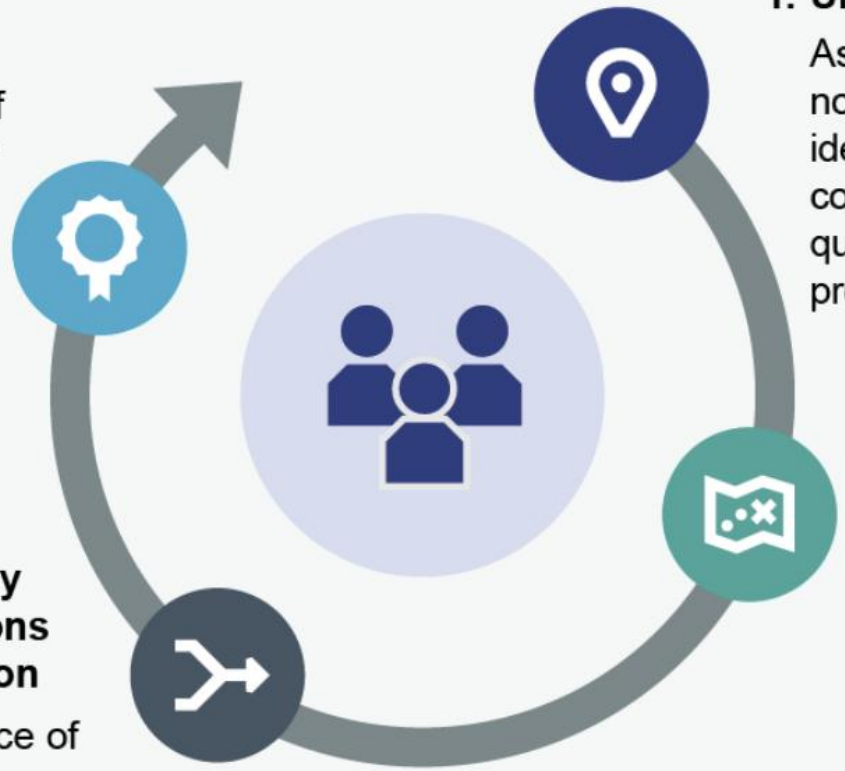
Four stages of commissioning cycle (updated model):

1. **Understanding local context**
   Assessing population needs now and in the future, identifying underserved communities and assessing quality, performance and productivity of existing provision

2. **Developing long-term population health strategy**
   Long-term population health planning and strategy and care pathway redesign to maximise value based on evidence

3. **Delivering the strategy through payer functions and resource allocation**
   Oversight and assurance of what is purchased and whether it delivers outcomes required

4. **Evaluating impact**
   Day-to-day oversight of healthcare usage, user feedback and evaluation to ensure optimal, value-based resource use and improved outcomes



NHS Deep Dive

Dr Peter Strouhal
Medical Director UK
Alliance Medical

Foreshortening Lung Cancer Diagnostic Pathways, Reducing Time to Staging

Alliance Medical

Dedicated to Diagnostics

By Dr P Strouhal
& Heathcote A, Hiscox H, Habbouchi H, King G

Disclosures:

- **Medical Director (UK), Alliance Medical Ltd.**

- Radiologist, Dudley Group **NHS** Foundation Trust
- Teleradiologist (PET-CT), Alliance Medical
- BIR Council member
- GE HealthCare Enterprise Imaging advisory board member

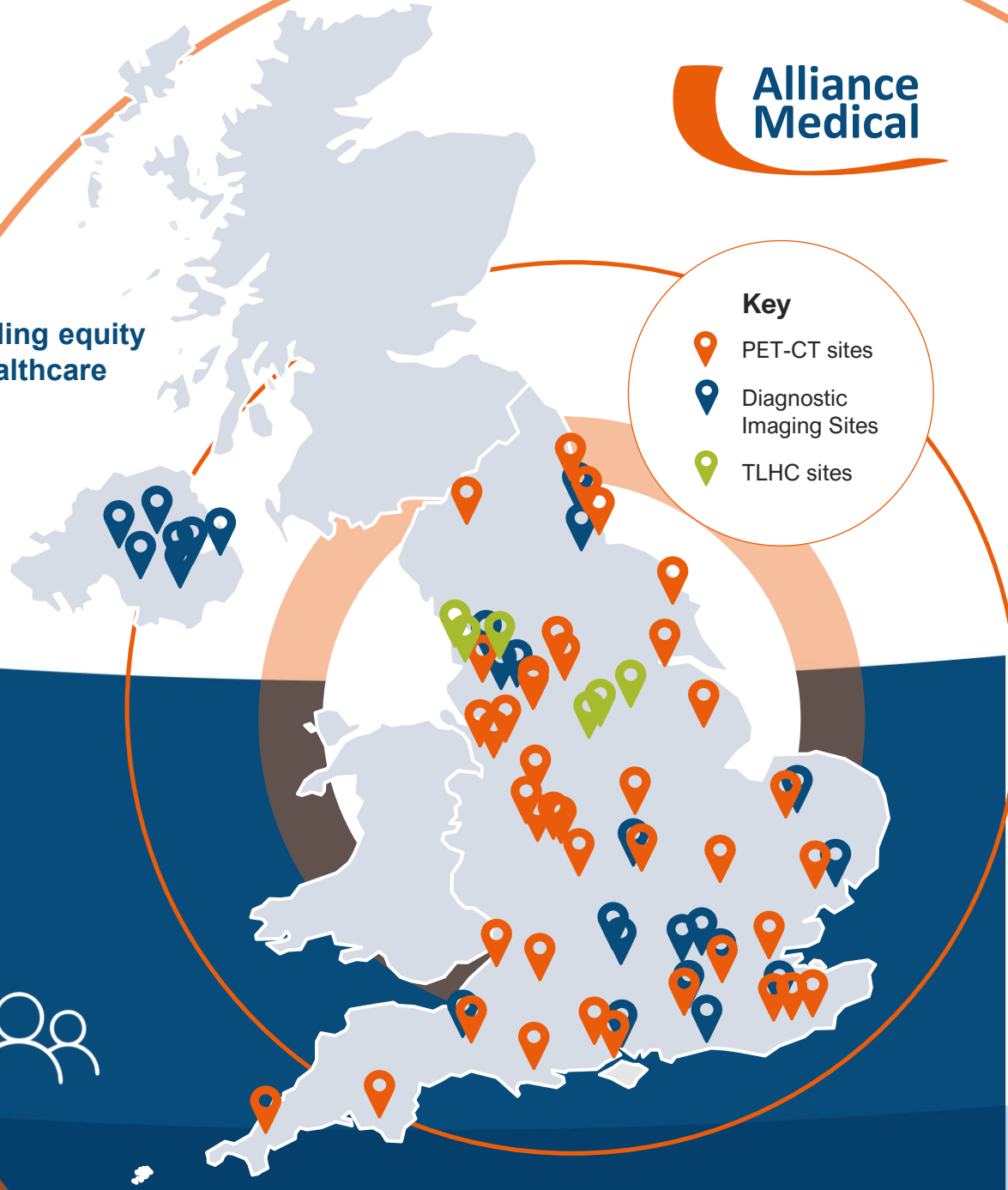
WE ARE ALLIANCE MEDICAL UK

And this is our national network

Improving pathways

Evolving diagnostics

Enabling equity in healthcare



Delivering

70% of PET-CT

Scans in UK

Partnered with NHS

100+ NHS Trusts

800,000+

Patients served each year

Proud to serve

Some of the UK's most disadvantaged communities

Five years of LCS
at Alliance Medical

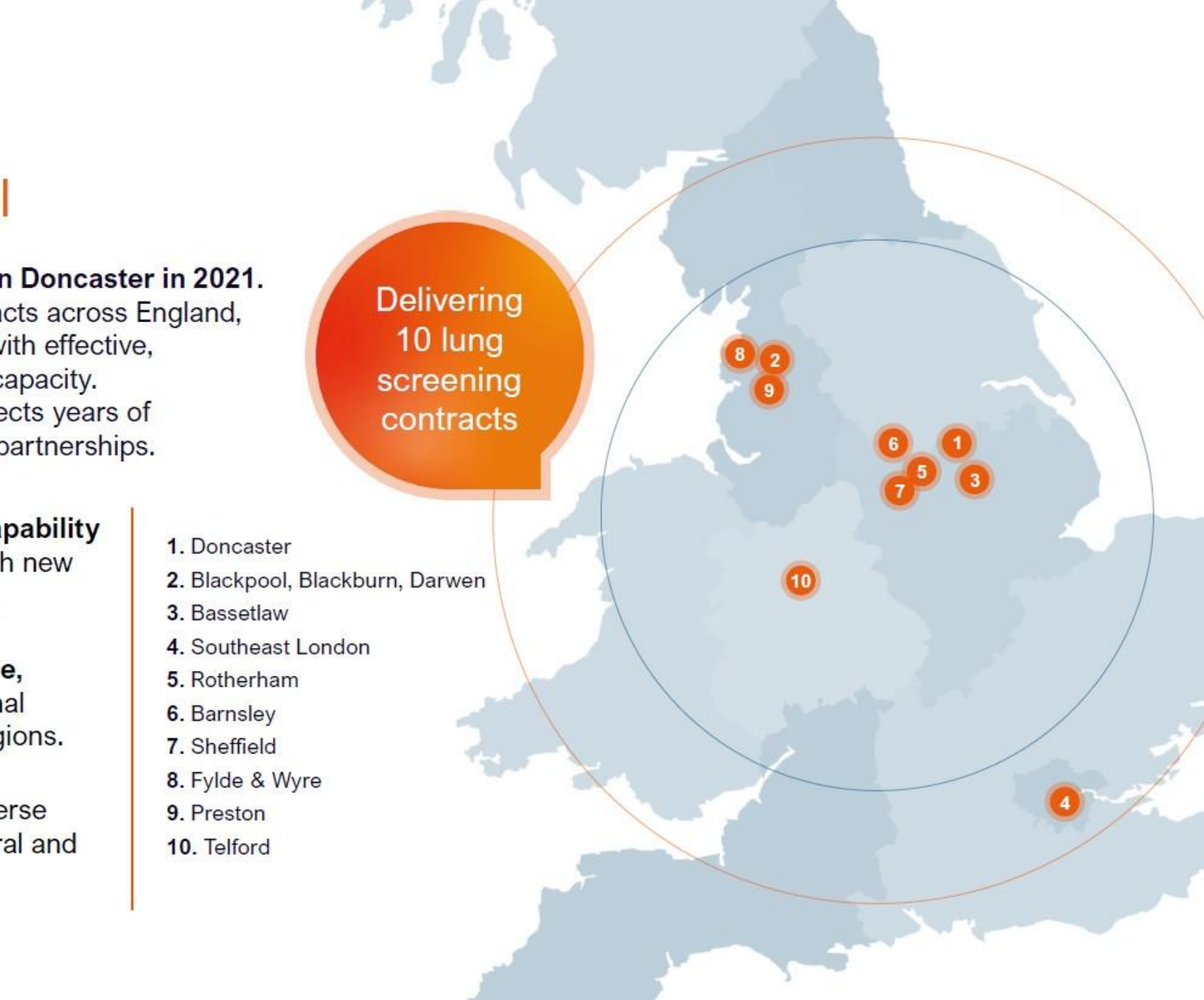
We launched the first LCS pilot in Doncaster in 2021.
Since then, we've delivered contracts across England, supporting ICBs and NHS Trusts with effective, accessible community-based CT capacity.
Our growing national footprint reflects years of operational expertise and trusted partnerships.

Strong mobilisation capability – proven ability to launch new sites quickly and safely.

Consistent governance, reporting and operational standards across all regions.

Experience across diverse geographies: urban, rural and high-inequality areas.

Delivering 10 lung screening contracts



1. Doncaster
2. Blackpool, Blackburn, Darwen
3. Bassetlaw
4. Southeast London
5. Rotherham
6. Barnsley
7. Sheffield
8. Fylde & Wyre
9. Preston
10. Telford

Impact of Lung Cancer Screening (AML)

Alliance Medical's LCS programmes

80% diagnosed
at early stages (Stage I–II), leading to better survival rates and lower treatment cost

High uptake
achieved in underserved communities

Proven success
delivering in high-deprivation, rural and coastal geographies

1,000+
cancers detected

180,000+
LDCT scans

250,000+
invitations

105,000+
Lung Health Checks delivered

Impact of LCS: The Problem

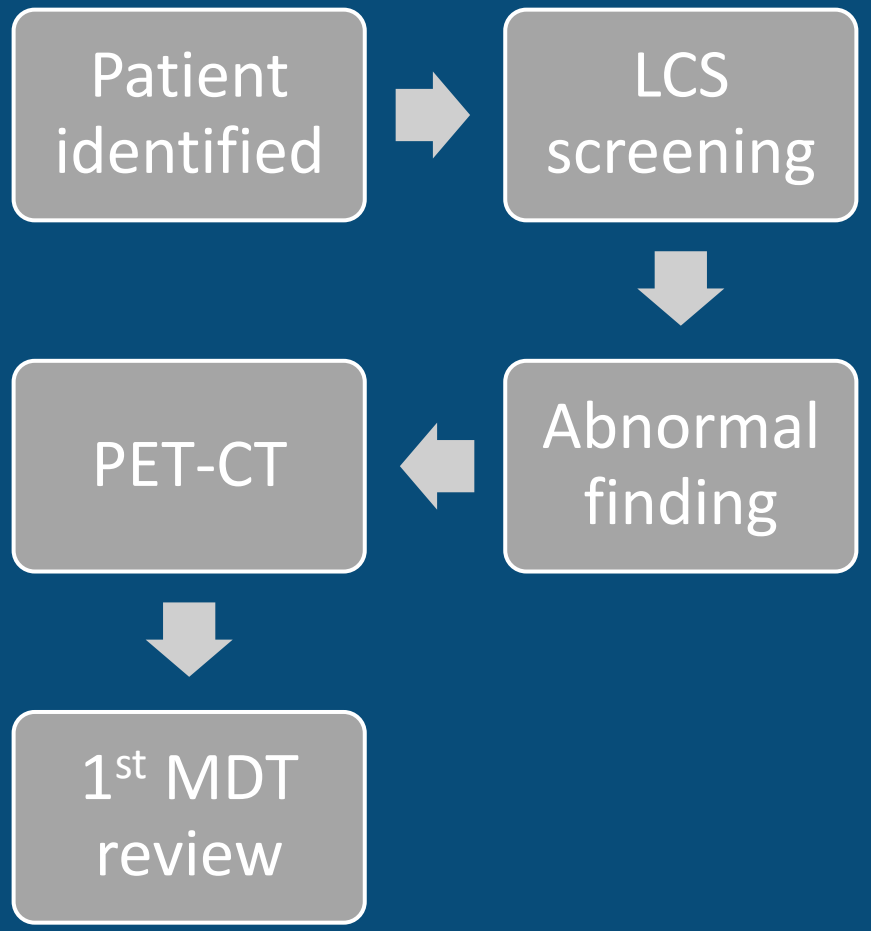
- PET-CT often sits late in diagnostic pathway
- Referral dependent on clinical/MDT review
- Sequential imaging steps introduce delay
- MDT decisions can be deferred awaiting final imaging staging

Why this matters

- Time to staging drives time to treatment
- MDT decisions often depend on PET-CT; delays reduce efficiency
- Opportunity to move PET-CT earlier in the patient pathway

Aim

- Introduce PET-CT after LCS CT
- Shorten time to MDT decision
- Improve staging confidence
- Use existing scanner capacity



Delivery Model

- 10 Dedicated and 17 other LCS sites – Trusts, CDC's and dedicated mobiles
- Shared reporting workflows: Local Trust & AML reporting networks
- Network delivery

Data / Cohort

- Routine operational data – extracted from AML Business Intelligence server
- Patients identified within existing workflows across 27 facilities
- Patients undergoing LCS between 01/10/2024 - 30/09/25
- Pathway supported by standard referral criteria, centralised bookings, shared reporting
- Network-level data analysis

- 600 unique patients identified with nodule ≥ 6 mm (620 total found)
- Looked at those patients having LCS CT progressing to PET-CT as next test
- 90% had PET-CT before 3-month follow-up imaging due
- 139 patients only needed follow-up LCS CT at 12 months

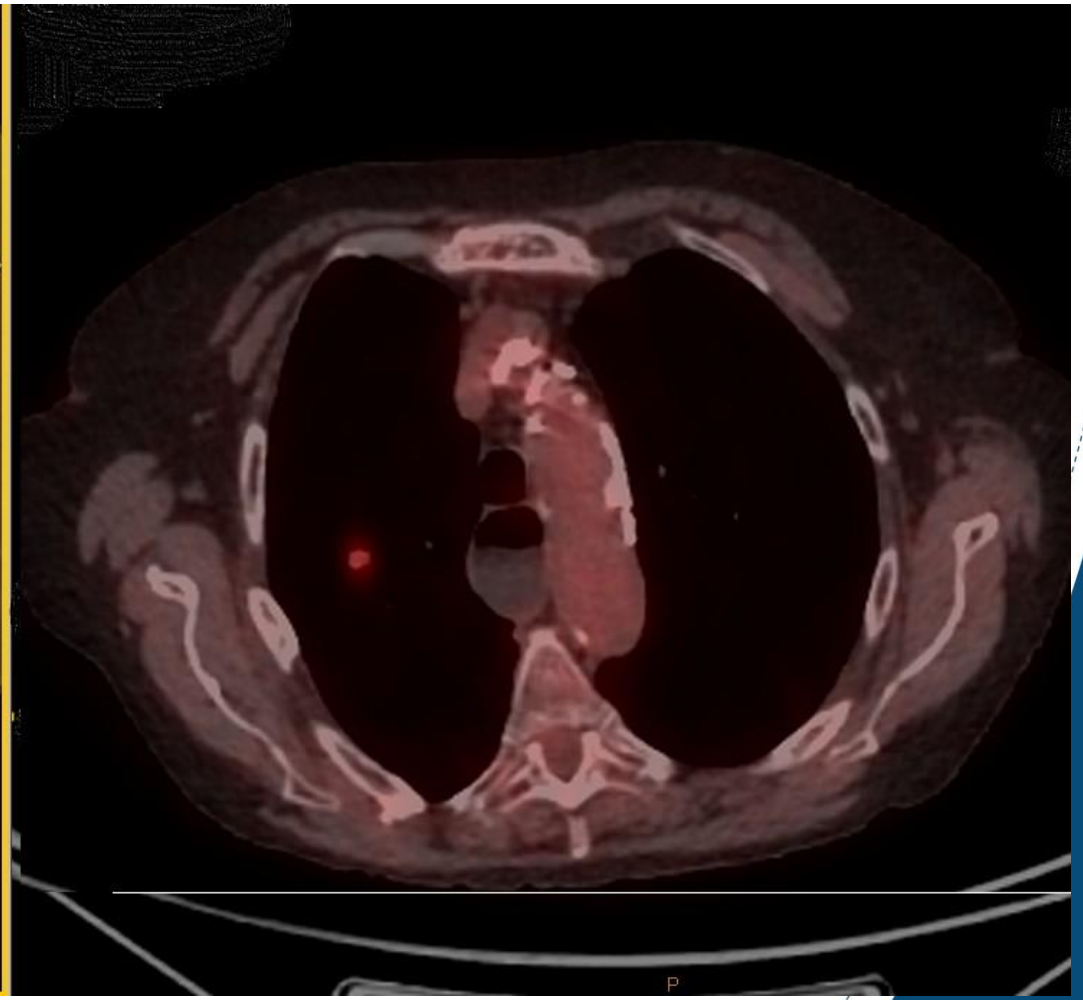
System Impact

- Earlier MDT discussion
- Reduced reporting turnaround
- Improved staging confidence
- No additional scanner capital

So What?

- Screening finds cancers earlier
- Early PETCT aligns staging with early detection
- Faster decision led care, with reduced follow-up requirement
- Pathways must respond

Example of LCS nodule



Trusted by clinical leaders

Long-term NHS partnerships are at the heart of our model – we work closely with ICBs and Trusts to adapt to local need and deliver outcomes that matter.

“Alliance medical have been instrumental in planning and delivering LCS across all five of our sites in South Yorkshire and Bassetlaw, most recently Sheffield. Timescales are met, data is provided as needed, and effective sites are secured in partnership with local teams. I look forward to continuing to work with them in the future.”

Dr Jason Page,
Clinical Director
South Yorkshire & Bassetlaw Lung Cancer Screening

We’ve partnered with:

- NHS Guy’s and St Thomas’ NHS Foundation Trust
- NHS The Rotherham NHS Foundation Trust
- NHS South Yorkshire Integrated Care Board
- NHS Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust
- NHS Blackpool Teaching Hospitals NHS Foundation Trust
- NHS Sheffield Teaching Hospitals NHS Foundation Trust
- NHS Lancashire and South Cumbria Integrated Care Board

Alliance Medical

Dedicated to Diagnostics

Thanks for listening

Alliance Medical | Lung Cancer Screening

Let’s deliver earlier diagnosis together

Partner with us to increase early detection, reduce inequalities and reach the communities who need screening most.

Contact

Heidi Hiscox, Lung Cancer Screening Programme Manager
Alliance Medical
Email: hhiscox@alliance.co.uk
Phone: 07809 212162

Skill Clinic

Claire Allen
Managing Secretary
Sleep Apnoea Trust

Gurnak Singh Dosanjh
Deputy CCIO | Digital Healthcare Consultant | CSO | ICB Clinical Lead, NHS Leicester, Leicestershire and Rutland