



# Strategy

An innovation exchange transforming clinical practice and improving patient outcomes, safety and experience, bringing benefits to everyone in our diverse region through collaboration between the NHS, life sciences industry and universities.

Updated March 2022



*The* **AHSN** Network

# Contents

Oxford AHSN strategy



# Strategy highlights

The Oxford AHSN strategic plan aligns with the AHSN Network strategic plan which has as an ambition:

“ **To achieve a substantial increase in adoption and spread of innovation across health and care systems.** ”

- Oxford AHSN staff have refreshed the organisation’s values
- **Oxford AHSN will lead on supporting local Integrated Care Systems (ICSs) evaluate and adopt innovation and improvement in health and care.** ICSs have a requirement to support innovation and research and drive quality improvement and improvement in population health through innovation and R&D. The AHSN needs to be clear about its role, how we will participate in ICS governance, decision making and alignment of priorities. We need to establish a core offer plus customisation for individual ICSs
- Local health and care systems have identified a broad range of priorities including maternity, mental health for CYP, ageing well, diagnostics and elective recovery
- The AHSN will support the local systems identify and address health inequalities

## Health and care priorities

Oxford AHSN will be seen as a national leader with deep expertise in innovation and improvement in the health and care priorities: cardiovascular diseases (CVD), Maternity, Mental Health, Respiratory, Artificial Intelligence (AI), Diagnostics and Patient and Public Involvement (PPI)



**CVD** – we have established a strong pipeline of interventions including a successful application with the Oxford and Thames Valley ARC to the National Innovation Prioritisation Programme to evaluate virtual TIA clinics



**Maternity** – current focus is on patient safety and sustaining previous interventions. Locally and nationally workforce is an issue. We need to build a pipeline of innovation and improvement projects to support local system



**Mental health** – we have a good track record of supporting interventions in mental health. However we need to support local stakeholders’ priorities which are CAMHS and with offers of innovation and improvement and especially digital solutions in collaboration with Oxford Health and Berkshire Healthcare



**Respiratory** – we lead nationally on asthma biologics and collaborate with Wessex AHSN on FeNO. We need to recruit clinical leadership in respiratory. We will work closely with Wessex and Kent Surrey Sussex AHSNs as they have strong networks



# Strategy highlights



**Inequalities** – will be addressed for each priority and considered for all our projects – we have a dashboard in development in collaboration with the ICSs. We also have an inequalities impact assessment tool



**Pipeline** – we will continue to develop a pipeline of high impact innovations to deliver against the health and care priorities



**The innovations we select will have the potential for national spread through the AHSN Network**



**Pipeline – discover** (early-stage innovations) – will be focussed on health and care priorities to develop programmes for local and national deployment. We will support early stage innovators through our Accelerator programme



**Pipeline – develop** (evaluation) – leaders in validating innovations in health and care priorities, AI and diagnostics



**Pipeline – in addition to our health and care priorities** we will also cater for promising innovations that the AHSN finds through engagement with industry (eg from the Accelerator) and academia (eg through links to the ARC)



**Pipeline – deploy** – we have deep expertise in innovation adoption and spread and improvement methodology



**Patient safety** - we will work with our local partners to deliver the national commission



**Diagnostics** – Oxford AHSN wants to be the “go-to” AHSN for in vitro diagnostics (IVD) companies, to lead the diagnostics agenda for the AHSN network, be a thought leader in helping to re-build the diagnostic industry in the UK and wants to see further national adoption of IVD products following the success of the real-world evaluation and subsequent adoption of PIGF-based testing. We have a strong pipeline of products under evaluation



**Medicines** – work with stakeholders to improve medicines optimisation, safety, access and uptake. We have a pharmacist representative on the regional Medicines Optimisation Committee to improve alignment in the region



**AI** – we will focus on AI evaluation and develop robust plans for wider rollout



**Digital** – we will respond more nimbly to local and regional priorities, be regarded as a trusted partner for digital innovation and support the ambition set by NHSx and national commissioners. We need to work more closely with local NHS organisations to align our pipeline with their priorities (eg CAMHS)



**Working with integrated care systems** – we will lead on supporting ICSs in evaluating and adopting innovation and improvement in health and care



# Strategy highlights



**Environmental sustainability** – supporting NHS policy to achieve net zero by 2040, in collaboration with other AHSNs we will work with innovators to develop environmentally friendly innovations and support the local NHS to adopt innovations that have a positive environmental impact. Priorities – inhalers, PPE and anaesthetic gases



**Community involvement (PPI)** – patient and public involvement in each stage of the Pipeline



**Workforce innovation** – through supporting the AHSN's programmes, develop workforce productivity through innovation, pathway redesign, supported by real world evaluation



**Economic growth** – we contribute to economic growth in our region, working with the NHS, academia and industry to create market-ready products



**Offer to innovators** – We want to provide the AHSN Network standard universal offer to all innovators, but also best-in-class support packages to assist innovators in developing their ideas and products



**Our structure as an organisation** serves a complex health and care system with multiple interested parties and commissioners. We need to be clear with our priorities, how we use our resources and how we communicate. We are making progress to better align our portfolio with the ICSs – this needs more focus



**Developing the organisation** – the process of developing the strategy has highlighted areas we need to strengthen such as a review of our evaluation skills and adding more clinical resource to support our health and care priorities



**Stakeholder communications** – strengthen two-way communication with ICSs



**Financing** – sustaining the AHSN depends on the three national commissions from which 80% of our funding flows



**Risks and mitigation** – #1 relicensing – we must ensure we deliver and communicate our impact from national and local projects

# Case study summaries

**Patient safety**

**Medicines,  
diagnostics, digital and AI**





# AHSN Network strategy 2021

The AHSN Network has set out a five-year strategy highlighting its ambitions.

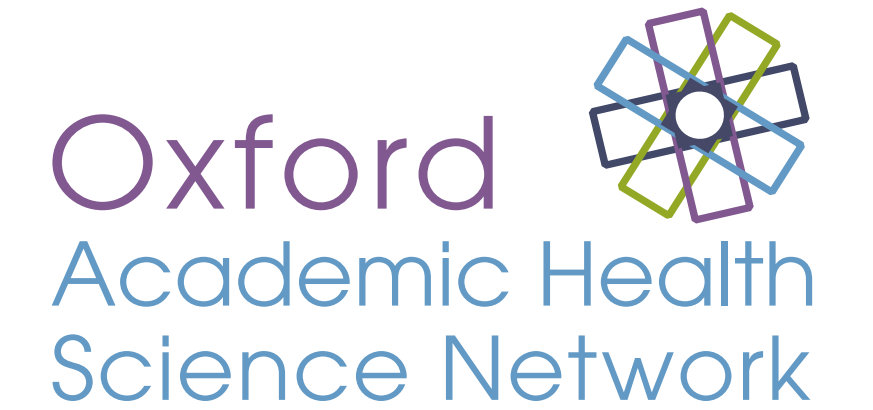
## By 2026 the AHSN Network - the umbrella body for the 15 regional AHSNs covering England - aims to have achieved the following ambitions:

- **We will have demonstrated our value as a network of AHSNs and secured a new five year licence** with national commissioners – that retains investment into local AHSN programmes and grows investment into national programmes.
- **We will have grown our portfolio of national programmes** – working in partnership with commissioners and strategic partners to redefine our existing national programmes and establish new national programmes, all focused on outcomes-led approaches to the most pressing strategic challenges facing health and care systems.
- **We will have established deep knowledge and expertise as a network** in the outcome areas we focus on through our national programmes and the health and care systems we're seeking to improve - enabling us to maximise the collective impact of our work and influence national policy and practice.
- **We will have developed a pipeline of high-impact innovation** – by providing a unified offer to innovators and developing strategic partnerships to identify and develop the most promising innovations, for current or future national outcome-led programmes.
- **We will be recognised as leaders in validating high-impact innovations** – using our expertise in real world evaluation to identify and validate high impact innovations, to feed into current and future national programmes. Our real world evidence will be influencing decision making by NICE, regulators, commissioners and policy makers.
- **We will have established AHSNs as a national authoritative voice on adoption and spread of innovation** – national commissioners and policy makers will regularly seek out our advice, insight and expertise and we will have enabled AHSNs to strengthen their reputation within local health and care systems.
- **All staff in every AHSN recognise their dual role** – of working both for their individual AHSN and the contribution they personally make towards the aims and objectives of the network of AHSNs.



# Vision, mission and values

Oxford AHSN



Oxford  
Academic Health  
Science Network

## Our vision

Best health for our population and prosperity for our region

## Our mission

We will support collaboration, research and innovation across the NHS, universities and business, building on our strengths to deliver exemplary care and create the strongest life sciences sector

## Oxford AHSN values

The Oxford AHSN is an open hub of knowledge and expertise working towards better patient outcomes in all aspects of healthcare improvement and innovation







# Oxford AHSN region

Population, health inequalities and innovation landscape



## Population

We work in a region with a growing population largely driven by economic growth, new housing schemes and increased life expectancy. Our cities and towns share many of the characteristics of London with more diverse and younger populations with significant student populations. We have a large rural population which are characterised by older populations. There are localised areas of deprivation and poor health but overall the population has a relatively high average life expectancy and fewer years of poor health. The NHS funding formula recognises the relative wealth and health of the region and funding per capita is among the lowest in the country.

With an increasingly older population we have more elderly patients with one or more long term and complex conditions and the growth of rates of cancer. The health and care system is experiencing a rise in urgent and emergency care and long term conditions, especially diabetes. Substance abuse, particularly alcohol is having a major impact on 50-60 year olds especially men which will have long term consequences for their health and care needs.

Mental ill-health demand from children and young people is growing significantly, possibly fuelled by covid restricting access to school and friends, the pressures of social media and also greater awareness of mental health, eg eating disorders and personality disorders such as ADHD.

The cost of living in our region is very high and this is an important factor in recruiting and retaining appropriately qualified health and care staff.

## Research and industry

The region is home to world leading research capabilities, eg, University of Oxford, University of Reading and Harwell. It is also home to a significant portion of the UK's life sciences industrial base, eg most of the UK's diagnostic companies reside in the region.

## Health and care in BLMK, BOB and Frimley

OUH provides physical tertiary services. OH provides tertiary mental health services. BHFT, CNWL and OH provide mental health services. BHT, MKUH, OUH and RBH provide acute services. BHT, BHFT and OH provide community services. SCAS provides paramedic services. There are 361 GP practices organised in 83 PCNs; BLMK 23, BOB 45 and Frimley 15. There are 503 registered care homes. There are 18 local authorities.

## What does this mean for innovation and improvement?

With increasing demand for health and care services, tighter budgets than other regions, and a workforce shortage we need to look for innovations that will increase productivity such as improving point of care diagnostics, remote monitoring and consultation and helping patients manage their conditions better. Utilisation of digital solutions, diagnostics, better medicines will be important to optimise the use of resources as will further integration of health and care services and change to patient pathways. Productivity will be a key component in delivering net zero too.



# Oxford AHSN region

Population summary (from inequalities dashboard)

## Population

- 2.7 million registered GP patients.

## Deprivation

1. Though our region is generally considered affluent, ~ 0.25 million patients are in the top three most deprived deprivation deciles.

2. Pockets of the highest deprivation levels are found right across our geography. The top four most deprived PCNs in our region are:

- I. Whitley PCN (Reading, Berkshire West),
- II. South East Oxford Health Alliance (Oxford City, Oxfordshire),
- III. Spine PCN, (Slough, East Berkshire),
- IV. East MK PCN, (Milton Keynes),

Note, Central BMW PCN, (Aylesbury, Buckinghamshire) is the most deprived PCN in Bucks, ranked 18th in our region

## Ethnicity

1. 77% 'White British'; 10% 'Asian/Asian British'; 7% 'White Non-British'; 3% 'Black/African/Caribbean/Black British'; 3% 'Mixed/Multiple ethnic group'; and 1% 'Other ethnic group'.

2. Slough (**East Berkshire**), Reading (**Berkshire West**), East Oxford City, (**Oxfordshire**), and High Wycombe (**Bucks**) have the PCNs with highest expected percentages of Non White British patients.

**Digital Usage** - Areas with the lowest digital usage correlate with deprivation and are found in Slough, South East Oxford City, Milton Keynes, Reading, Banbury, and Aylesbury.

**Sexual Orientation** – Oxford City has the largest proportion of patients that identify as not being heterosexual.

**Religion** – 48% Christian; 37% No religion; 5% Muslim; 3% Hindu; 2% Sikh; 1% Buddhist; >1% Jewish; 1% Other.

**Gender Identity** – Patients that identify as same sex at birth: 99% Yes; <1% No (161); 1% Prefer not to say (342).





# Oxford AHSN region

## Inequalities

### Why is this important?

- Health inequalities are ultimately about differences in the status of people's health. The term is commonly used to refer to differences in the care people receive and the opportunities they have to lead healthy lives, both of which can contribute to their health status
- Inequalities in health and care are important to individuals' own health but also to health and care systems that try to maximise population health with limited resources
- Inequalities In a Nutshell - <https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/health-inequalities>
- **Core20Plus5** is an NHS initiative to reduce health inequalities, focusing on the most deprived 20% of the population and addressing inequalities in five key clinical priorities – mental health, maternity, respiratory, CVD and cancer diagnostics. The Oxford AHSN's clinical priorities align to those of Core20Plus5 as does the national AHSN Network's business plan.'

### Approach

- Oxford AHSN will use the Equality and Health Inequality Impact Assessment to assess inequalities in projects
- In collaboration with Unity Insights (formerly KSS AHSN Insights team) and our 3 ICSs we are developing inequalities dashboards, eg for our clinical priorities and smoking

### Pipeline

- In each phase of the Pipeline we will consider inequalities to determine if there are differences in the population for risk factors, access (eg digital exclusion) – eg Trish Greenhalgh on oximetry, outcomes, safety, experience





# Oxford AHSN region

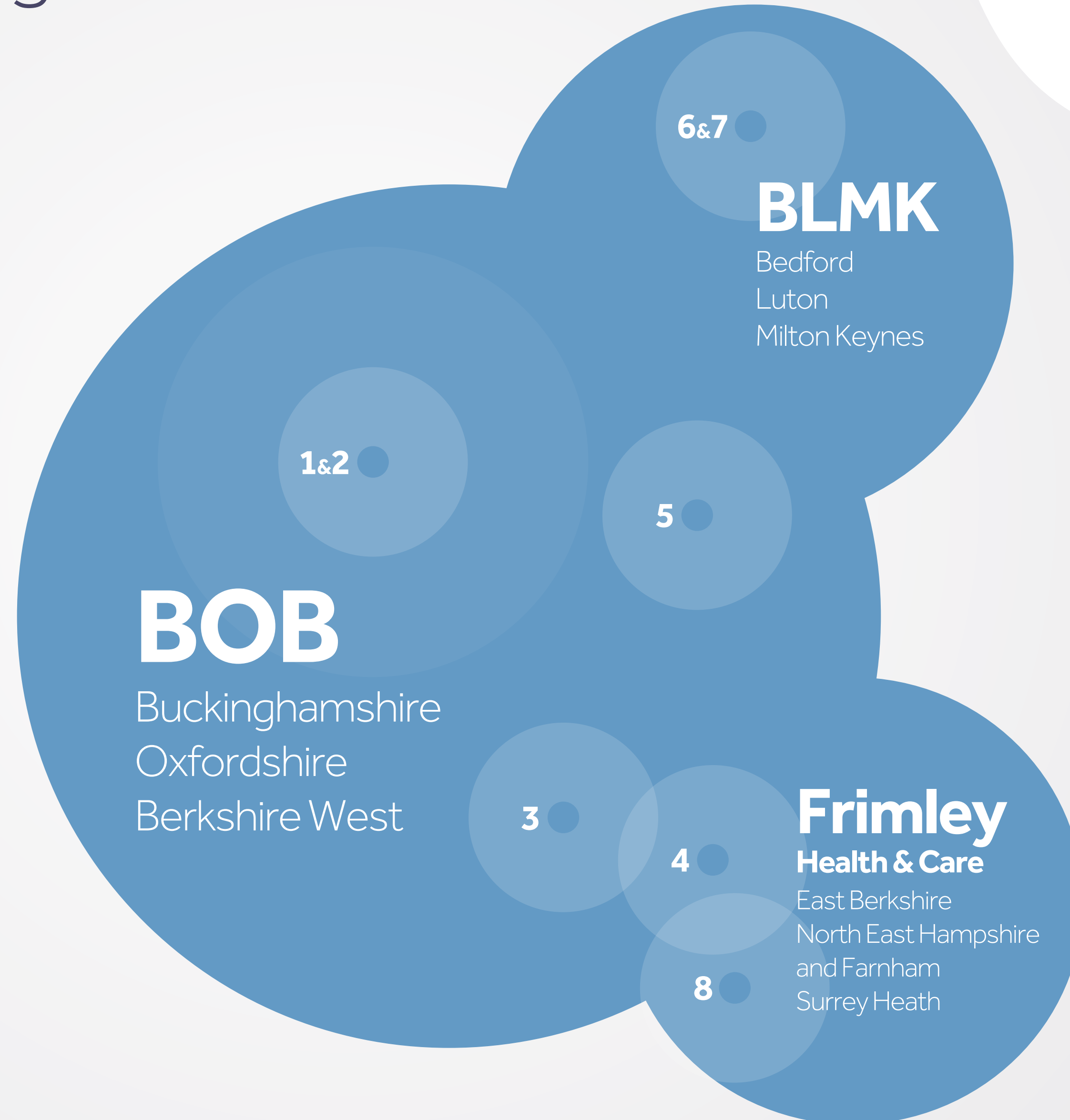
Integrated care systems

## The Oxford AHSN works with three integrated care systems:

- Buckinghamshire, Oxfordshire & Berkshire West (BOB) which covers much of our region
- Frimley Health and Care
- Beds, Luton & Milton Keynes

## NHS Trusts

- 1 Oxford University Hospitals
- 2 Oxford Health (Oxon/Bucks/Wilts)
- 3 Royal Berkshire
- 4 Berkshire Healthcare
- 5 Buckinghamshire Healthcare
- 6 Milton Keynes University Hospital
- 7 Central and North West London (mental health)
- 8 Frimley Health



1&2

6&7

### BLMK

Bedford  
Luton  
Milton Keynes

### BOB

Buckinghamshire  
Oxfordshire  
Berkshire West

5

3

4

### Frimley Health & Care

East Berkshire  
North East Hampshire  
and Farnham  
Surrey Heath

8



# Oxford AHSN region

Local health and care system priorities



## BLMK ICS

- Every child has a strong, healthy start in life: from maternal health, through the first thousand days to reaching adulthood
- People are supported to engage with and manage their health and wellbeing
- People age well, with proactive interventions to stay healthy, independent and active as long as possible
- We work together to build the economy and support sustainable growth
- In everything we do promote equalities in the health and wellbeing of our population



## BOB ICS

- Elective
  - Orthopaedics
  - Ophthalmology
  - Endoscopy
- Mental health – CAMHS
- Ageing well
- Diagnostics – Community Diagnostic Hubs
- Urgent care – place-based solutions'

## Frimley Health and Care



## Frimley ICS

- A targeted and coordinated wellbeing offer to support children to start well (0-18 years)
- A targeted wellbeing offer for the wider population
- Developing our Community Deal approach to developing new relationships with people and communities that improve health and wellbeing
- Developing the Frimley Offer to support our current workforce and to attract people from our local population to a career with us
- Scale up improvement by replicating success at scale through approaches that improve quality and efficiency and by co-producing solutions with communities
- Innovate for the future, adopting digital developments that deliver practical improvements and cultural



# Oxford AHSN region

Research and innovation landscape

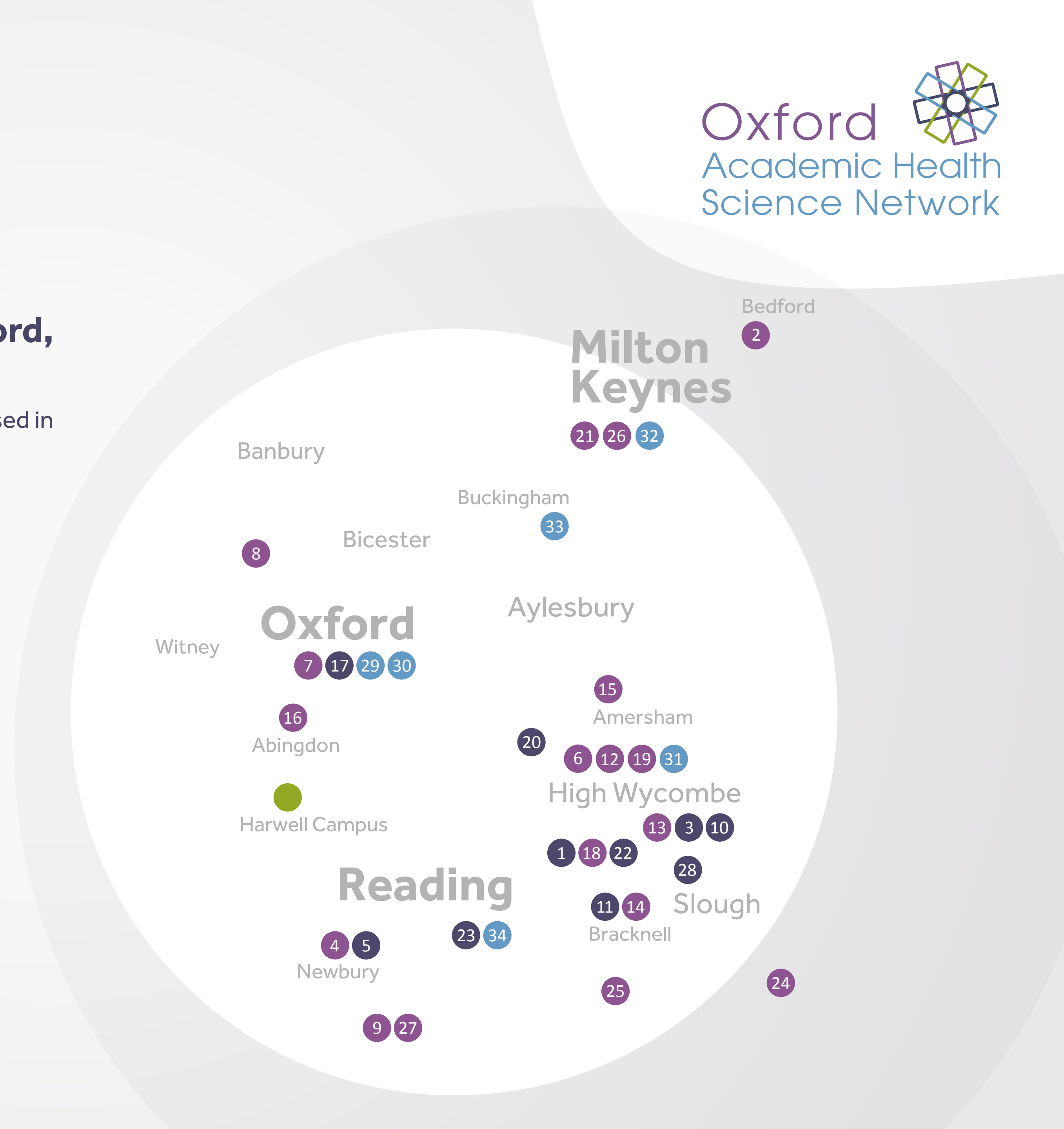


## The Oxford AHSN region is home to world-leading research capabilities including the University of Oxford, University of Reading and Harwell.

Much of the UK's life sciences industry – and most of the diagnostic sector – is based in the region.

- |  |  |
|--|--|
| 1. Abbott (Maidenhead)                     | 18. Hitachi Chemical Dx (Maidenhead)         |
| 2. Alere (Bedford)                         | 19. Janssen-Cilag Ortho (High Wycombe)       |
| 3. Amgen (Uxbridge)                        | 20. Leo Pharma (Princes Risborough)          |
| 4. Baxter (Newbury)                        | 21. Phadia (Thermo Fisher) (Milton Keynes)   |
| 5. Bayer (Newbury)                         | 22. Pfizer Wyeth (Maidenhead)                |
| 6. Beckman Coulter (High Wycombe)          | 23. Quintiles (Reading)                      |
| 7. Becton Dickinson (Oxford)               | 24. Roche Diagnostics (Burgess Hill)         |
| 8. Bio-Rad (Kidlington)                    | 25. Siemens Healthcare Diagnostics (Frimley) |
| 9. Biomerieux (Basingstoke)                | 26. Sysmex (Milton Keynes)                   |
| 10. Bristol-Myers Squibb (Uxbridge)        | 27. Thermo Fisher (Oxoid) (Basingstoke)      |
| 11. Boehringer Ingelheim (Bracknell)       | 28. UCB (Slough)                             |
| 12. Cepheid (High Wycombe)                 | 29. Uni of Oxford                            |
| 13. Dalichi-Sankvo (Gerrards Cross)        | 30. Oxford Brookes                           |
| 14. Diasorin (Bracknell)                   | 31. Bucks New Uni (Wycombe)                  |
| 15. GE Healthcare (Amersham)               | 32. Open (MK)                                |
| 16. Gen-Probe Life Sciences Ltd (Abingdon) | 33. Buckingham Uni (Buckingham)              |
| 17. Genzyme (Oxford)                       | 34. Uni of Reading                           |

- Pharmaceutical
- Diagnostics
- Universities





# Roles & skills

How we support the health and care system

- We are experienced **independent experts in innovation adoption and improvement**
- **We support innovators** (NHS, Industry and Academic) along the pathway from identifying needs to adoption at scale
- We have established **trusted relationships** that enable us to **collaborate** at **local, regional** and **national** level
- We **understand local needs** and have develop a pipeline of projects with the potential for regional and national rollout
- **We use evidence** to support adoption and spread and improvement
- We **measure results**
- **We train front line** staff in improvement and innovation adoption methodology
- **We provide unbiased support** in developing positive safety culture and system-level change
- We encourage health and care staff to gain **insight and share learning**
- We support the health and care system with **QI and pathway development work**
- We provide **coaching & mentoring** support
- **We evaluate the evidence** base and measurement relating to improvement
- **We translate national requirements** and make them applicable at the local level
- **We will lead on supporting local ICSs evaluate and adopt innovation and improvement in health and care**

## **Strengthening our offer to ICSs:**

- Improve communication through being involved in ICS governance structures
- Align AHSN activities with ICS requirements
- Strengthen connections with ICS through joint roles and participation in each other's governance structures

## **We need to develop better organisational understanding through:**

- Networking and relationship building, leading to greater collaboration
- Develop joint roles (whilst balancing the need to maintain independence and impartiality)



# Working with integrated care systems

## AHSN role

**Oxford AHSN will lead on supporting local ICSs evaluate and adopt innovation and improvement in health and care.** ICSs have a requirement to support innovation and research. The AHSN needs to be clear about its role, how we will participate in ICS governance, decision making and alignment of priorities. We need to establish a core offer plus customisation for individual ICSs.

## Operating model for working with ICSs

We will contribute the ICSs agenda of integration, investment and improvement. We must have voice in the governance and decision-making bodies in the ICS – where strategic decisions are taken on innovation, research and improvement and where decisions to shape health and care services, eg maternity, mental health and CVD. We collaborate freely with KSS and Wessex AHSN and other AHSNs in the Network to enrich our local offer.

With Eastern AHSN and BLMK ICS we are recruiting a manager to work inside the ICS to draw in support from the AHSNs and support AHSN projects. We will explore this model with BOB and Frimley. The AHSN CEO and the AHSN industry team meet the BOB ICS Head of Strategy monthly. Our Industry teams meets the BOB Head of Strategy bi-weekly.

## Core service offer to ICSs

All AHSNs will deliver interventions and products commissioned nationally by NHSE. Roughly 50% of the AHSN's resources go to support nationally commissioned projects. We will influence nationally to improve alignment of nationally commissioned

innovations (eg RUP) with our local ICS priorities. All 15 AHSNs are commissioned by NHSE/I to deliver national programmes and innovation products. All 15 AHSNs are commissioned by the Office for Life Sciences to engage with industry, identifying local Needs, Signposting, Evaluating innovation and supporting adoption and spread. These services are there to support our ICSs. All AHSNs are commissioned to deliver a Patient Safety Collaborative with a portfolio of improvement projects including maternity safety, medicines safety, care home safety and deterioration.

## Local tailored offer to ICSs

The balance of the AHSN's portfolio comprises projects driven by local needs, local innovators, local training needs. Our local offer to innovators will support local economic growth and help make our ICSs' great places for industry to engage. We will triage industry contacts to ICSs. We will research the AHSN Network innovation pipeline for opportunities to share with the ICSs we support. We will support the ICSs by evaluating innovation, eg reviewing digital applications for mental health or evaluating AI technologies. We will work jointly with the ICSs to develop an innovation pipeline to meet local needs. We will support spread and adoption. We are working in collaboration with BLMK, BOB, Frimley and the public health team on an inequalities dashboard – this will help all of us focus on inequalities as we plan interventions. We also support local commercial innovators with our Accelerator programme. NHS and Care professionals are supported through our "Practical Innovators" programme – we propose to cost share on this with the ICSs – the course is ideal to train up clinicians and managers in innovation adoption across systems. We add value by supporting grant applications for the ICSs. We support ICSs with patient involvement projects and workforce innovation too (eg wellbeing).

The Patient Safety Collaborative commission is changing and from April 2023 the content of the programme will be driven by local ICS needs. We have started the dialogue as we enter the 2022/23 transition year.





# Health and care priorities

Oxford AHSN overall health and care aims

- To optimise health and life expectancy through the support and development of high value innovations and improvements
- To be recognised within the AHSN Network as an AHSN with expertise in:
  - Supporting innovation and improvement in our key health areas
  - Delivering commissioned activity & taking lead roles in supporting commissioned activity
  - Developing work ready for adoption and spread to other areas.

## Key health areas of focus

Recognising the experience and expertise we already have:

**Cardiovascular disease**

**Respiratory disease** →

**Mental health**

**Maternity care**

- Building on our strengths in AI, Diagnostics and PPI
- We will also continue to work within other clinical areas that respond to local and national requests and priorities.

## Key Oxford AHSN health and care objectives

- Align with stakeholder priorities; delivering the 'value-added' rather than duplicating existing work
- To work with companies delivering innovations of value in the H&C pathways
- To support & evaluate the implementation of new technologies & novel pathways for the prevention, detection & management of clinical risk factors:
  - Identification and promotion of those innovations that optimise important clinical outcomes.
  - Identification and promotion of those innovations that optimise the use of workforce
  - Identification and promotion of those innovations that reduce inequality
  - Through the support implementation of research outputs from our academic partners



# Health and care priorities

Approach to filling the pipeline

## Approach

- To promote a pipeline of innovation to fulfil the aims and objectives:

### Discover

- Concept through to creating value propositions
- Partnership with Oxford and Thames Valley ARC, Oxford Academic Health Partners (OAHP), Clinical Research Networks (CRN), Biomedical Research Centres (BRC)
- Early engagement with innovators
- Signaling demand and system needs

### Develop

- Proving value propositions for innovation
- Partnerships with ARCs, other AHSNs
- Engagement with system leaders and early adopters

### Deploy

- Delivering at scale to realise benefits and value proposition
- Partnerships with ICSs, Trusts, ICPs, PCNs

## Key stakeholders

- Our National commissioners: NHSE, NHSI and OLS
- NHS South East Region
- ICSs, place-based lead providers, provider collaboratives, clinicians and commissioners
- Clinical networks and alliances
- Third sector organisations
- Clinical Societies
- Patients and those organisations representing the patients' voice

## Other key partners

- Thames Valley Applied Research Council (ARC)
- Other AHSNs and the AHSN Network
- Health Education England (HEE)
- NHSE (NHSX, NHS Digital, NHS@home)
- Oxford Academic Health Partners (OAHP)
- Biomedical Research Centres (BRC) & Clinical Research Network (CRN)
- Association of British Pharmaceutical Industry (ABPI), Association of British HealthTech Industries (ABHI) and British In Vitro Diagnostics Association (BIVDA)



# Health and care priorities

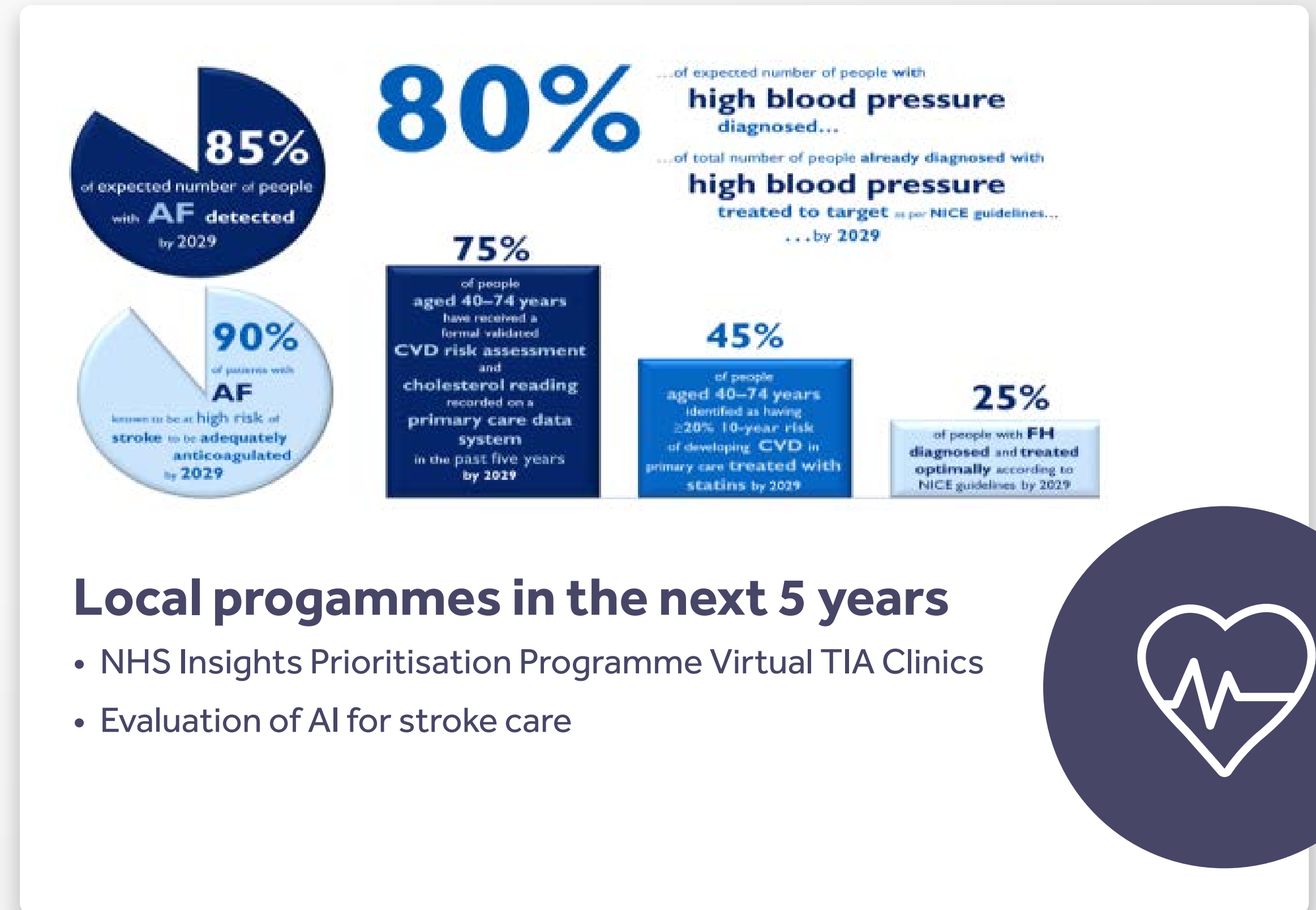
Cardiovascular

## National context and local priorities

- A priority area within the NHS Long Term Plan - clear ambition to prevent 150,000 strokes, heart attacks and cases of dementia by 2029
- Focus on improved detection and management of three high-risk conditions - AF, hypertension & high cholesterol
- Across the Thames valley the aim is to reduce inequalities & increase detection.
- To empower patients to self-manage and prevent escalation

## National AHSN programmes

- AF detection and medicines optimisation
- BP@home – detection and self-monitoring
- Lipid management & detection of familial hypercholesterolaemia
- Rapid Uptake Products (RUP) – PCSK9i, high-intensity statin, ezetimibe, inclisiran





# Health and care priorities

## Respiratory

### National context and local priorities

- A key priority area within the NHS Long Term Plan
- Respiratory hospital admissions remain a major factor in the winter pressures faced by the NHS.
- Incidence & mortality rates are higher in disadvantaged groups & areas of social deprivation
- Investment will be targeted; with an ambition to transform outcomes.
- To increase detection and diagnosis of respiratory conditions and reduce inequalities
- Aim to decrease both morbidity and mortality.

### National respiratory programme board main work streams

- Pulmonary rehabilitation
- Early and accurate diagnosis (including diagnosis of breathlessness)
- Breathlessness management
- Flexible learning/self-management
- Medicines Management
- Community Acquired pneumonia

### National AHSN programmes

- Asthma biologics, to increase uptake in those with severe asthma
- FeNO, to increase its use in the diagnostic & management pathway of people with asthma.
- Asthma and COPD Discharge Bundles, to increase their uptake and use.

### Key deliverables in the next 5 years

- To support local ICSs in pathway development across the system
  - Primary care/ Community management of breathlessness (Cardiopulmonary overlap)
  - Acute respiratory deterioration (elderly, frailty, urgent care)
- To deliver the National AHSN RD Program and to be in the top performing quartile
- To identify and promote those innovations that optimise the use of workforce
  - Quality assured diagnostics (e.g. Spirometry)
  - Digital technologies
  - Improving workforce efficiency
- Building networks around issues
  - Task and Finish networks around specific issues
  - Improving integration across our systems – improving links between primary and secondary care





# Health and care priorities

Maternity

## National context and local priorities

- The issues in pregnancy, delivery and the neonatal period have lifelong psychological, physiological, and economic effects.
- The Oxford AHSN will work towards supporting the national ambition:  
To achieve 50% reductions (from 2010 baseline) in stillbirth, maternal mortality, neonatal mortality and serious brain injury by 2025  
To reduce preterm birth from 8% to 6% (NHS Long Term Plan)
- Maternity claims represent the highest value and second highest number of clinical negligence claims in the NHS (> £4 billion paid in compensation over the last decade)
- Within the population of the Oxford AHSN area approximately 27000 pregnancies occur per year.



## Key deliverables in the next 5 years

- We will grow our portfolio of activity relating to the national ambition, ensuring a spread through the discover, develop, deploy pipeline, and supporting national commissions.
- To maintain and grow a strong multidisciplinary maternity and neonatal network that spans all maternity providers and relevant organisations in the area
- To continue to align our work with local priorities and support local innovation and enable us to deliver improvements and innovations that are relevant to our local area
- To enable effective shared learning and collaborative working across services and systems

### Activity will primarily focus on the following key areas:

- Prevention, identification and escalation of maternal, fetal and neonatal deterioration
- Prevention and optimisation of preterm birth
- Effective fetal monitoring during labour
- Risk assessment, prevention and surveillance of pregnancies at risk of fetal growth restriction
- Prevention/reduction of serious incidents in maternity and neonatal care





# Health and care priorities

Mental health (prioritising children and young people)

## National context and local priorities

- Mental health embraces a number of quite separate services and covers all age ranges.
- It represents 15% of the local health spend (20/21) across England.
- Learning Disabilities and Autism are often considered alongside mental health though technically are not part of it.
- The Covid-19 pandemic has served to exacerbate existing problems for mental health services, in particular long waiting times (in CAMHS and other services) and severe recruitment challenges.
- Referrals are rising numbers, compounded by long-standing inequalities of access and treatment.

## ICS MH priorities

- Priority is Children's and Young Peoples' Mental Health
- Neurodevelopmental pathways – including expanding digital
- Eating disorders – Avoidant restrictive food intake disorder (ARFID), also availability of inpatient beds
- Developing female PICU
- Physical health checks and SMI (most are done in primary care)
- CMHT transformation – recruitment is biggest challenge
- General vacancy rate is significant – BOB-wide workforce challenges – especially in CAMHS

## National AHSN programmes

- FREED – Early Intervention in Eating Disorders
- FOCUS ADHD – Improving ADHD assessment
- Patient safety
  - Reducing restrictive practice
  - Improving sexual safety on wards

## Key deliverables in the next 5 years

- MH to be seen as a natural home for innovation and cutting-edge work.
- Evidence based Digital, AI and workforce innovations and solutions to form a key focus of that work
- The AHSN's role to be clear to the system and that this role can be described
- Playing in the 'white spaces' bringing in innovative elements and combining people and ideas together
- To be a recognisable partner and collaborator, and source of support embedded within key circles in provider services
- To ensure that the patients voice is heard through the discover, develop and deployment stages of innovation





# Health and care priorities

Elective recovery

As of October 2021 almost 6m people are on NHS waiting lists for a huge range of treatments including orthopaedic and ophthalmic surgery, psychiatric assessments, podiatry appointments

Our commissioners are asking AHSNs to identify and deliver interventions to mitigate the back log

## **Oxford AHSN has in its pipeline the current solutions:**

- Peri-operative – evaluation work to streamline the peri-operative pathway and reduce cancelled surgeries and improve patient outcomes
- Elastomeric devices – to deliver IV antibiotic treatment in patients' homes
- Remote monitoring for Severe Asthma patients – to reduce burden of face to face monitoring consultations in tertiary care

## **Peri-operative care project**

- ICS level project looking to implement and scale up digital innovations along the peri-operative pathway.
- Funding from NHSx - £420k
- Involving four technologies – Ufonia, and three others who are currently undergoing NDAs and/or contracting.
- Ufonia is an AI-driven chatbot, currently being used in the post-operative space in OUH and Imperial Hospital.
- Looking at musculoskeletal pathways (RBH and OUH) and cataract pathways (Bucks and OUH).
- Looking to improve patient outcomes and experience by getting them as fit and ready for surgery as possible.



# Patient safety and improvement

Specific patient safety projects are led by the Oxford Patient Safety Collaborative which is hosted by the Oxford AHSN. This includes five National Patient Safety Improvement Programmes (SIPs) and many additional local projects that align to these broad topic areas. **The ambition of the Oxford PSC and AHSN is to work increasingly closely with our local ICS partners to realise shared goals and ambitions to improve patient safety to our regional population.**

Driving improvements to patient safety will remain an integral theme of all the Oxford AHSN projects and programmes. We strive to find synergy with all AHSN areas and share individual's expertise and experience across our organisation's boundaries.

We are committed to supporting the vision of the NHS Patient Safety Strategy which seeks to continuously improve patient safety. We see our participation as pivotal in achieving success, through supporting and leading in the following areas:

- Improving understanding of safety by drawing intelligence from multiple sources of patient safety information (**Insight**)
- Equipping patients, staff and partners with the skills and opportunities to improve patient safety throughout the whole system (**Involvement**)
- Designing and supporting programmes that deliver effective and sustainable change in the most important areas (**Improvement**).



<https://www.england.nhs.uk/patient-safety/patient-safety-improvement-programmes/>



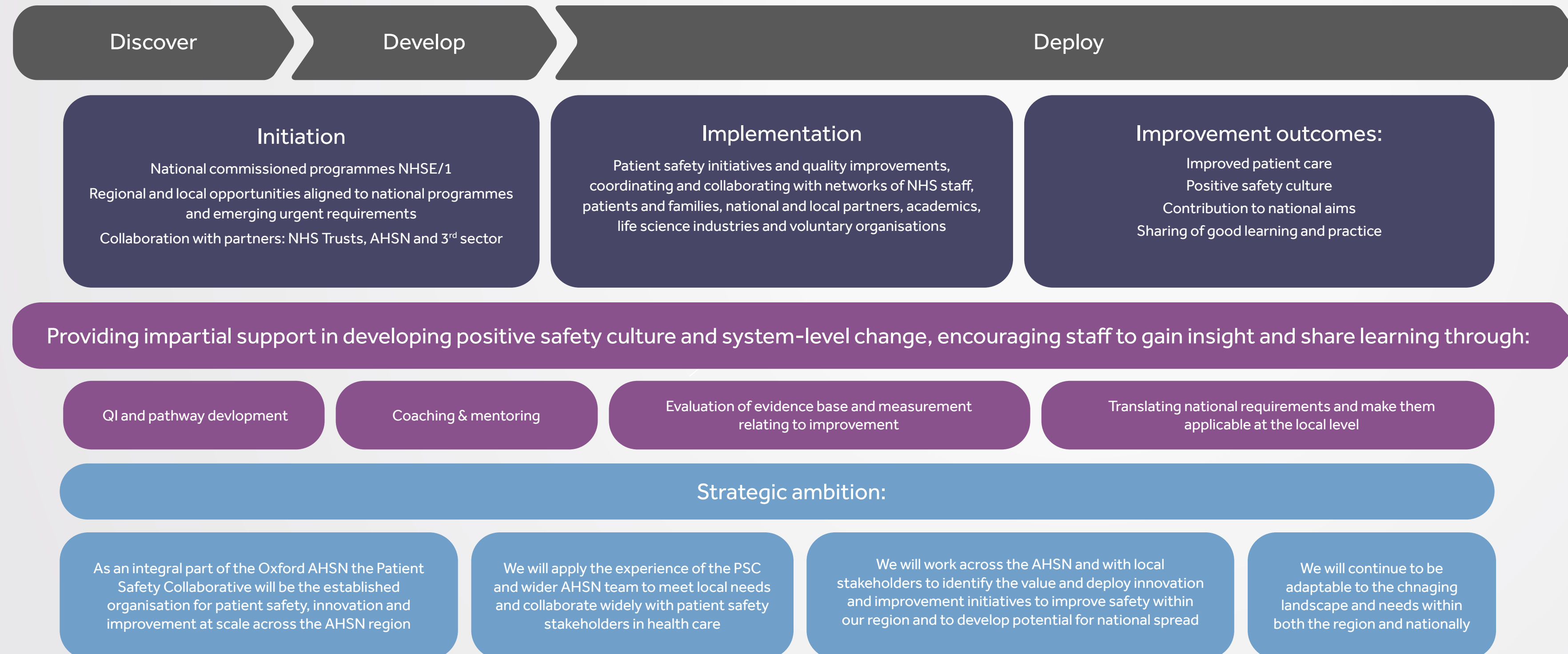
<https://www.england.nhs.uk/patient-safety/the-nhs-patient-safety-strategy/>





# Patient safety and improvement

Improved patient safety is a theme across most of work and is the specific focus of the Oxford Patient Safety Collaborative, embedded within Oxford AHSN



PSC commission is expected to be changing in 23/24 to focus on local ICS needs





# Patient safety and improvement



● Patient safety case study

## Reducing risk of cerebral palsy

Babies who are born prematurely (less than 30 weeks gestation) are at more risk of developing cerebral palsy. There is growing evidence that giving magnesium sulphate to mothers before birth can protect the brain during premature labour and birth (see links to papers below). For every 37 mothers who receive magnesium sulphate one case of cerebral palsy can be prevented.

In 2018, NHS England commissioned a number of national programmes. One of these was Preventing Cerebral Palsy in Preterm Labour (PReCePT) – a multi-organisational quality improvement approach to the adoption and spread of magnesium sulphate, thereby reducing the number of very preterm babies born with cerebral palsy. It followed a successful quality improvement project run by a neighbouring AHSN.

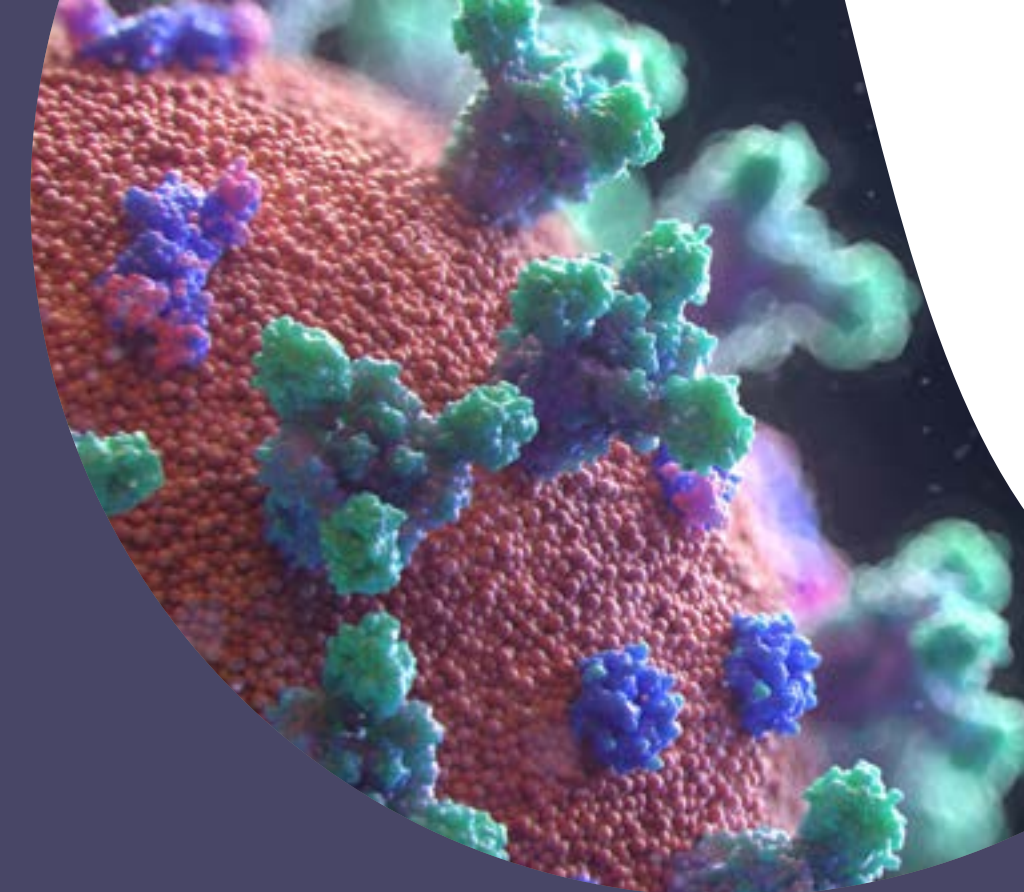
PReCePT Thames Valley was actively supported by the Oxford Patient Safety Collaborative, part of the Oxford AHSN, which was pivotal in promoting regional networking and facilitating shared learning. It built a culture of partnership and collaboration which sped up the adoption and spread of innovation to improve clinical outcomes. During the first nine months of 2020 the Thames Valley uptake rate averaged 92% – well above the 85% national target – and hit 100% in October and November.



<https://www.patientsafetyoxford.org/clinical-safety-programmes/previous-programmes/precept-prevention-of-cerebral-palsy-in-pre-term-labour/>



# Patient safety and improvement



● Patient safety case study

## **Oximetry monitoring at home**

In response to the Covid pandemic Oxford AHSN, Oxford AHSN supported the roll out of two major programmes at pace to help keep Covid-19 patients safe and well at home. Working closely with their system partners and neighbouring AHSNs, this consisted of two pathways relating to early identification of silent hypoxia through pulse oximetry monitoring.

By February 2021, around 12,000 patients in the south east had benefitted from the 'COVID Oximetry @home' (CO@h) service which remotely monitors patients who had, or were at risk of, Covid-19. This involved patients self-recording their own oxygen saturations using a pulse oximeter. Monitored by primary care health professionals, patients are contacted urgently should saturation levels drop below 95%, and admitted to hospital if appropriate. The implementation of 'COVID virtual wards' (CVW), supported the earlier safe discharge of Covid-19 inpatients. Both initiatives were extended nationwide, and by February 2021 75% of acute trusts reported having access to a COVID virtual ward linked to local CO@h projects.

Early work undertaken in our area was key to the success of this project including pilot sites in Slough and Reading. Following this a collaboration between community leaders, GPs, NHS commissioners, researchers and the Oxford AHSN sought to support groups at greater risk from Covid-19. An innovative project ensured that pulse oximeters were made freely available at a foodbank, mosque and a homeless shelter linked to a GP practice.



<https://www.patientsafetyoxford.org/clinical-safety-programmes/sepsis/covid-19-virtual-wards/>



# Patient safety and improvement

● Patient safety case study

## Improving hydration in care homes

Dehydration is one of the most common causes of admission to hospital for care home residents. One in four nursing home patients admitted to hospital is dehydrated. Dehydration increases the risk of urinary tract infections (UTIs) which can lead to multiple complications including confusion, falls, acute kidney injury and hospital admission.

The Oxford Patient Safety Collaborative identified addressing care home hydration as a key priority within its acute kidney injury programme. The Good Hydration! project was designed to encourage residents to drink more fluids with the aim that this would lead to fewer UTIs requiring medication or hospital admission. This approach involved introducing structured drinks rounds seven times a day, designed and delivered by care home staff. The initiative was developed by the Oxford Patient Safety Collaborative and East Berkshire Clinical Commissioning Group. Across pilot sites, there was a 36% reduction in UTIs with the frequency of UTIs dropping from one every nine days to one every 80 days. The number of UTIs requiring antibiotics also fell by 58%. One residential home was UTI-free for 243 consecutive days. Skin integrity also improved and GP calls fell.

These improvements have been sustained and the Good Hydration! approach has spread across the Oxford AHSN region and beyond. Project resources, including a series of animated videos, have been developed and shared to spread the learning among care home staff. The success of the Good Hydration! project led to a number of national prizes and awards.



<http://bit.ly/good-hydration>



# Technology themes

Diagnostics - Digital, devices and AI

**The Diagnostics programme was established by Oxford AHSN in 2016 to provide bespoke support, evaluation and expert advice for the in vitro diagnostics (IVD) industry. The COVID-19 outbreak has highlighted the need for IVD products.**

## What do we want to achieve?

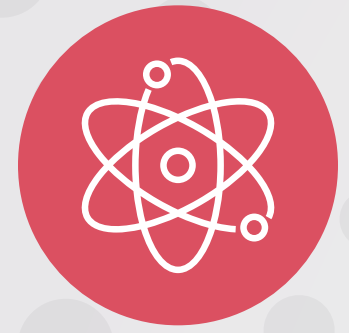
- Oxford AHSN wants to be the “go-to” AHSN for IVD companies
- Oxford AHSN wants to lead the diagnostics agenda for the AHSN network
- Oxford AHSN wants to be a thought leader in helping to re-build the diagnostic industry in the UK
- Oxford AHSN wants to see further national adoption of IVD products following the success of the real-world evaluation and subsequent adoption of PIGF-based testing

## How will we do this?

- At least 50% of our real-world evaluation projects within the Strategic and Industry Partnerships programme will involve an IVD product that solves a clear unmet need in a clinical pathway
- We will set up and lead a Diagnostics Community of Interest group across the AHSN network
- We will work with the British In Vitro Diagnostics Association (BIVDA) to promote the value of IVD
- We will work with the BOB Integrated Care System to develop Community Diagnostics Hubs as test beds for evaluation of innovative IVD
- We will conduct social media campaigns and communications activities to highlight the value of IVD to the NHS

## List of metrics

- Pipeline tool: number of evaluations at individual sites, type of evaluation setting, evaluation partners, focus of evaluation
- OLS programmes tracker: evaluations initiated and completed within a quarter, outcome of evaluation, output of evaluation
- OLS case studies: the impact of RWE and collaboration between AHSNs



# Technology themes

Medicines - Digital, devices and AI

Getting the most from medicines for both patients and the NHS is becoming increasingly important because more people are taking more medicines. With an ageing population, polypharmacy (the use of multiple medicines) is a growing issue

It has been estimated that up to 50% of medicines prescribed for long-term conditions are not taken as intended (NICE 2016 Medicines optimisation QS120).

Two national medicines optimisation programmes, commissioned by NHS England / Improvement, have been delivered by the Oxford AHSN and the national AHSN Network. These are PINCER (see case study) and Transfer of Care around Medicines (TCAM). A third national programme – Polypharmacy – is being introduced in 2022/23.

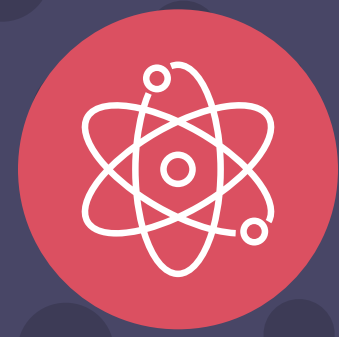
In addition, the Oxford AHSN has supported local systems, facilitating leadership programmes, establishing collaborative working groups, scoping risk stratification tools and delivering workshops.

## What do we want to achieve?

- Improved access to medicines through increased uptake of new pathways
- Increase access to cost-effective alternatives where appropriate eg biologics
- Contribute to environmental sustainability through reduced medicines wastage

## How will we do this?

- We will seek to identify potential innovation and improvement initiatives and support adoption and spread within our four clinical priority areas: cardiovascular disease, respiratory, mental health and maternity/neonatal



# Technology themes

Medicines - Digital, devices and AI



Oxford   
Academic Health  
Science Network

Case Study

## PINCER

Medication errors in general practice are a preventable cause of patient safety incidents associated with morbidity, hospitalisations and deaths. It is estimated that 66 million potentially clinically significant medication errors occur each year, 71% of which are in primary care.<sup>1</sup> One in 550 prescriptions are associated with a severe error.<sup>2</sup>

PINCER, a pharmacist-led information technology intervention for reducing clinically important errors in general practice prescribing was shown in a trial published in *The Lancet* to reduce error rates by up to 50%.<sup>3</sup> An economic analysis showed introducing PINCER was cost effective. It demonstrated an overall reduction in costs of £2,679 per practice over a 5 year horizon and an increase in quality of life of patients (0.81 Quality Adjusted Life Years per practice).<sup>4</sup>

In 2018, PINCER was selected as a national medicines optimisation project by NHS England and Improvement with implementation being led by the Academic Health Science Network (AHSN). Across Oxford AHSN's geography GP Practices across four Clinical Commissioning Groups were supported to implement PINCER. This support involved funding licences, support to deliver action learning sets and reporting benchmarked outcomes.



<https://www.nottingham.ac.uk/primis/documents/pincer/pincer-progress-report-july-2020.pdf>

### References

1. Elliott, R. A. et al. Cost Effectiveness of a Pharmacist-Led Information Technology Intervention for Reducing Rates of Clinically Important Errors in Medicines Management in General Practices (PINCER). *Pharmacoeconomics* 32, 573–590 (2014).
2. Avery A, Ghaleb M, Barber N, et al. The prevalence and nature of prescribing and monitoring errors in English general practice: a retrospective case note review. *The British Journal of General Practice*. 2013;63(613):e543-e553

### 18 months following rollout (April 2020), at a national level, analysis of follow up data showed:

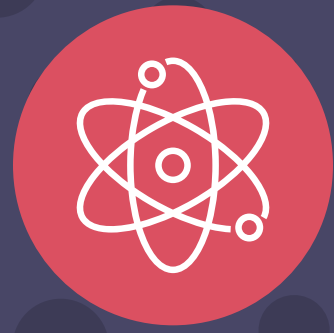
- 13,387 (-14.4%) fewer patients at risk of a medication related adverse event (of the 1,060 GP practices providing a repeat upload of data)
- Greatest reductions were for those indicators associated with a gastrointestinal bleed (10,559 fewer patients at risk, -25.9%)

### Across Oxford AHSN, 206 GP practices adopted PINCER and over 250 clinicians were trained in PINCER methodology.

#### Data to April 20 showed:

- 2,338 (-18.4%) fewer patients at risk of a medication related adverse event
- 1,819 (-30.6%) fewer patients at risk of a gastrointestinal bleed

3. Avery AJ, Rodgers S, Cantrill JA, et al. A pharmacist-led information technology intervention for medication errors (PINCER): a multicentre, cluster randomised, controlled trial and cost-effectiveness analysis. *Lancet*. 2012;379(9823):136-142. doi:10.1016/S0140-6736(11)61817-5.
4. Elliott, R. A. et al. Cost Effectiveness of a Pharmacist-Led Information Technology Intervention for Reducing Rates of Clinically Important Errors in Medicines Management in General Practices (PINCER). *Pharmacoeconomics* 32, 573–590 (2014).



# Technology themes

Medicines - Digital, devices and AI



Oxford   
Academic Health  
Science Network

● Case Study

## SPECTRA

The precise population of those with severe asthma in the UK is currently unknown. The proportion is often estimated to be 5% of the total asthma population. Patients with potential severe asthma can remain unknown to specialist care for years, often reliant on oral steroids which can have devastating effects on mental and physical health. A number of these patients may be eligible for treatment with an asthma biologic. The estimated eligible population for asthma biologics is 47,300, however, only 8,000 – 10,000 patients currently have access to these advanced therapies (17 -21%).<sup>1</sup> This low national uptake is the rationale for the selection of asthma biologics for the Accelerated Access Collaborative (AAC) Rapid Uptake Products programme (RUP) 20/21. Oxford Academic Health Science Network (AHSN) is the lead AHSN for the national programme.

NICE in their Adoption Scoping Report found a cause for the low uptake is the difficulty in identification and referral of appropriate patients in primary care.<sup>2</sup> Early identification and referral is a critical step to improving severe asthma care and is a priority area for the national programme. To support this priority, the AAC and Oxford AHSN, in collaboration with Astra Zeneca have developed and launched SPECTRA. SPECTRA is a primary care clinical system resource that works within GP clinical systems. It identifies adults with potential severe asthma, supports optimisation and referral where required. Two national webinars have been organised to launch the SPECTRA tool. 85 people attended the first webinar (Nov 21) and, to date, 220 people have registered for the second webinar (Jan 22).

As of November 2021, 157 GP Practices; 8 Clinical Commissioning Groups; 5 AHSNs; 9 secondary care sites and one integrated care system have signed up for SPECTRA.



<https://suspected-severe-asthma.co.uk/>

### References

1. Rapid Uptake Products – Technical Note 2021/22. The AHSN Network
2. Asthma Biologics Adoption Barriers and Suggested Solutions. National Institute for Health and Care Excellence. 2021  
<https://www.oxfordahsn.org/wp-content/uploads/2021/11/Asthma-Biologics-Adoption-Report-final.pdf>







# Technology themes

Digital, devices and AI

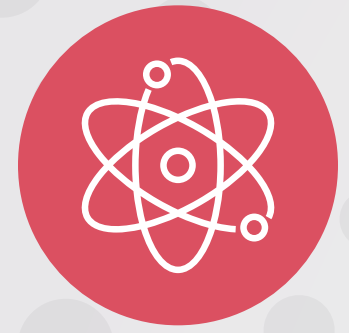
## **Digital, devices & artificial intelligence**

There has been a huge increase in digital technology, devices and AI that have the potential to make a significant difference to health and social care. These innovations are a crucial part of the NHS Long Term Plan, with an ambition that digitally-enabled care will become mainstream across the NHS.

Technology is fundamental to the future of the NHS, from helping health and care professionals communicate better and enabling people to access the care they need when it is convenient to them, to apps that make care and advice easily accessible whenever you are. While AI could help reduce the burden on the health and care system by automating certain tasks, and could address the health and wellbeing gap by predicting which individuals are at risk of illness, thereby enabling more effective, targeted treatment. However, there is not yet a robust bed of evidence to support widespread uptake.

The Oxford AHSN will have a focus on digital technologies, devices and AI, with a priority to support the real-world evaluation to help achieve wider adoption of technologies that make a significant positive impact on health and care. We will continue to support the ambition set by our national commissioners and NHSX and we will increase our responsiveness to local and regional system needs and priorities.

We aim to be regarded as a key stakeholder and trusted partner for digital innovation, devices and AI.



# Technology themes

Digital, devices and AI

## What do we want to achieve?

We aim to be a key stakeholder and trusted partner within the areas of digital technologies, devices and AI. This is a focus area for the AHSN whereby we intend:

- Improve clinical outcomes, clinical pathways and opportunities for patient self-management
- Increased responsiveness to local and regional system needs and priorities, including the four clinical priority areas of the AHSN
- Support improvements in productivity through increased use of digital technology, devices and AI
- Develop skills in this area, particularly real-world evaluation

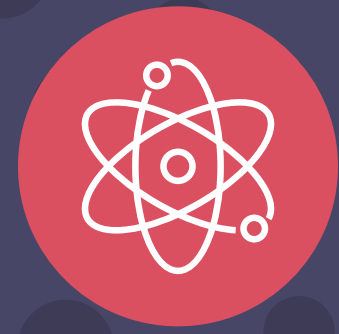
## How will we do this?

We will work collaboratively both internally and externally with our system networks to:

- Identify opportunities for grant funding which will support the development, evaluation and adoption of new technologies and AI solutions, such as the National Institute of Health Research (NIHR) / NHSX AI in Health and Care Awards
- Support proof of concept and value proposition through real world testing and evidence collation
- Develop robust implementation plans for wider roll out, which will often include pathway transformation
- Seek opportunities for regional collaboration that fit with the priorities of the system
- Through Oxford Applied Research Collaborative and regional AHSNs/ARCs, share tested solutions for operational and workforce issues
- Work with national bodies and networks to inform management of AI technologies
- Enhance and further develop the diverse in-house capability and expertise by building on existing skillset within the Oxford AHSN, to best meet the needs of the broad AHSN programme of work and to be responsive to local and national needs (e.g. evaluation; tech intelligence; case study capture, bid writing, SPRINT and Hackathons)
- Identify opportunities to encourage greater cross-working across programmes within the Oxford AHSN to best meet the needs of each project

## How will we measure success?

- Pipeline tool: number of evaluations at individual sites, type of evaluation setting, evaluation partners, focus of evaluation
- OLS programmes tracker: evaluations initiated and completed within a quarter, outcome of evaluation, output of evaluation
- OLS case studies: the impact of RWE and collaboration between AHSNs
- Development of expertise within the Oxford AHSN workforce to successfully manage and evaluate projects within this area
- Success criteria is defined within specific projects and NHS Outcomes Framework
- Evidence of all projects having given consideration to the potential of a digital component



# Technology themes

Digital, devices and AI



Oxford   
Academic Health  
Science Network

● Case Study

## Sleepio

Insomnia affects one in ten adults. Poor sleep has a negative impact on physical and mental health, performance, and safety. Sleepio is a digital programme scientifically proven to help overcome poor sleep, based on cognitive behavioural therapy (CBT) and backed by 12 Randomised Control Trial evidence.

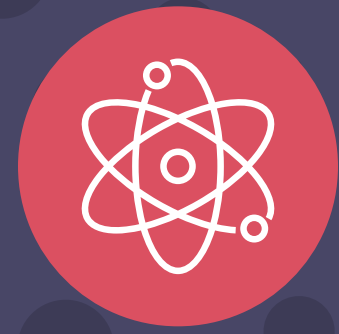
In October 2018, Innovate UK funded a project providing free direct online access to Sleepio to all 2.7 million adults living, working or studying in the Thames Valley. This was the first large-scale NHS rollout of direct access digital medicine, allowing people to access the programme whenever is most convenient for them – without needing a GP referral or prescription. This initiative was led by the Oxford AHSN in partnership with Big Health (the company behind Sleepio).

The programme involved engaging with GP surgeries in Buckinghamshire and other primary care professionals – including Improving Access to Psychological Therapies – to enable a Health Economic Evaluation to be conducted. Engagement with major employers (including Thames Water, Unipart, Oxfordshire County Council, RAF Brize Norton, and University of Oxford) across the Thames Valley also took place, as well as campaigns – using Instagram, Facebook, and local radio – to engage with the wider community. The project demonstrated the positive impact of the treatment on the population. During the project, 16,695 individuals engaged with Sleepio and there was a 56% recovery rate of insomnia symptoms among those who accessed the online treatment programme.

In March 2020, free access to Sleepio was extended to all NHS staff in England as part of a package of health and wellbeing support for key workers. As demonstrated in the Thames Valley, there was significant uptake of Sleepio and similar levels of recovery from insomnia symptoms, as well as anxiety and depression, were observed.




**Sleepio**



# Technology themes

Devices & artificial intelligence



Oxford   
Academic Health  
Science Network

● Case Study

## Brainomix

As part of the Health and Care Award, the Oxford AHSN is carrying out a detailed evaluation of a state-of-the-art technology to help clinicians make the rights decisions so that more patients recover quickly following a stroke. The e-Stroke Suite technology, developed by Oxford-based company Brainomix, has been introduced in six NHS trusts and is now live in hospitals in Reading, Aylesbury, High Wycombe, Milton Keynes, Northampton, Oxford and Swindon. The hospitals are working collectively as the first integrated regional stroke network of its type in the country, in line with a key NHS priority.

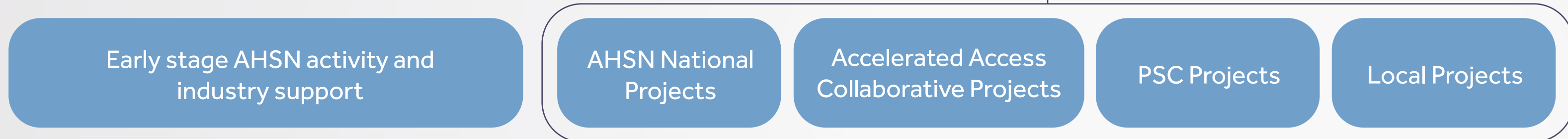
High quality CT brain scans are being shared quickly and securely within and between hospitals using the imaging software which incorporates artificial intelligence (AI). Previously, CT brain scans had to be reviewed by a specialist in limited locations. Now they can be seen within a few minutes of being processed – anywhere, any time – and advice given immediately. Reducing the time between the patient arriving in hospital and being referred for treatment is crucial in securing full recovery after having a stroke. The innovative decision support tool helps clinicians rapidly and accurately decide the type and severity of stroke and the most appropriate treatment, such as identifying whether a patient would benefit from a mechanical thrombectomy (MT), a procedure to remove a blockage in a large blood vessel in the brain which can cause a severe stroke.

The NHS Long Term Plan identifies stroke as a clinical priority. It aims to increase use of thrombectomy so that hundreds more people are able to regain their independence following a stroke. Within the Thames Valley, Oxford University Hospitals NHS Foundation Trust (OUH) provides specialist stroke care for patients requiring MT. Currently 30-50 patients undergo MT each year in Oxford. Across the Thames Valley it is estimated that 300-400 patients per year could benefit from MT.

The aim of the project is to evaluate the feasibility of an artificial intelligence-enabled imaging support solution (e-Stroke Suite) combined with digital connectivity to improve stroke care in an NHS network. The Oxford AHSN Medical Director has provided leadership and organisational support to the Thames Valley stroke network, chairing the Thrombectomy Innovation & Transformation (TITAN) quality improvement team who are leading on the roll-out of the e-Stroke Suite across the region. If the implementation is successful across a network, valued and adopted by clinicians, and workflow is improved, a larger scale health economic analysis of the e-Stroke Suite will take place across several NHS stroke networks.



# Pipeline development Approach



## Approach to building an innovation pipeline

This will be tailored with our local ICSs



# Pipeline development

Approach to discovery and development (real world validation)

**We will continue to support the identification of “early-stage” ideas and suitable candidates for uptake as local AHSN projects creating the value proposition and supporting their development. All projects should have the potential for widespread deployment both locally and then nationally.**

## What do we want to achieve?

- Portfolio/pipeline management process to become integral to Oxford AHSN’s daily work, promoting an environment that welcomes and fosters innovation
- Define the local support requirements and customer relationship management (CRM) needed for project success, with a clear system for signposting and supporting innovators
- Identify economic value from the outset of each project
- Ensure patient experience is at the heart of all our work

## How will we do this?

- Oxford AHSN will support the companies, Integrated Care Systems and Places that we work with to increase the investment that they can leverage from non-dilutive funding (see economic growth)
- We will work with funding bodies such as Innovate UK, National Institute for Health Research (NIHR), Health Foundation, SBRI, Horizon Europe (including EIT Health) to identify grant funding opportunities
- We will use our network to form high quality consortium for grant funding opportunities involving local, regional, national and international partners
- In 2021, the AHSN is undertaking a review of evaluation skills to identify gaps that could be filled through training and/or recruitment.
- We will work with funding bodies such as Innovate UK, National Institute of Health Research (NIHR), NHSX, Health Foundation, SBRI, Horizon Europe (including EIT Health) to identify grant funding opportunities for real world evaluation
- We will work with the BOB ICS to develop Community Diagnostics Hubs as test beds for real world evaluation
- We will work with Oxford University Hospitals to develop their innovation framework for the pre-commercial space to accelerate technologies under evaluation into deployment
- We will further develop real-world evaluation skills and expertise across Oxford AHSN workforce

## How will we measure success?

- OLS programmes tracker: evaluations initiated and completed within a quarter, outcome of evaluation, output of evaluation
- OLS case studies: the impact of RWE and collaboration between AHSNs
- Pipeline tool: number of evaluations at individual sites, type of evaluation setting, evaluation partners, focus of evaluation
- OLS programmes tracker: evaluations initiated and completed within a quarter, outcome of evaluation, output of evaluation
- OLS case studies: the impact of RWE and collaboration between AHSNs
- Use of portfolio/pipeline management process across the Oxford AHSN
- Tangible benefits to improvements in our population’s health and care



# Pipeline development

## Deployment

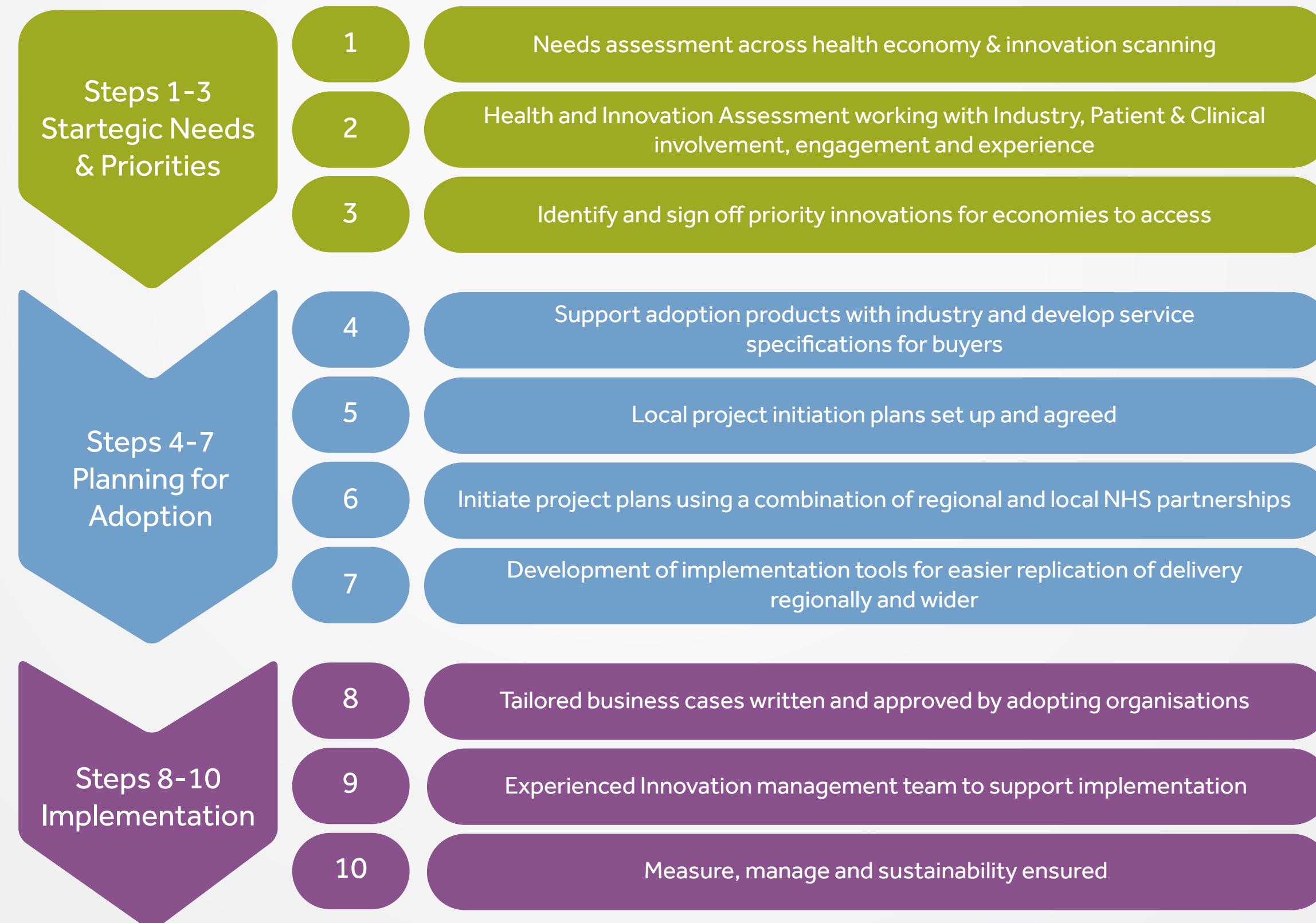
Deployment promotes spread and adoption of a proven product or technology across the wider healthcare system.

The Oxford AHSN uses a range of approaches to deployment. An iterative approach enables project management to be tailored to individual projects and their specific requirements. The 10-step process below captures the key steps for each project.

Each project will have a Project Initiation Document (PID) completed at the outset, for review by the Executive Team and appropriate Oversight Group.

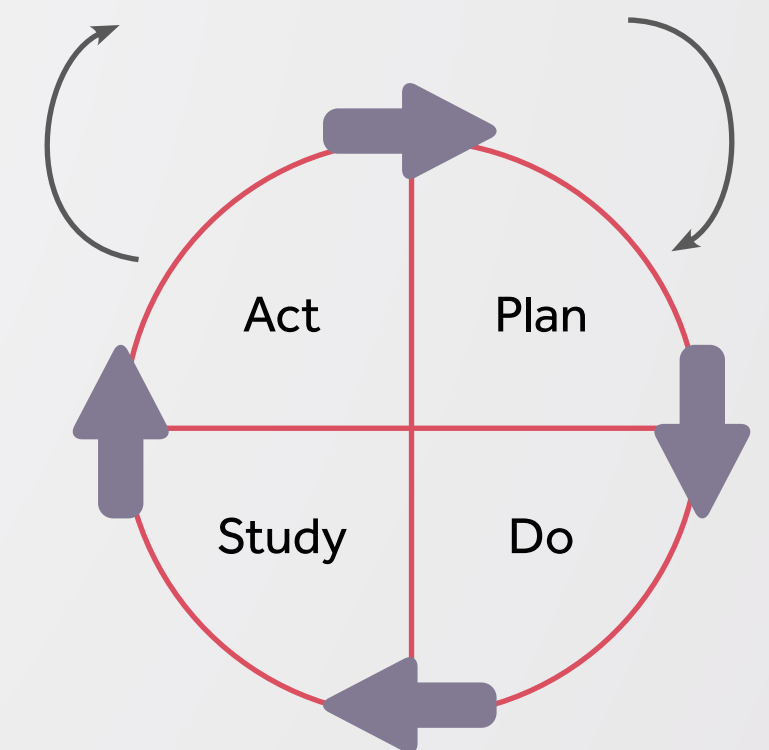
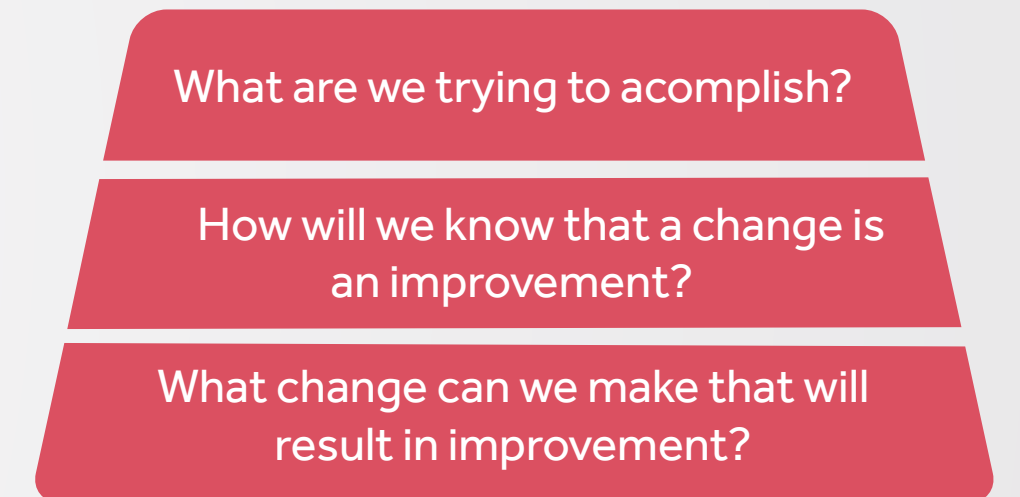
Quality Improvement (QI) is an important part of the Oxford AHSN's work, with the Model for Improvement (shown below) often used as a framework to guide this work.

### The 10-step process to innovation adoption



### Improvement methodology

#### Model for Improvement





# Community involvement theme

## Aims

- Helping to develop patient and public involvement and coproduction plans, including understanding what matters to patients, carers and the public, including their experience of health and care
- Helping to understand population health inequalities and applying this understanding to community involvement plans
- Supporting development of innovation in involvement and coproduction and a culture to support it

## Who we work with

We support local, regional and national priorities, working with project teams and on independent projects.

## How we work

We can offer advice, carry out projects with teams or on their behalf across the innovation pathway.

## Developing diversity in public partners

- Development of community of practice for coproduction
- Deliberative panel representing the population

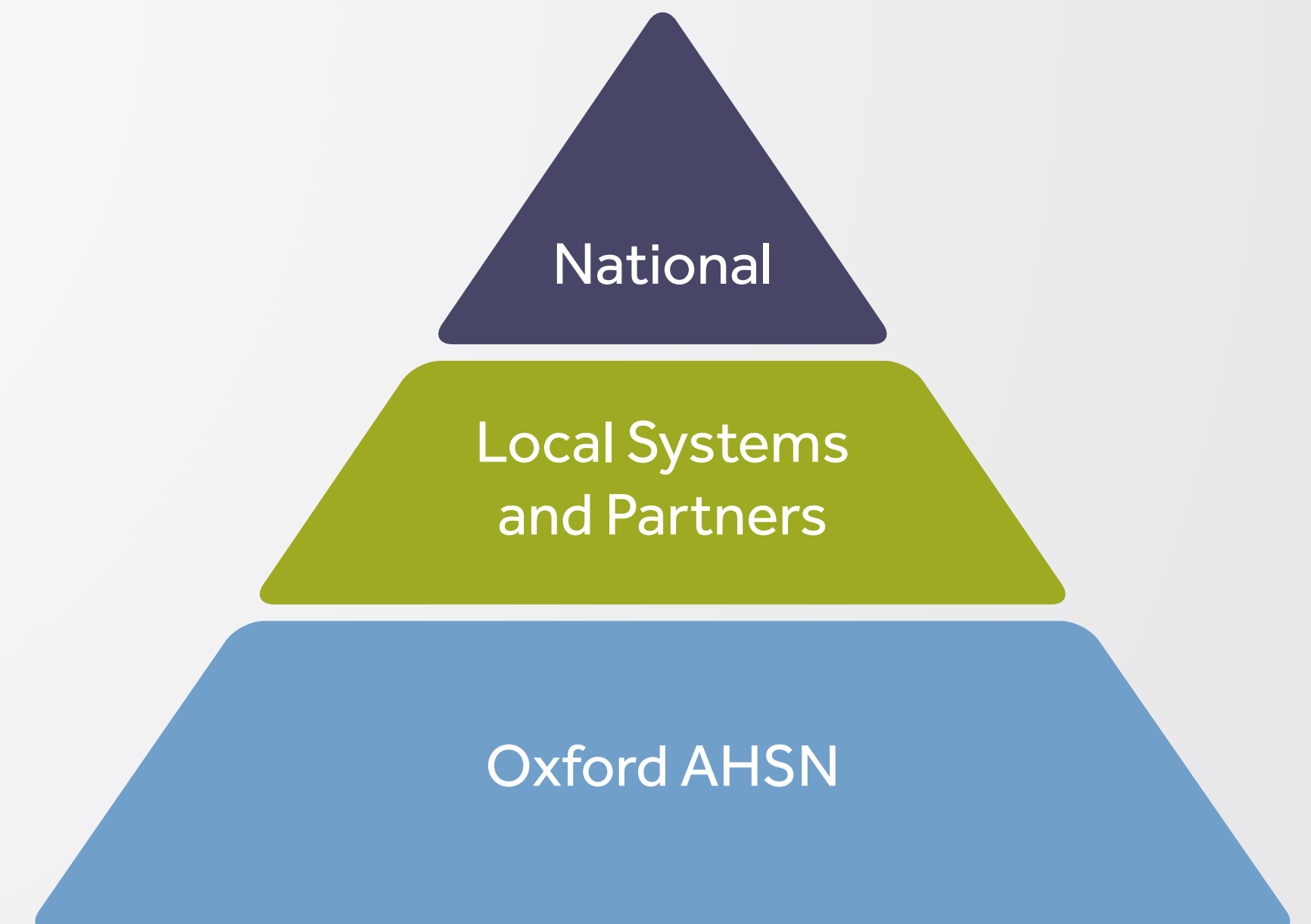
## Understanding the impact of involvement activities

Community of Practice mapping on the time bank and skill share platform Hexitime

Respiratory: asthma biologics

Cardiovascular: BP optimisation – focus on patient experience

Maternity: supporting engagement with seldom heard communities







# Workforce innovation theme

## Aims

- To support the national ambition: more people, working differently in a compassionate and inclusive culture.
- To achieve this by supporting AHSN programmes, alongside local and national system partners, to develop workforce productivity through innovation and pathway redesign, supported by real world evaluation.

## Who we work with

We support local, regional and national priorities, working with project teams and on independent projects

## How we work

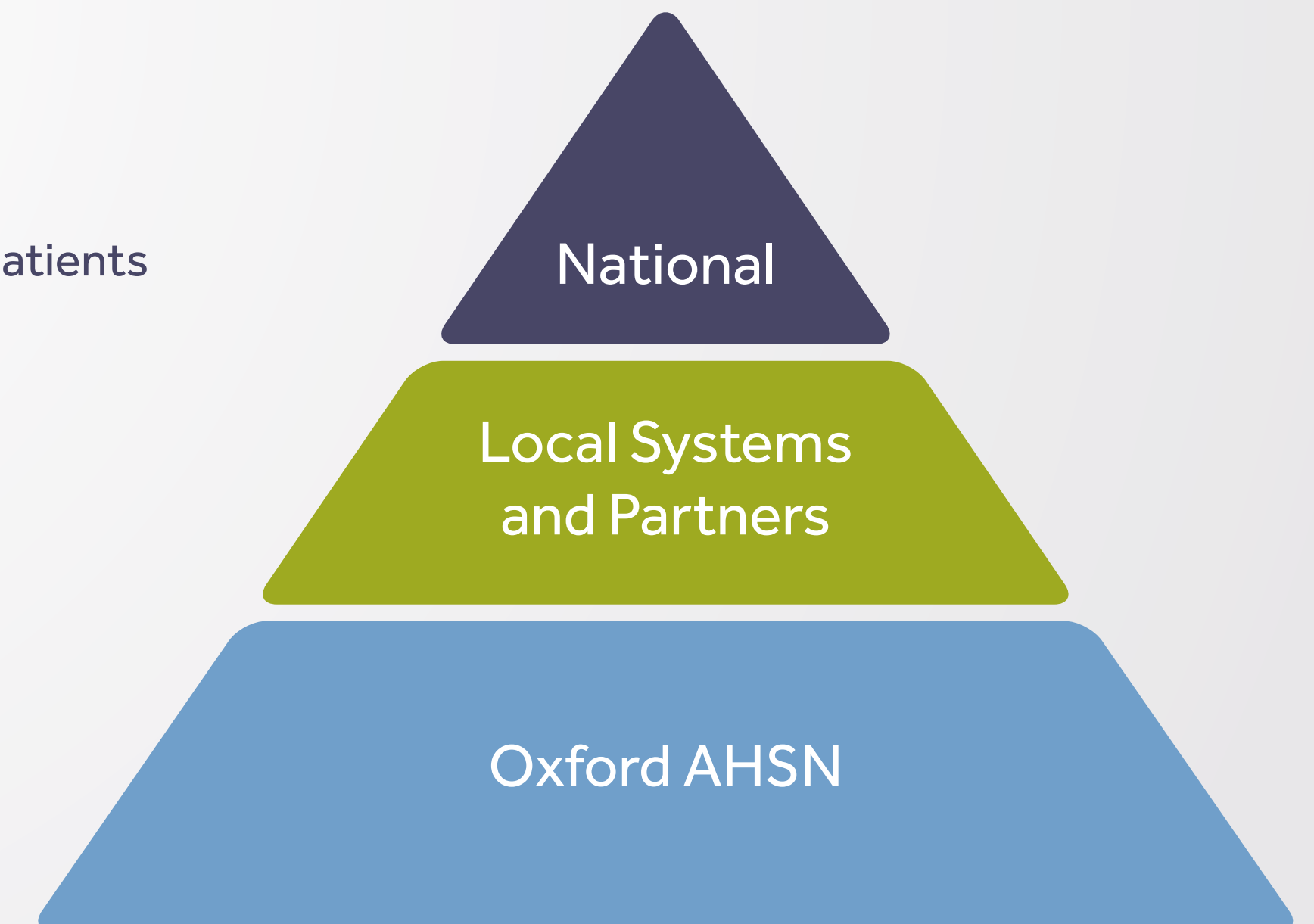
We can offer advice, carry out projects with teams, or on their behalf, across the innovation pathway

## Cardiovascular

- BP optimisation: understanding staff and patient experience, changing workflows in primary care, upskilling patients and staff, focus on digital literacy

## Staff health and wellbeing

- Independent evaluation of BOB ICS Enhanced Occupational Health and Wellbeing Project
- Flexible and remote working policy review in BOB
- Evaluation of SE Region HWB initiatives





# Environmental sustainability

## AHSN Network Environmental Sustainability Strategy

Developing a strategy which suggests four areas of activity for the AHSNs:

- 1 Reducing our carbon footprint & environmental impact
- 2 Encouraging innovators to think Green
- 3 Supporting adoption of innovations with a positive impact
- 4 Spreading good practice and brokering relationships



- Build a movement by sharing best practice across the AHSN Network and the NHS
- Work with innovators on products, services and practices that reduce the environmental harm caused by delivering healthcare
- Influence policy to enable uptake of environmentally friendly innovations
- Calculate the impact of our main programmes (e.g. PIGF-based testing)

## Oxford AHSN Environmental Sustainability Strategy

- Develop and support shared learning levels with COI  
Raise awareness of staff on sustainability  
Engage local sustainability leads - Trusts, CCGs, ICSs and SE Region
- We will work with innovators to develop and build the case for adopting environmentally friendly innovation. We will support the local NHS adopt innovations that have a positive environmental impact
- Influence acceleration of innovations into NHS Supply Chain catalogue, ensure pricing of environmentally friendly products is not at a disadvantage, highlight need for clinical acceptance of new products
- We will undertake an environmental impact assessment of all our local and nationally commissioned projects

The aim of sustainable healthcare is to provide better care for patients today without compromising health and care provision in the future. The sustainability of healthcare delivery is as important as the financial viability of services. Without a sustainable environment, healthcare costs will rise and delivery will be made more difficult by the changing climate.

Work with innovators to develop innovations and support the local health and care system to adopt innovations that have a positive environmental impact – priorities include asthma inhalers, anaesthetic gases, wound care and polypharmacy.



# Economic growth

**Cross cutting economic growth is a key metric for the Office for Life Sciences Commission. Through the annual AHSN Impact Questionnaire the number of jobs created, jobs safeguarded, and investment leveraged is already recorded.**

## What do we want to achieve?

- Oxford AHSN will support the companies, Integrated Care Systems and Places that we work with to increase the investment that they can leverage from non-dilutive funding
- Although the Strategic and Industry Partnerships programme will be the main driver of the economic growth agenda through the Office for Life Sciences commission, the other core and cross cutting programmes will also be actors in the economic growth agenda of Oxford AHSN and contribute to the investment target
- We have set ourselves an internal target of leveraging £18 million of non-dilutive funding over the next 5 years

## How will we do this?

- We will be an active partner in grant applications, participating as co-applicants and actively contributing to the success of the application and the project
- We will work with funding bodies such as Innovate UK, National Institute of Health Research (NIHR), NHSX, Health Foundation, SBRI, Horizon Europe (including EIT Health) to identify grant funding opportunities
- We will use our network to form high quality consortium for grant funding opportunities involving local, regional, national and international partners
- We will support the Oxford AHSN regional infrastructure bids with academic, health or other partners for developing regional clusters and innovation hubs
- We will support companies to develop the skills to leverage dilutive funding through our Accelerator programme (see offer to innovators)
- We will record the amount of funding leveraged by Oxford AHSN as part of our quarterly reporting process

## What won't we do?

- We will not be seeking funding for estate development projects
- We will not be named on grant applications without being a formal collaborator
- We will not be recording / reporting the value of exports achieved by companies as a metric

## List of metrics

- Number of jobs created and safeguarded (annual questionnaire)
- Investment leveraged (quarterly and annual questionnaire)
- Number of countries where an innovation is spread as a result of AHSN intervention
- Number of grant contracts awarded, and value of contracts awarded (quarterly)
- Regional infrastructure bids (quarterly)



# Offer to innovators

**Providing a core offer of support for innovators is a key function of the Office for Life Sciences Commission. Oxford AHSN provides the AHSN universal support offer to innovators without any entry/eligibility requirements and also provides targeted support packages through its locally commissioned Strategic and Industry Partnerships programmes.**

## What do we want to achieve?

- Oxford AHSN will continue to offer the AHSN universal support offer (i) triage an innovator's value proposition, (ii) provide advice and guidance on sources of support (signposting), (iii) develop understanding of innovators understanding of national and local NHS needs and challenges (innovation exchange) and (iv) communicate opportunities to innovators and companies (newsletters and communications activities)
- Oxford AHSN will provide the AHSN universal support offer delivered directly by the core Oxford AHSN team, predominantly from the Strategic and Industry Partnerships programme, but with support of subject matter experts from all programmes
- Oxford AHSN will provide best-in-class targeted support packages to develop individual innovator's value proposition and business planning support to accelerate an innovator's plan to bring a solution to market

## How will we do this?

- We will offer the following free to all as a Level 1 offer (i) provide NHS market advice and insights, (ii) provide access to specialists in health and social care, (iii) work with an innovator to assess evidence gaps, (iv) provide advice on evaluation, (v) provide innovators with introduction to best practice in health economic requirements and business case development, (vi) broker evidence gathering opportunities and evaluation planning, (vii) provide support to apply for funding (see economic growth), (viii) support an innovator in developing a market access strategy
- We will offer a bespoke Level 2 package to support an innovator to produce budget impact models as a fee for service offer
- We will offer a bespoke Level 2 package to develop innovator's value proposition through our established Lean Assessment Process methodology as a fee for service offer
- We will offer a bespoke Level 2 package to evaluate the benefit, cost and risk of strategic options and provide rationale for a proposed innovation to accelerate an innovator's plan to bring a solution to market through the Oxford AHSN accelerator programme as either a free to all or fee for service offer (dependent on whether early stage or scale up)
- We will work with best-in-class organisations for blended delivery of the bespoke Level 2 packages by core team and partners and invest in development of our staff to increase capacity particularly in health economics

## What won't we do?

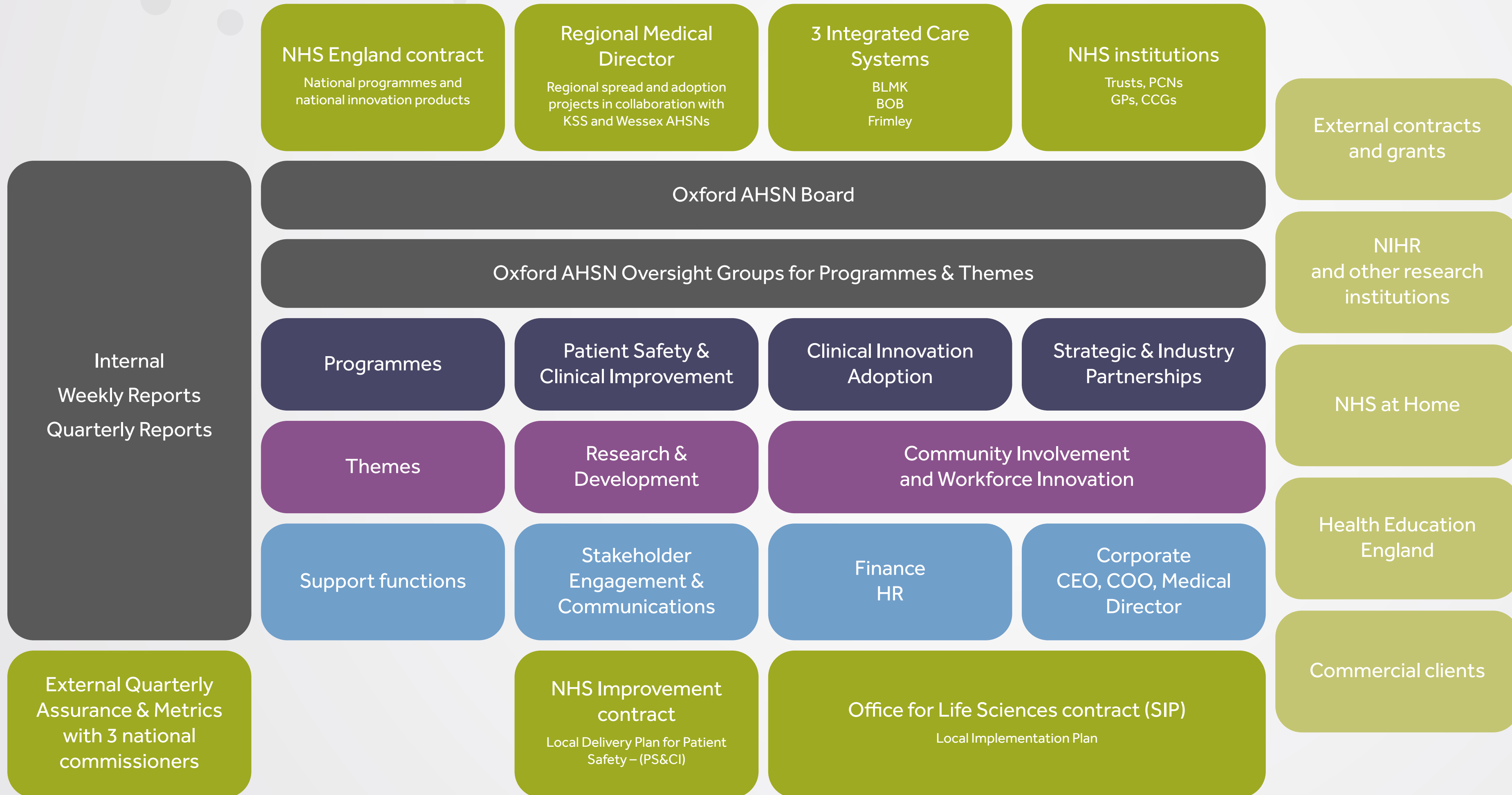
- We will not be offering specialist intellectual property support, we will signpost to experts
- We will not be offering specialist international export support outside of offering innovator-paid access to the E-maps modules
- We will not provide access to data (such as hospital episode statistics) and visualisation services, we will signpost to expert services
- We will not support an innovator with a formal appraisal of the current evidence for the innovation or provide regulatory advice or provide advice on clinical trial design and execution, we will signpost to experts
- We will not provide innovators with support to aid the development of marketing strategies, we will signpost to experts

## List of metrics

- Total number of companies supported (monthly)
- Number of companies supported at Level 1 – signposted only (monthly) / Number of companies supported at Level 2 and 3 – supported innovation development (monthly) / Number of companies supported at Level 4 – real world evaluation or spread & adoption (monthly)
- Number of areas of unmet needs / areas of challenge highlighted and developed (quarterly)



# Programmes and structure



To serve a complex system with multiple interested parties and commissioners we need to be clear with our priorities, how we spend our time and how we communicate



# Developing the organisation

## What do we want to achieve?

- The goal - to attract and retain great people, supporting diversity and development in a fair and inclusive environment.

## How will we do this?

- Clear offer from start to finish - what tools do we have to offer staff: flexible working, physical location, work-life balance, NHS employee rewards (pension, annual leave, sick pay, Occupational Health, employee assistance programme), AHSN offer (training and development – coaching, mentoring, secondment opportunities, qualifications)
- The employee journey: onboarding and induction initiatives – setting clear expectations at key milestones, clear ways of working and structure and annual appraisals
- Communication and bringing people up to speed – not just new starters, all staff (those returning from mat leave, sick leave, upskilling, internal mobility, secondments)
- Consistent developmental feedback and succession planning
- Developing our values and living those values
- Working with Wessex AHSN to undertake an evaluation skills analysis of the team and identify any gaps in our capability. This will help inform our decisions with recruitment, training, partnerships etc
- Talk to leadership team – understand goals, objectives, daily struggles eg readiness for next leaders within programmes.
- Work with the senior team to strengthen specific areas, such clinical leadership in respiratory, maternity and mental health. Developing short term secondments for clinical leaders in the Thames Valley to work with us and gain knowledge of improvement, innovation adoption and working with industry. In return the AHSN will also gain knowledge, experience and networks to shape and progress our health and care priorities.
- Full commitment to the AHSN network EDI pledges
- Celebrating successes – ensuring employees feel valued

## How will we measure success?

- Oxford AHSN specific staff survey (annual)
- Appraisals (informed and trained managers)
- Regular conversations with employees
- Retention
- Capturing training and development information eg skills brought back to AHSN, experience gained during time at the AHSN (running a national programme, lead a national piece of work, secondment to local Trust or business)



# Stakeholder communications

## What do we want to achieve?

- The essence of the Oxford Academic Health Science Network is **to develop a strong network** of people across the region with an interest in improving health outcomes for the population and strengthening the economy through collaborative work.
- Engagement and communications underpins everything we do as all AHSN work is through our partners collaborating.



## How will we do this?

- Target our stakeholder communications to help reach a wider audience and strengthen two-way engagement.
- Website refresh to align with AHSN local and national priorities.
- Develop an interactive digital brochure detailing some of the key programmes.
- Supporting strategy development and alignment with national AHSN Network strategy.
- Supporting organisational development.
- Supporting development of personal and corporate values.
- Successful VIP visits.
- Strengthen relationships with ICS partner comms teams and ensure effective two-way flow of information.
- Continue to take part in regional and national online events and publications with partners in other AHSNs.
- Continue to publish case studies (we have been since 2014)

## How will we measure success?

- Engagement and collaboration – local partners and external stakeholders
- KPI's such as number of Twitter followers (6,000 in Q2) LinkedIn followers (on track to pass 1,000 followers this year)



# Financing Oxford AHSN

- 80% of our funding comes from national commissioners – NHS England/Improvement and the Office for Life Sciences
- Our local Trusts and Universities contribute £0.3m per annum, to the AHSN – an important contribution towards our local work
- This is supplemented by important grants from, eg NHSx, Innovate UK, EIT and HEE. The grants fund resources for real world evaluation of innovators' products and training for stakeholders staff.
- We ensure that 80% of our funding goes on programmes and keep corporate costs to 20% or less of the total costs.
- To sustain the AHSN we need commissioner income to match inflationary rises in payroll costs
- We will continue to rely on national commissioners for most of our funding
- Relicensing is critical to sustaining the AHSN's roles and activities and those of the AHSN Network





# Risks and mitigation

**Failure to align and support developing ICSs with improvement and innovation agenda.**

- AHSN needs to engage the leadership of the ICSs, align ICS priorities and AHSN work programmes. We need to be the innovation and improvement arm of our three local ICSs.

**Failure to demonstrate impact for patients, especially locally commissioned programmes.**

- Ensure that local programmes are evidence based, measurable and that there is local appetite for them. Ensure we align the local programmes with AHSN health and care priorities and ICS priorities. Communicate the benefits when realised.

**Relicensing – failure to be relicensed. The strategy assumes that the work of AHSNs will continue after the end of the current license.**

- We must ensure we deliver impact and communicate it





# Glossary

- ADHD: attention deficit hyperactivity disorder
- AHSN: Academic Health Science Network
- AI: Artificial Intelligence
- ARC: Applied Research Collaboration
- BLMK: Bedfordshire Luton and Milton Keynes
- BOB: Buckinghamshire, Oxfordshire and Berkshire West
- CAMHS: Child and Adolescent Mental Health Services
- CMHT: Community Mental Health Team
- COPD: chronic obstructive pulmonary disease – [read about our respiratory work](#)
- CVD: Cardiovascular disease
- CYP: children and young people
- EDI: Equality, Diversity and Inclusion
- EIT Health: European Institute of Innovation and Technology
- FeNO: fractional exhaled nitric oxide
- HEE: Health Education England
- HWB: Health and Wellbeing Board
- ICS/ICP: Integrated Care System/Integrated Care Place
- IV: intravenous
- IVD: in vitro diagnostics
- KPI: Key performance indicator
- KSS: Kent Surrey Sussex AHSN
- MH: mental health
- MK: Milton Keynes
- NHSE/I: NHS England and Improvement
- NICE: the National Institute for Health and Care Excellence
- NIHR: National Institute for Health Research
- OLS: The Office for Life Sciences
- PCN: primary care network
- PICU: Psychiatric Intensive Care Unit
- PIGF: placental based growth factor – blood test to rule out pre-eclampsia
- PPI: patient and public involvement
- PSC: Patient Safety Collaborative
- QI: quality improvement
- RMOC: Regional Medicines Optimisation Committee
- RUP: Rapid Uptake Products – see AAC
- RWE: real world evaluation
- SBRI: Small Business Research Initiative
- SIP: Oxford AHSN Strategic and Industry Partnerships programme
- SLT: senior leadership team
- TIA: transient ischaemic attack

## NHS organisation acronyms

- BHT: Buckinghamshire Healthcare Trust
- BHFT: Berkshire Healthcare Foundation Trust
- CNWL: Central and North West London
- MKUH: Milton Keynes University Hospital
- OH: Oxford Health
- OUH: Oxford University Hospitals
- RBH: Royal Berkshire
- SCAS: South Central Ambulance Service

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