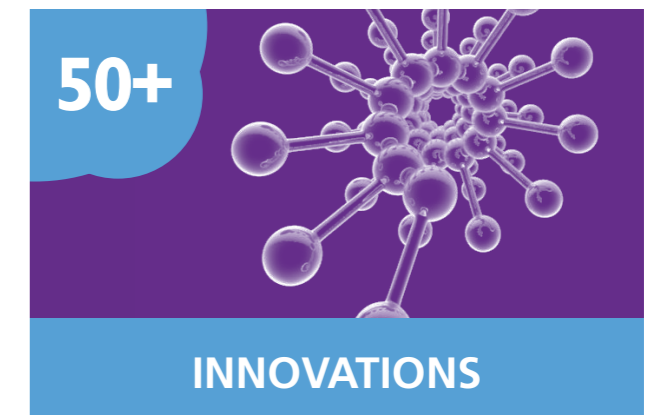


# The first five years...



...and a look ahead

## Oxford AHSN impact since 2013



The **Oxford Academic Health Science Network** gets innovation into clinical practice to improve patient safety, outcomes and experience through collaboration between the NHS, industry and universities

# Our first five years

Welcome to this overview of some of what has been achieved in the first five years of the Oxford Academic Health Science Network – and a look at what lies ahead.



Having been there at its birth, I have found it enormously rewarding to watch the Oxford AHSN grow and flourish over its first five years. Like any new parents, those of us who were around at the outset had our hopes and dreams for this fledgling organisation.

Taking stock now we can be rightly proud of what it has achieved in improving health and generating wealth – and excited too for what comes next. Bringing together industry, universities and the NHS was a new concept in 2013. Hearts and minds needed to be won over and inevitably there have been some tough challenges along the way.

Coming from a commercial perspective myself I have gained much from the insights of those from academic and health service backgrounds who have united in the AHSN's common cause. I have also benefitted hugely from the support of my Board.

The growing depth and breadth of experience and expertise within the Oxford AHSN – and across the wider network of AHSNs covering England – is impressive and bodes well for the next five years.

**Nigel Keen**  
Chairman, Oxford Academic Health Science Network

## CASE STUDY

### Better care for women who develop diabetes during pregnancy



An innovative smartphone app developed by researchers and engineers working with frontline clinicians is helping women who develop diabetes during pregnancy to better manage their condition and make fewer hospital visits.

Oxford AHSN played a key role in establishing the proof of concept for the GDM-Health system, spreading the pilot from a single hospital to multiple sites across a region of 3.3 million people.

It also helped to bring together Sensyne Health, the University of Oxford and Oxford University Hospitals NHS Foundation Trust to sign an agreement which will see £5m invested back into research and frontline healthcare as well as accelerating the commercialisation of the app to help more women with gestational diabetes.



The Oxford Academic Health Science Network and the 14 other AHSNs covering England were established in 2013 to work with regional partners across the NHS, industry and universities to improve patient outcomes and generate economic growth by supporting the spread of innovation and best practice.

Over the last five years our focus has been on building collaborative programmes with healthcare professionals, managers, researchers in academia and industry, and patients to identify, evaluate and support the spread of innovations of value to improve patient outcomes and experience.

Working with researchers at the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) Oxford, our clinical networks in mental health have led to improvements in patient outcomes within and beyond our region.

Our commercial team has developed major programmes supporting the adoption of innovation in diagnostics and digital, reflecting the large number of companies in these fields based within our region.

Our work is underpinned by strong patient and public involvement with invaluable input from lay members. Our innovative Leading Together programme has extended to include people with learning disabilities and their carers.

Our patient safety team has had important national impact in a number of key areas including creating implementation packs for three critical care devices and establishing measures for 'suspicion of sepsis' which underpinned a new national dashboard for evaluating the deteriorating patient developed by Imperial College Health Partners.

We have worked with Health Education England to develop a pipeline of workforce training and development packages supporting our innovation and improvement programmes.

For example, more than 1,000 people took part in dementia webinars and more than 100 joined our Adopting Innovation and Managing Change programme.

The Oxford AHSN coordinated the creation of a series of videos explaining what to expect in a range of diagnostic scans. The films have had more than 100,000 views on YouTube with one of them winning a national BMA Patient Information award.

Our work is increasingly expanding into the community where simple innovations can have major impact – on the health of older people in particular. One example is our successful care home hydration initiative which has won five national awards.

AHSNs have a unique place in England's health and social care system and have demonstrated their effectiveness in supporting spread and best use of emerging technology and new ways of working. We now have a great opportunity to build on the successes achieved in our first five years.

**Professor Gary Ford, CBE**  
Chief Executive, Oxford Academic Health Science Network

*The Oxford AHSN and its Patient Safety Collaborative have provided invaluable support to us and the other NHS trusts in our region. Their accessible 'can-do' attitude and ability to see the bigger picture is increasingly persuading clinicians of the value of sharing excellence across, as well as within, our organisations which is leading to raised standards everywhere."*

**Steve McManus**, Chief Executive,  
Royal Berkshire NHS Foundation Trust

# Clinical Innovation Adoption

*The Clinical Innovation Adoption programme helps implement evidence-based innovation in the NHS to improve patient care. It supports changes in practice and improvement, building region-wide capability and capacity.*

The **Clinical Innovation Adoption (CIA) team** has a hard-earned reputation for offering top-class guidance which helps the health service find sustainable solutions, matching innovations with needs.

It supports the widespread diffusion and uptake of proven innovations to improve patient outcomes, safety and experience, as well as enhancing cost-effectiveness. The programme works closely with NHS leaders in primary and secondary care, commissioners, clinical innovators, industry partners and others in line with both regional and national priorities.

Using a tried and trusted ten-step process, the programme has evaluated more than 300 innovations, taking account of potential benefits, impact on patient experience, local priorities and ease of adoption. Expert input from the team covers building the case for change, evaluation, supporting implementation and understanding and overcoming barriers to adoption.

As a result, over 30 sustainable and wide-ranging innovations have been implemented across medicines, medical devices, digital and system transformation. There are currently at least 20 active overarching projects. Focus areas include heart failure, prostate cancer, falls prevention and sleep improvement. The programme is leading on most of the national programmes being delivered by all AHSNs (see page 12) – including a successful collaboration to reduce stroke risk through better identification of atrial fibrillation (see case study on page 6) – as well as products added to the national Innovation and Technology Tariff.

The Clinical Innovation Adoption programme is working with clinical entrepreneurs Maryanne Mariyaselvam and Peter Young, who are supported by the NHS Innovation Accelerator, to implement three critical care devices designed to reduce human error and improve safety for critically ill patients.

## CASE STUDY

### Eye-catching campaign raises awareness of rheumatoid arthritis

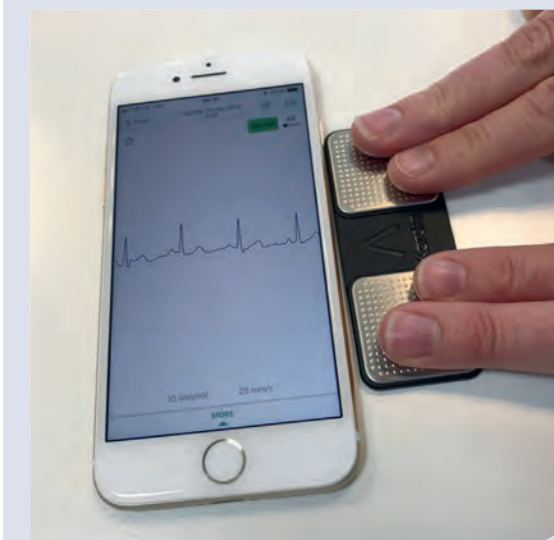


**A giant talking hand** helped raise public awareness of the early signs of rheumatoid arthritis as part of an award-winning campaign run by the Oxford AHSN with patients, health professionals and the National Rheumatoid Arthritis Society.

Targeted videos were made for the public and GPs to raise awareness and improve understanding, highlighting the importance of earlier recognition, diagnosis and treatment. This initiative emerged from the regional network of specialist clinicians working in inflammatory arthritis established and coordinated by the Oxford AHSN.

## CASE STUDY

### Better detection and management of atrial fibrillation



**The Oxford AHSN** has developed and implemented a comprehensive work programme aimed at driving through improvements in the detection and management of atrial fibrillation (AF) in order to reduce the numbers of AF-related stroke.

This programme consists of a range of collaborative projects with regional partners including Clinical Commissioning Groups (CCGs), GPs, acute trusts and industry, with each project seeking to introduce and evaluate a novel and innovative method of service delivery.

Atrial fibrillation (AF) is the most common cardiac arrhythmia, estimated to affect around 56,000 people in the Oxford AHSN region with around 16,000 unaware that they have it.

The Oxford AHSN is working with pharmacists, industry, other AHSNs and NHS commissioners and providers to improve AF detection and management leading to fewer strokes.

In 2017 the Oxford AHSN hosted a practical workshop and produced packs to support implementation.

In 2016 the Clinical Innovation Adoption programme established a practical course supporting frontline innovators and change agents within the NHS. With the start of the fifth cohort in September 2018 around 125 people have taken part in this course which is run at Buckinghamshire New University and funded by Health Education England.

*The Oxford AHSN has played a crucial role in connecting us with the NHS frontline. Their expertise, local knowledge and practical help were instrumental in opening doors for us to get our innovative critical care patient safety devices into the hands of the right people. The Oxford AHSN really knows how to achieve spread and adoption of clinical innovations across the NHS. It's still hard but it would be a lot harder without them."*

**Peter Young**, Consultant Anaesthetist and NHS Innovation Accelerator Fellow

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# Patient Safety and Clinical Improvement

The Oxford AHSN Patient Safety and Clinical Improvement programme is building a culture of safety, continuous learning and improvement in line with local and regional priorities. This approach is reducing harm and enabling safer care than ever before.

## The national Patient Safety Collaborative (PSC)

programme, established in 2014, is the largest patient safety initiative in the history of the NHS. It is funded and co-ordinated by NHS Improvement, and organised and delivered by England's 15 AHSNs.

The Oxford PSC is establishing and sustaining relationships with key partners including NHS staff and patients through quality improvement collaboratives, communities of practice and shared learning. This approach is applied locally and at scale with a focus on targeted training, adopting and spreading best practice within the region and across the country.

The Oxford PSC is embedded in the Oxford AHSN enabling cross-working throughout the organisation and ensuring patient safety is at the forefront of all its programmes.

A key focus has been establishing region-wide care pathways, embedding practical quality improvements and creating the right conditions for safer systems of care, learning from errors and reducing avoidable harm. For example, nine sets of regional guidelines have been introduced in maternity, leading to a reduction in unwarranted variation and better care around the 30,000 births in the region every year. The regional guidelines include the interpretation of fetal wellbeing, administration of oxytocin in labour and place of birth of extremely premature babies (see case study on page 8).

Our work to establish a 'Suspicion of Sepsis' methodology was published in BMJ Open in 2017 along with a 'how to' guide. This formed the basis for the national dashboard for evaluating the deteriorating patient which was launched in autumn 2018.

Several projects have been completed successfully and handed back to host trusts for long-term sustainability. These include Pressure Damage, Retention of Maternity Swabs and Human Factors in Serious Incidents.

## CASE STUDY

### Reducing urinary tract infections in care homes through better hydration



**Rates of urinary tract infections (UTIs)** requiring antibiotics or hospital admission have dropped significantly following the introduction of structured drinks rounds designed to encourage care home residents to drink more. UTIs are closely associated with dehydration.

This initiative was developed by the Oxford AHSN Patient Safety Collaborative with East Berkshire Clinical Commissioning Group and supported by Health Education England. Brightly coloured trolleys – based on topical themes developed by staff and residents – now make seven rounds a day in at least 13 care homes with 300+ staff receiving training.

A learning package based around a series of animated videos has been developed. The project has won a number of national awards recognising innovation and improvement in patient safety.

Hundreds of people have attended successful events hosted by the Oxford PSC including two annual conferences and shared learning workshops. Ten communities of practice and clinical groups have been established along with a Q Community supporting quality improvement.

The patient safety team is leading on two of the new national programmes being delivered by all AHSNs – see page 12. (SIM – bringing together policing and mental health services; PReCePT – helping to reduce cerebral palsy in preterm babies through use of magnesium sulphate).

**Collaborative working provides peer support, reduces variance throughout trusts, reduces workload locally, supports shared learning and facilitates collection of consistent regional data.”**

**Dr Andrew Brent**, Sepsis clinical lead

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## CASE STUDY

### More babies born very early are surviving due to better joint working



**Research has shown** that babies who are born very early (under 27 weeks of pregnancy) are more likely to survive and thrive if their birth takes place in a hospital that has the highest level of neonatal care (a Level 3 unit).

The Oxford AHSN worked with all maternity units across a region of 3.3 million people to change practices with a greater focus on the risks for mother and baby rather than availability of beds and staff. Best care guidelines to improve identification and management of threatened pre-term labour were also introduced.

As a result, 50% more extremely premature babies are now born in a Level 3 unit, the safest place for them. An independent study concluded that this approach saved the lives of four extra babies every year.

# Strategic and Industry Partnerships

The Strategic and Industry Partnerships programme builds evidence for innovations in the real world, working with companies and other partners to accelerate health and economic gains. Its experienced team has deep knowledge of diagnostics, medtech, digital health and the pharmaceutical industry.

The **Oxford AHSN region** is a leading national and international life sciences cluster, home to a rich and diverse community of innovators, entrepreneurs, researchers and other partners.

The Oxford AHSN provides expert support along the entire innovation pathway, from idea origination, through concept development, testing and regulatory approval and on to adoption. It fosters long-term partnerships with industry, a culture of innovation in the NHS and economic growth, securing £123m of investment into the region to date.

The Strategic and Industry Partnerships (SIP) team is aligning its work with the Accelerated Access Collaborative and the requirements of the Office for Life Sciences which is funding AHSNs to establish a network of innovation exchanges.

These include:

- identifying needs and collaboration opportunities
- signposting for industry
- real world evaluation and monitoring of clinical and economic impact
- diffusion and adoption of innovations.

Radical national plans to improve health outcomes and the quality of patient care through the adoption of breakthrough diagnostic and digital technologies are reflected in the Oxford AHSN's priorities. The SIP team plans to expand its work in these areas as well as increasing activities with medtech and pharma.

The SIP programme is taking a leadership position in the adoption of 'point of care' (POC) diagnostic tests. POC testing presents new opportunities to provide more services in the community for managing the frail elderly rather than in hospital and contributes to more rapid decision-making with increased clinical confidence (see case study, page 10).

## CASE STUDY

### Digital health roadmap guides developers



The **Oxford AHSN** has produced a *Digital Health Roadmap* for innovators and entrepreneurs interested in developing and commercialising digital health products and services.

The Roadmap, produced with Oxford University Innovation, helps SMEs overcome challenges relating to health management apps, wearable technology, online interactions and other digital innovations. It gives comprehensive guidance at every stage from concept to adoption including interoperability, information governance and data management, the regulatory framework, clinical testing and developing a commercial model.

## OUR INDUSTRY PARTNERS:



The Oxford AHSN has been a key partner in the development of innovation hubs in Oxford and Buckinghamshire to support emerging businesses and pioneering entrepreneurs.

*Johnson & Johnson is committed to helping people live longer, happier, healthier lives. We are working closely with the Oxford AHSN to find new ways to improve outcomes for patients.”*

**Mark Hicken,**  
Managing Director, Janssen UK & Ireland,  
a pharmaceutical company of Johnson & Johnson

*Working in partnership with the Oxford AHSN meant the right stakeholders were brought together with a clear plan developed to accelerate the adoption of this innovation.”*

**Chris Hudson,**  
Director of Healthcare Development and  
Strategic Services, Roche Diagnostics

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## CASE STUDY

### New blood test improves clinical decision-making



A new point of care blood testing device is being introduced into frontline NHS services after an evaluation at three hospitals carried out by Oxford AHSN showed that it speeded up clinical decision-making relating to antibiotic prescribing in three-quarters of cases involving common childhood illnesses such as fever and abdominal pain.

It also enables potentially life-threatening conditions such as sepsis to be identified earlier and ensures that more patients are seen in the right place first time.

Wider application has been demonstrated. The devices are, for example, contributing to streamlining diagnostic pathways in the community for frail elderly patients, enabling more care closer to home and easing pressure on A&E departments.

## Involvement

The Patient and Public Involvement, Engagement and Experience (PPIEE) theme underpins everything the Oxford AHSN does. Patients, public and professionals work together to support the delivery of person-centred care in our partner organisations.

**Sustainable healthcare depends on people** being actively engaged in maintaining their health, in managing the illnesses that affect them and being involved in designing and delivering healthcare systems.

The Oxford AHSN is building a network of professionals and patients that will create change in individual care, organisational culture and systems of care. We work with a growing roster of lay partners and lay associates and are strengthening relationships within and across organisations too. One example is the Leading Together programme (see case study).

We also coordinate a wide-ranging patient and public involvement training and development programme in conjunction with the NIHR CLAHRC Oxford, Clinical Research Network Thames Valley and South Midlands and other partners.

Dozens of healthcare professionals, researchers, patients, carers and the public have attended these 'Working together' workshops which have taken place at venues in Berkshire, Buckinghamshire and Oxfordshire. Topics covered include how to write for a lay audience and outcomes that matter to patients and the public.

**This is the way to go: professionals and citizens working together to make health and wellbeing better."**

Jeremy Taylor, Chief Executive, National Voices

w: [bit.ly/PPIEE](https://bit.ly/PPIEE)  
e: [PPIEE@oxfordahsn.org](mailto:PPIEE@oxfordahsn.org)

### CASE STUDY

#### Public and professionals come together to change culture



**Over 100 people have completed The Leading Together Programme** – an innovative leadership development course for professionals and lay people created by the Oxford AHSN. It offers an innovative approach to changing culture – bringing together patients, carers and the public with professionals to reflect and learn from each other.

The programme covers developing knowledge and understanding of the benefits of working collaboratively, sharing expertise and experiences to support learning, building collaborative networks and learning to appreciate different perspectives. The initiative was a finalist in the regional NHS Leadership Recognition Awards 2017. It is supported by NHS England and the Thames Valley and Wessex Leadership Academy.

## The next five years

NHS England has committed to the long term future of Academic Health Science Networks, describing them as 'change catalysts' and the 'innovation arm' of the health service.

The 15 AHSNs, created in 2013, began working to a new five year licence in 2018. The priorities of Oxford AHSN's three programmes – Clinical Innovation Adoption (see page 5), Patient Safety and Clinical Improvement (see page 7), Strategic and Industry Partnerships (see page 9) – are closely aligned with the requirements of the three national commissioners – NHS England, NHS Improvement and the Office for Life Sciences.

A key imperative is greater collaboration between AHSNs. This is demonstrated in a number of programmes selected for national adoption and spread through to 2020 (see box opposite).

The Oxford AHSN is also supporting further innovation and transformation initiatives in line with the needs and priorities of the local NHS and our commitment to improve health and accelerate growth through partnership working. Some examples of this are provided in the case studies on page 13.

**We are hugely enthusiastic, not only about the work you've been doing, but frankly the work you are going to do over the coming years. You are our 'change catalysts'."**

Simon Stevens, NHS Chief Executive

### The AHSN Network

#### NATIONAL PROGRAMMES

- **Preventing strokes** and saving lives through better detection of atrial fibrillation – see case study on page 8
- **Preventing cerebral palsy** in pre-term babies through administration of magnesium sulphate
- **Making better use of medicines** to reduce the risk of patient harm and save NHS money
- **Supporting group rehabilitation** for patients with knee and/or hip osteoarthritis
- **Bringing together policing and healthcare skills** for patients with complex mental health needs and their families
- **Supporting the collaborative adoption** of the emergency laparotomy pathway

[www.ahsnnetwork.com](http://www.ahsnnetwork.com)

**CASE STUDY**

### Pre-eclampsia test to help mums and babies

The Oxford AHSN is working with maternity units at hospitals across the region and beyond to support the roll-out and adoption of a new hospital test to more accurately diagnose pre-eclampsia (PE), a major cause of morbidity in pregnant women and babies. This will lead to better outcomes for women with PE and more efficient use of NHS resources.



**CASE STUDY**

### Better sleep without pills

The Oxford AHSN is evaluating an online support package to help people overcome insomnia without sleeping pills. Sleepio is available free to all living in the Oxford AHSN region. If successful, a blueprint for wider adoption of digital medicine will follow. The project is funded by Innovate UK.



**CASE STUDY**

### Connecting experts to improve quality

The Oxford AHSN is growing a regional network of people committed to improving health and care through the national Q community initiative with the Health Foundation and NHS Improvement.



**CASE STUDY**

### Supporting access to healthcare markets

The Oxford AHSN is leading an international initiative to create an online knowledge hub for industry, entrepreneurs and clinical innovators.

The European Market Access for Partners (eMaps) project, funded by EIT Health, will help navigate the complex processes and pathways associated with accessing healthcare markets in Europe and the USA.



### Key to cover images







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