



Department
of Health

NHS

National Institute for
Health Research

Delivery IVD Research through the National Institute for Health Research.

18 March 2014



Dr Tony Soteriou
Infrastructure and Growth Senior Manager

National Institute for Health Research

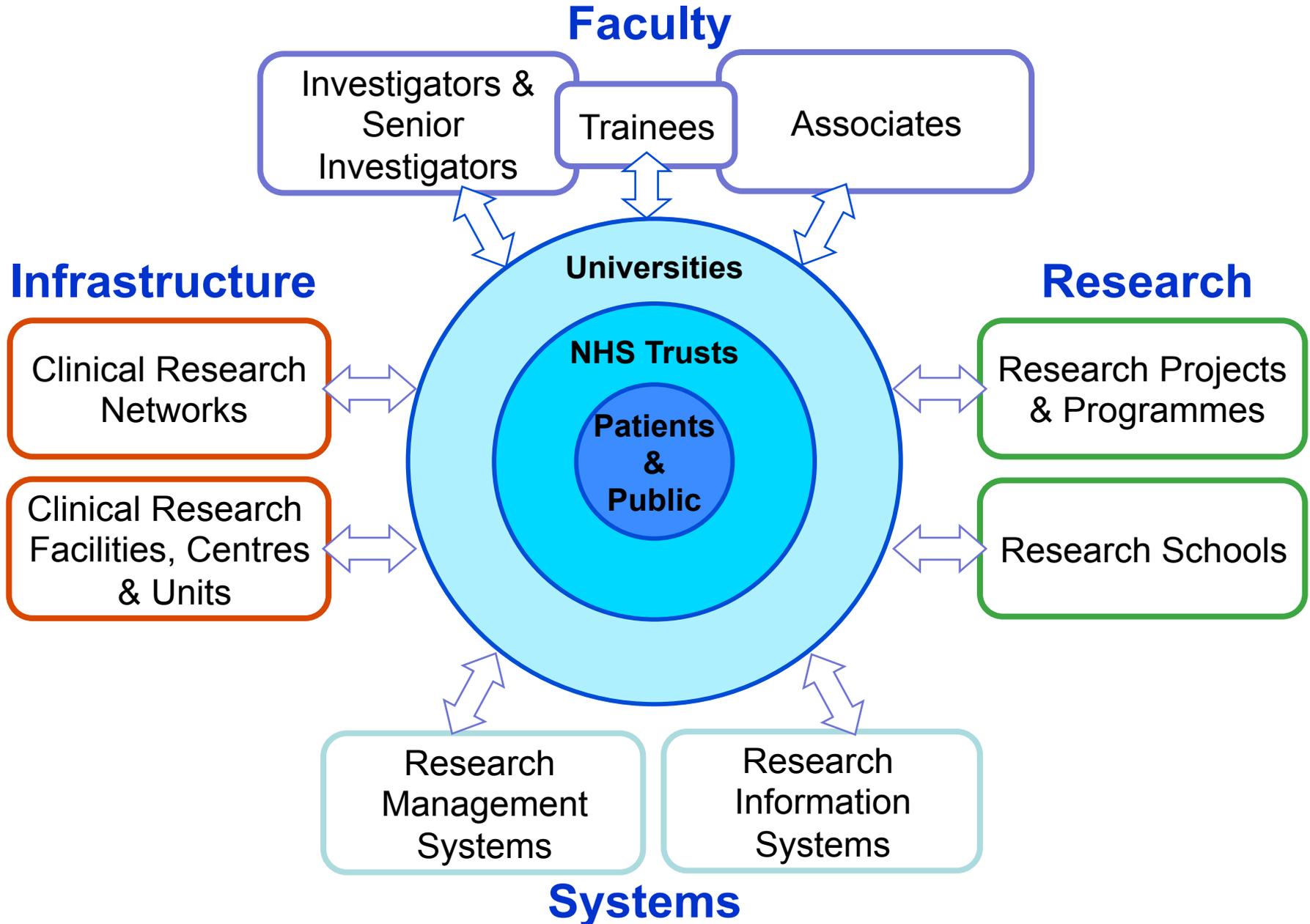
Goals

- Transform research in the NHS
- Increase the volume of applied health research for the benefit of patients and the public
- Develop and support the people who conduct and contribute to applied health research

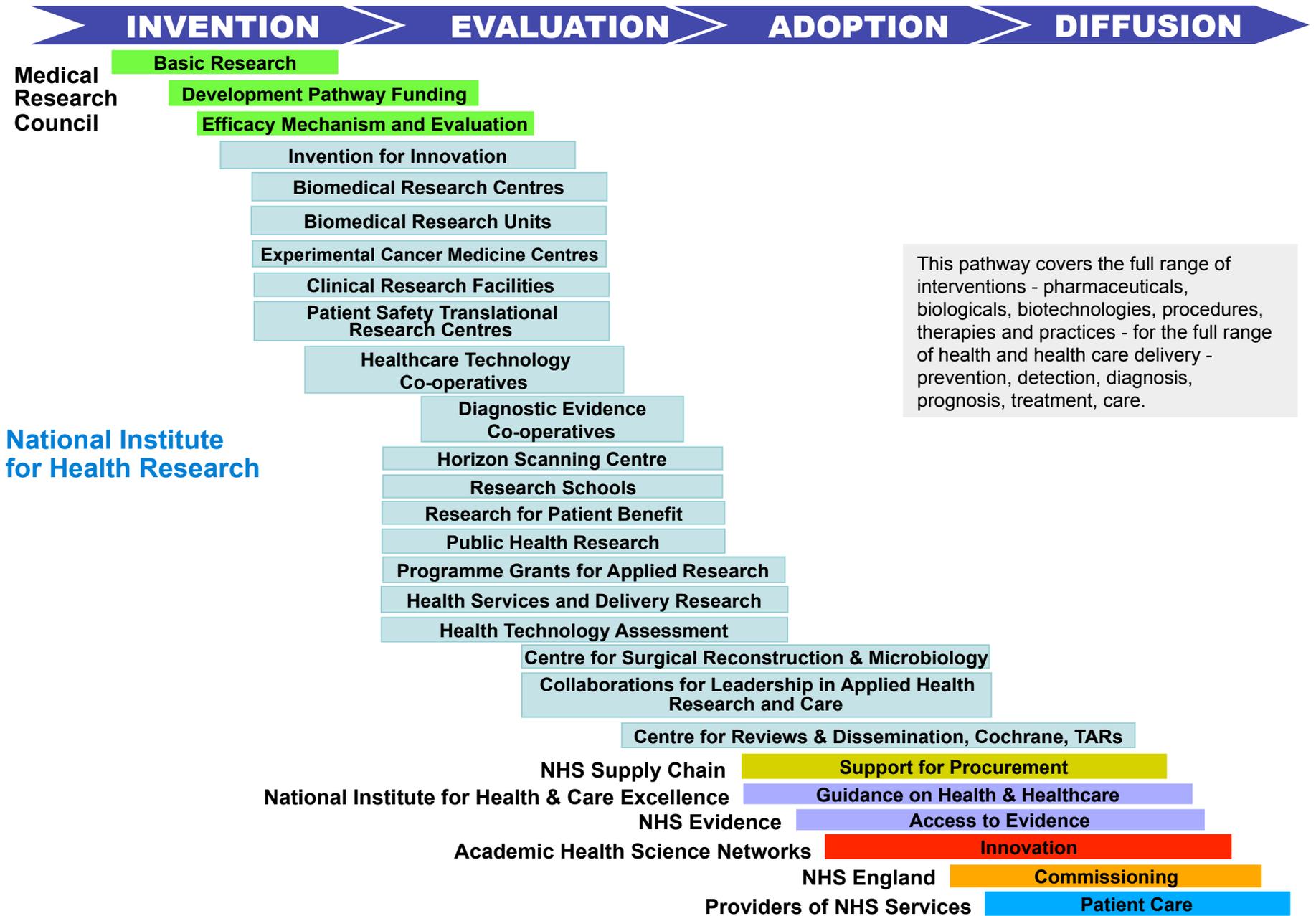
Principles

- Transparent
- Competitive
- High quality
- Value for money
- Focused on outcomes

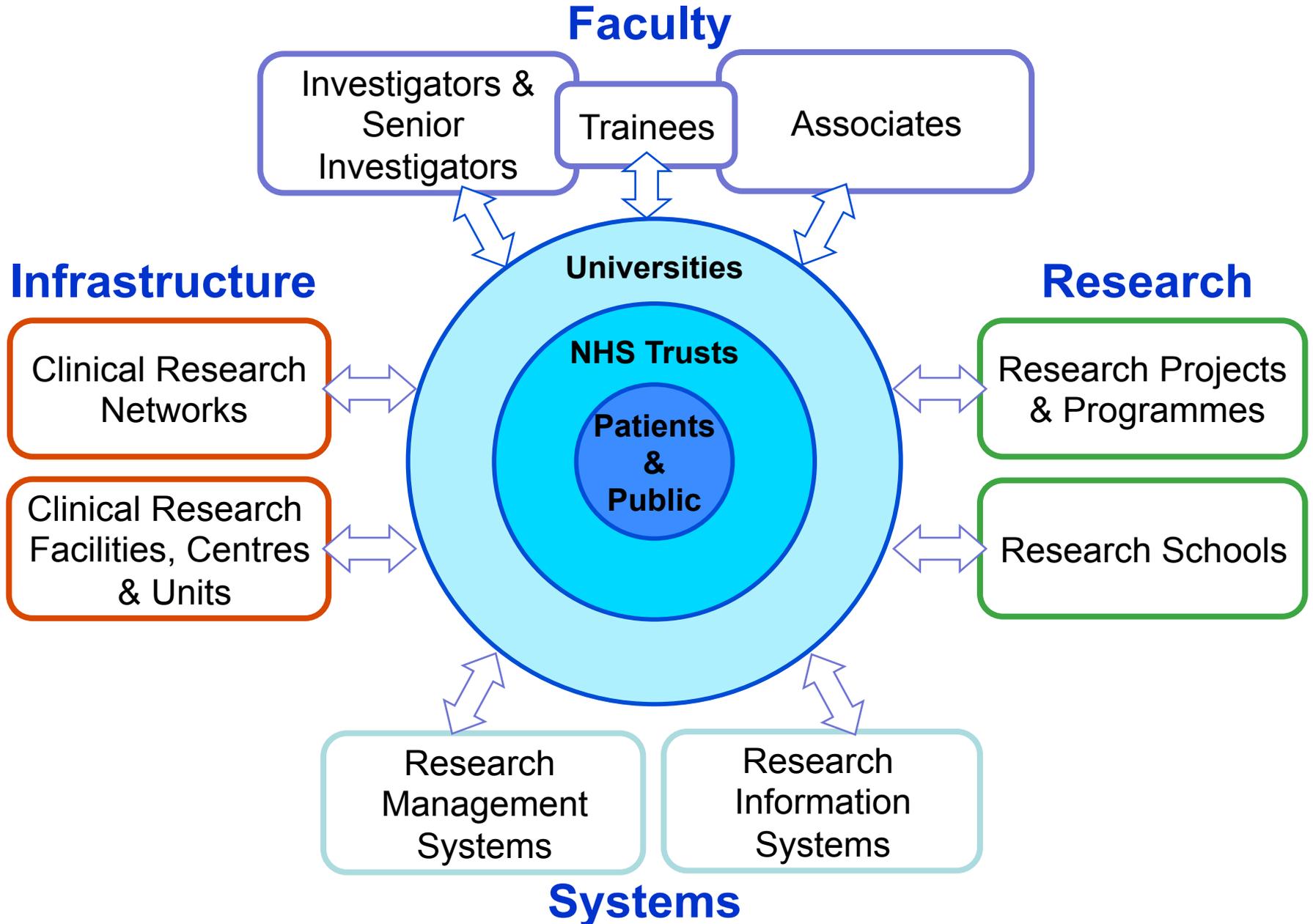
NIHR Health Research System



The central role of NIHR research in the innovation pathway



NIHR Health Research System



Efficacy and Mechanism Evaluation (EME) Programme

- Jointly funded by NIHR and MRC and managed by NIHR, the EME Programme sits between funders of basic science and early clinical research and the more applied NIHR programmes
- Actively supports the translational pull through of promising interventions*, with significant potential to benefit patients and the NHS in the medium to longer term, from early clinical studies into later phase evaluation,
- Funds science driven clinical efficacy studies to test interventions and provides the opportunity to explore disease or treatment mechanisms, which may in turn lead to improvements in health and patient care
- Supports and encourages academics and clinicians to work with commercial organisations, in particular SMEs
- Has committed almost £90 million to internationally competitive research from across the UK during the last 5 years

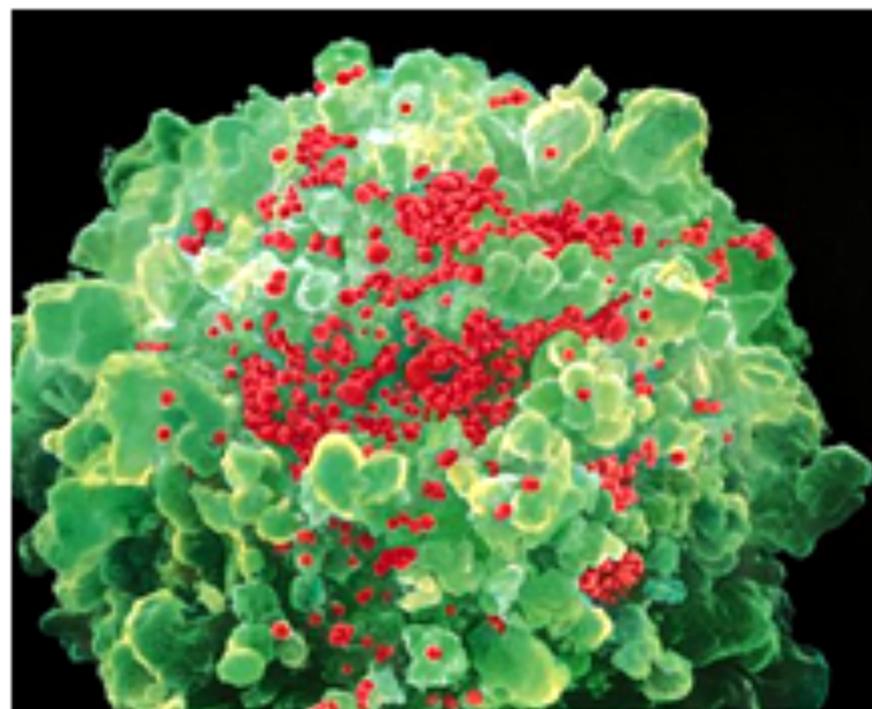
*

the term intervention is used in the broadest sense and includes any method use to promote health, prevent and treat disease and improve rehabilitation or long-term care.

NIHR Invention for Innovation (i4i)

- Designed to translate med tech innovations into patient benefit for the NHS with end user pull
- Moving technologies and devices towards investor readiness with de-risked, compelling propositions
- “Valley of Death” - funding for novel innovations which are too early stage to be funded by venture capital or private equity
- Mission-critical funding for collaborations: universities, clinicians and med tech industry (focus on SMEs)
- Strong commercial, clinical, technology development and regulatory experience within the funding panel

Next Generation Mobile Diagnostics for HIV



Assisted vision for severely sight impaired individuals

Stephen Hicks

Nuffield Department of
Clinical Neurosciences,
University of Oxford



NHS
*National Institute for
Health Research*

RNIB



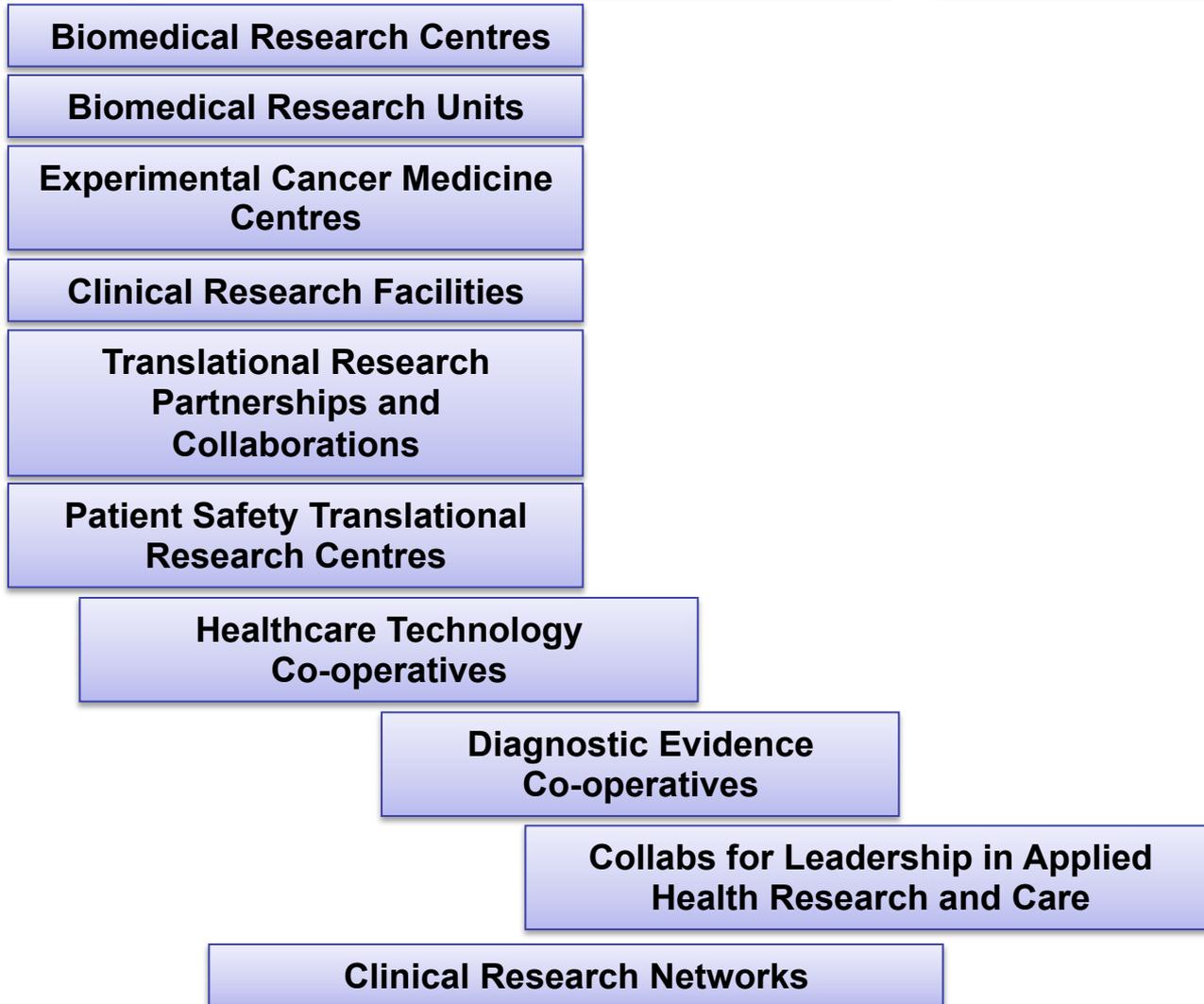
Infrastructure

Clinical Research
Networks

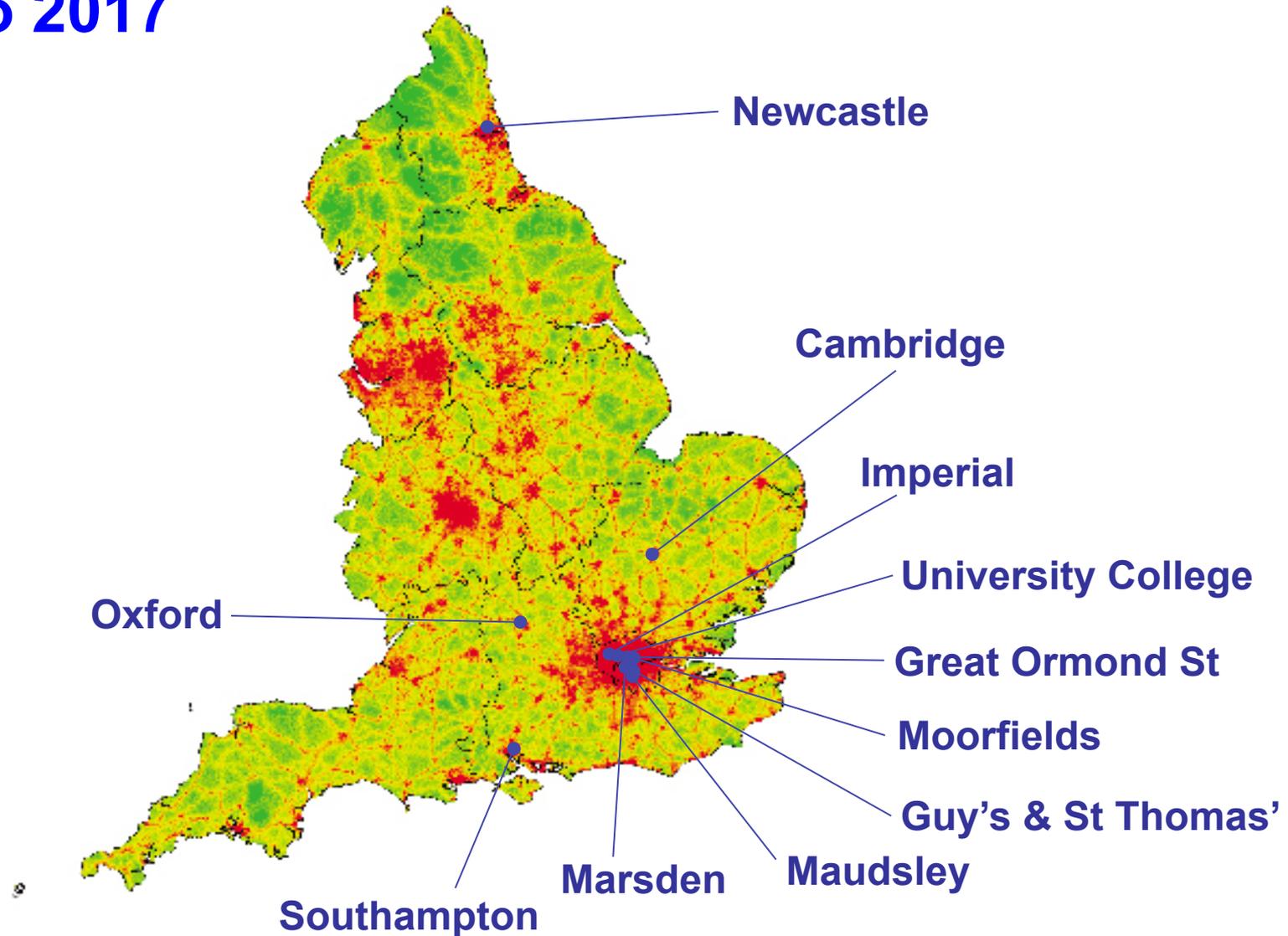
Clinical Research
Facilities, Centres
& Units

- Clinical Research Networks
- Biomedical Research Centres
- Biomedical Research Units
- Clinical Research Facilities
- Experimental Cancer Medicine Facilities
- Patient Safety Translational Research Centres
- Collaborations for Leadership in Applied Health Research and Care
- Healthcare Technology Cooperatives
- Diagnostic Evidence Cooperatives
- Clinical Trials Unit support
- Research Design Service

NIHR Clinical Research Infrastructure



NIHR Biomedical Research Centres: 2012 to 2017



NIHR Biomedical Research Units: 2012 to 2017

Leeds

- Musculoskeletal

Liverpool

- Gastrointestinal

Manchester

- Musculoskeletal

Birmingham

- Gastrointestinal

Oxford

- Musculoskeletal

Bristol

- Cardiovascular
- Nutrition, Diet and Lifestyle

Newcastle

- Dementia

Nottingham

- Hearing
- Gastrointestinal

Leicester

- Cardiovascular
- Nutrition, Diet & Lifestyle
- Respiratory

Cambridge

- Dementia

UCLH

- Dementia

Barts & the London

- Cardiovascular

Southampton

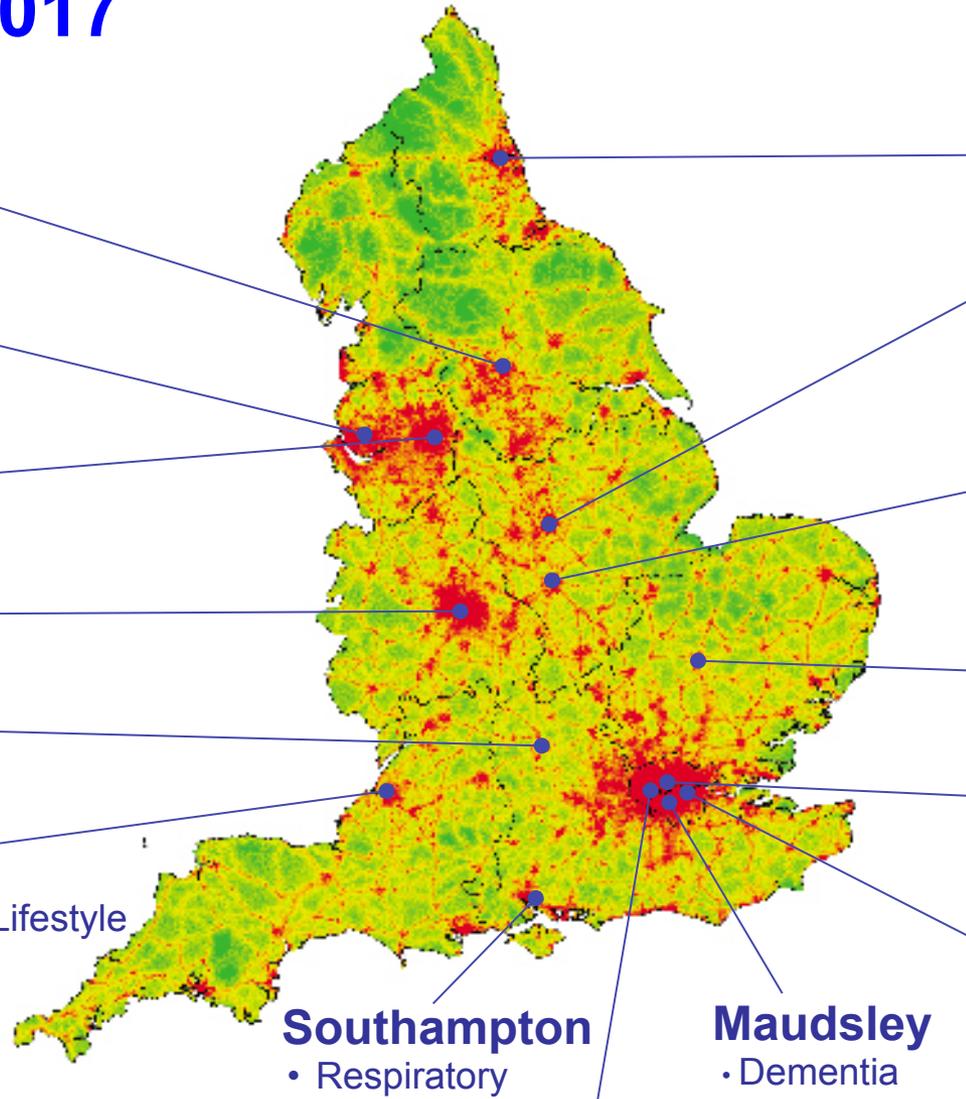
- Respiratory

Maudsley

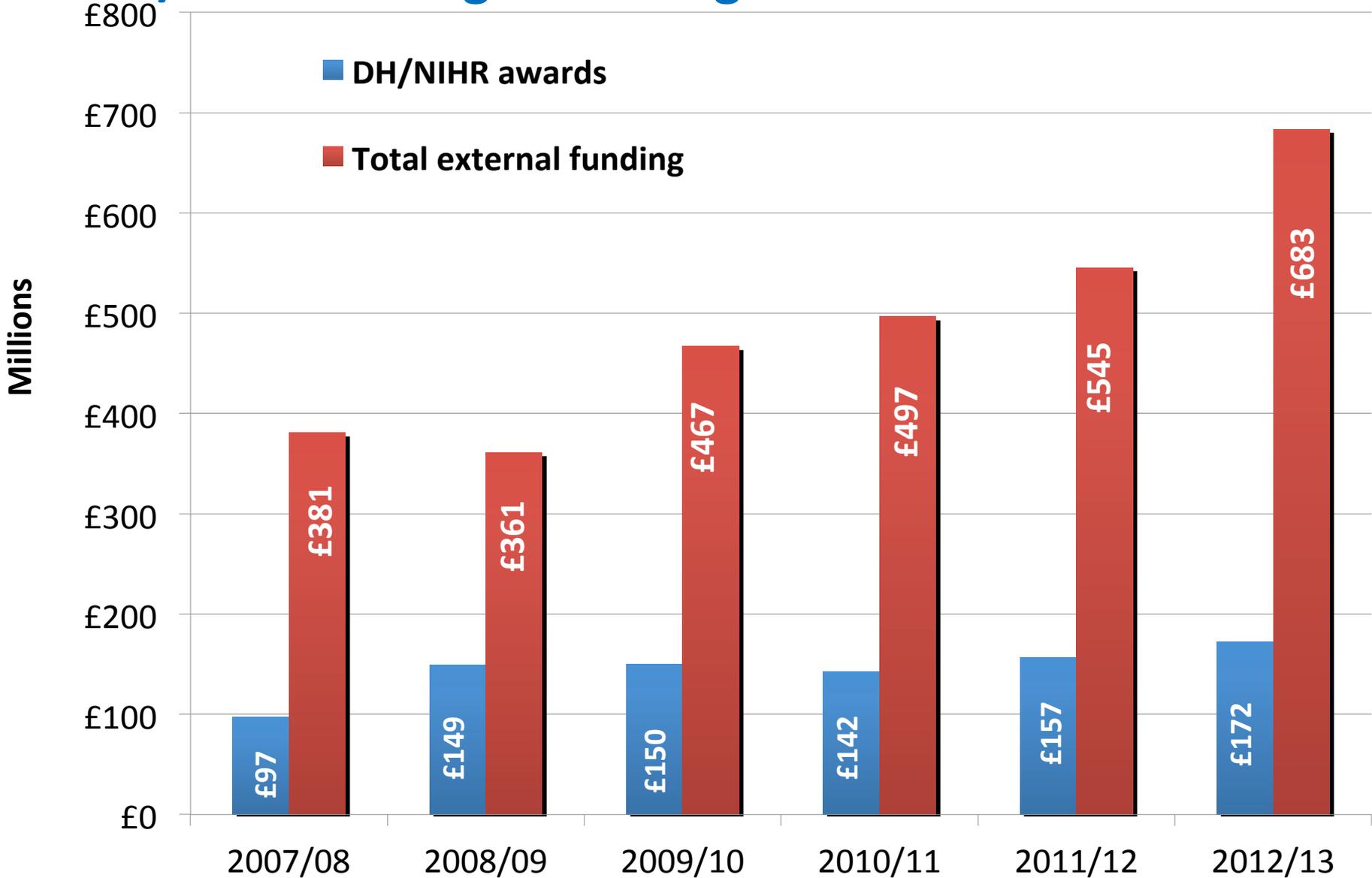
- Dementia

Royal Brompton & Harefield

- Cardiovascular
- Respiratory



BRCs/BRUs leveraged funding



BBC Sign in

NEWS HEALTH



Blindness gene therapy trial: 'I don't trip over things any more'

16 January 2014 Last updated at 00:14 GMT

Researchers in Oxford say they have improved the vision of patients that would otherwise have gone blind.

BBC News reported the start of the trial two years ago - the results of which have now been published in the Lancet.

The so-called gene therapy is for a rare form of blindness called Choroideremia, but the doctors say it could potentially be used to treat the more common form of age-related blindness which affects 300,000 people in the UK and millions across the world.

Jonathan Wyatt was on the verge of losing his sight when he received the treatment two years ago. He told BBC News how his vision has improved.

Watch Sky News **sky NEWS HD** LIVE 21 January 2014

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Gene Therapy Breakthrough Could 'Cure' Blindness

Doctors who injected a genetically-modified virus into the eyes of blind patients discover it significantly improves their sight. 7:33am UK, Thursday 16 January 2014



Video: Gene Therapy Could 'Cure' Blindness

Tweet 169 Recommend 4 g+1 10 Email

By Thomas Moore, Health and Science Correspondent

Patients suffering from an inherited form of blindness have for the first time had their vision dramatically improved by gene therapy.

8 July 2013 Last updated at 00:02

1.1K Share

Baby born using new IVF screening technique

By James Gallagher

Health and science reporter, BBC News



Connor Levy's parents had been trying to conceive naturally for four years.

A baby has been born in the US using a new method for screening embryos during IVF which could dramatically reduce costs, researchers report.



First IVF baby with new embryo screening technique

Posted 8 July 2013

A baby boy has been born to a couple in the USA by IVF involving the use of a new embryo screening approach.

The method uses the latest DNA sequencing techniques and aims to increase IVF success rates while being more affordable for more couples.

The work was a collaborative effort. It received significant support from the National Institute for Health Research (NIHR) Oxford Biomedical Research Centre, a partnership between Oxford University Hospitals NHS Trust and the University of Oxford. The collaboration also involved industrial partners, in particular the medical diagnostic company Reprogenetics UK.

Dr Dagan Wells of Oxford University led the international team which has shown how 'next-generation sequencing' can be used to pick the embryos created by IVF that are most likely to lead to successful pregnancies.

The approach can identify embryos with the correct number of chromosomes, and may cut hundreds of pounds off the cost of embryo screening, Dr Wells says, which currently adds £2000–£3000 to IVF treatments.

He will outline the development today at the European Society of Human Reproduction and Embryology's annual meeting in London.

The majority of embryos produced by IVF aren't able to lead to successful pregnancies, and scientists have sought to find ways of identifying the embryos that should be implanted to give the greatest chance of success.

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NEWS HEALTH

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17 October 2013 Last updated at 01:16 [Share](#) [f](#) [t](#) [e](#) [p](#)

Blood test 'detects sepsis in hours'

By Helen Briggs
BBC News

A rapid blood test to diagnose blood poisoning, or sepsis, at the hospital bedside could potentially save thousands of lives, say researchers.

Early studies at King's College London suggest the condition can be diagnosed in two hours using a simple blood test.

Current diagnostic methods take up to two days, which may delay treatment with life-saving antibiotics.

The condition - caused when the body's immune system overreacts to infection - causes 37,000 UK deaths each year.

In the study, published in the journal **PLOS ONE**, researchers identified a biomarker for diagnosing sepsis rapidly in blood samples.



Sepsis kills more people than breast and bowel cancer combined

THINKSTOCK

Related Stories

Call for more urgent sepsis care

The logo for Sky News HD, featuring the word 'sky' in a lowercase, bold, sans-serif font, followed by 'NEWS' in a larger, bold, uppercase, sans-serif font, and 'HD' in a smaller, bold, uppercase, sans-serif font. The text is white on a dark background.

46 gene sequencing test for cancer patients on the NHS

The first multi-gene DNA sequencing test that can help predict cancer patients' responses to treatment has been launched in the National Health Service (NHS), thanks to a partnership between scientists at the the National Institute for Health Research (NIHR) Oxford Biomedical Research Centre (BRC), a collaboration between Oxford University Hospitals NHS Trust and Oxford University

Healthcare Technology Cooperatives

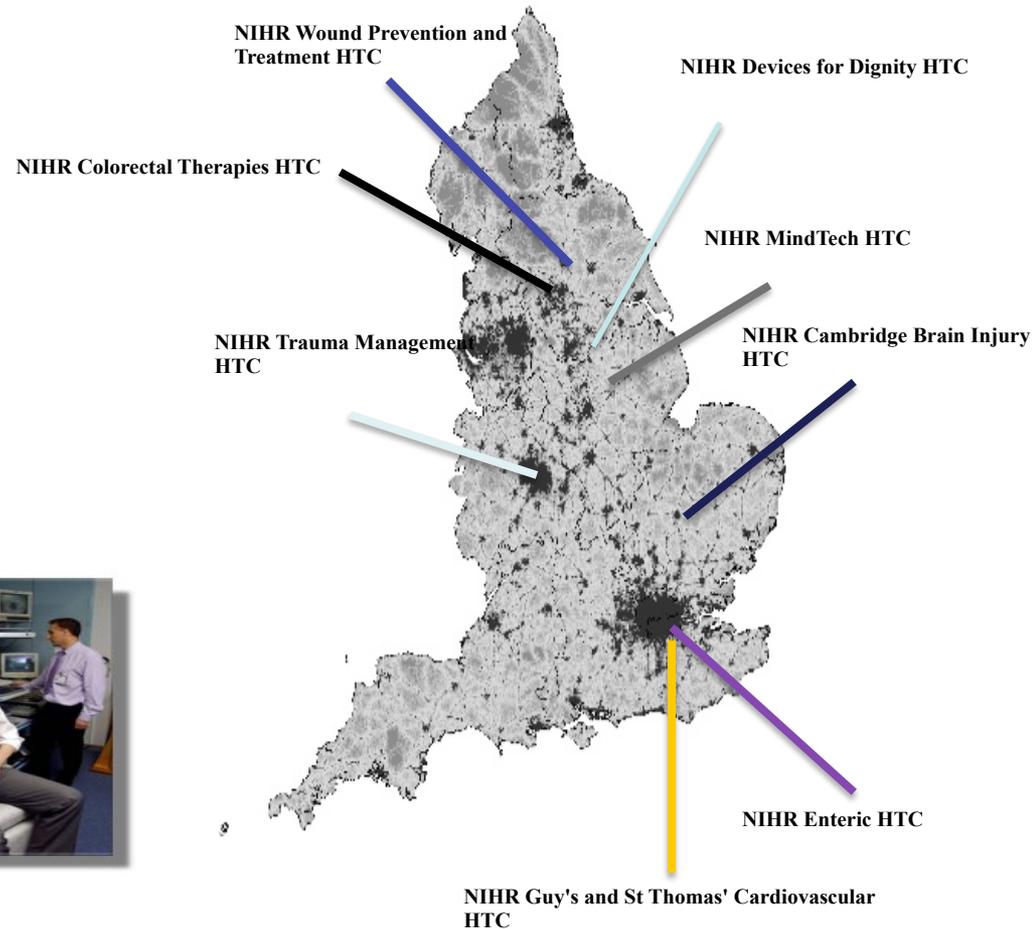
New NIHR Healthcare Technology Cooperatives:

•Building on the pilot scheme (2008), the NIHR launched an open competition in January 2012. The NIHR announced the designation and funding of eight new HTC's on 13 December 2012.

•The eight new HTC's launched on 1 January 2013 receive £6.4m of funding over 4 years.

HTC clinical areas & themes:

•Chronic gastrointestinal disease; Brain Injury; Cardiovascular disease; Devices for Dignity; Wound Prevention and Treatment; Colorectal Therapies; Mental Health and neurodevelopmental disorders; Trauma Management.

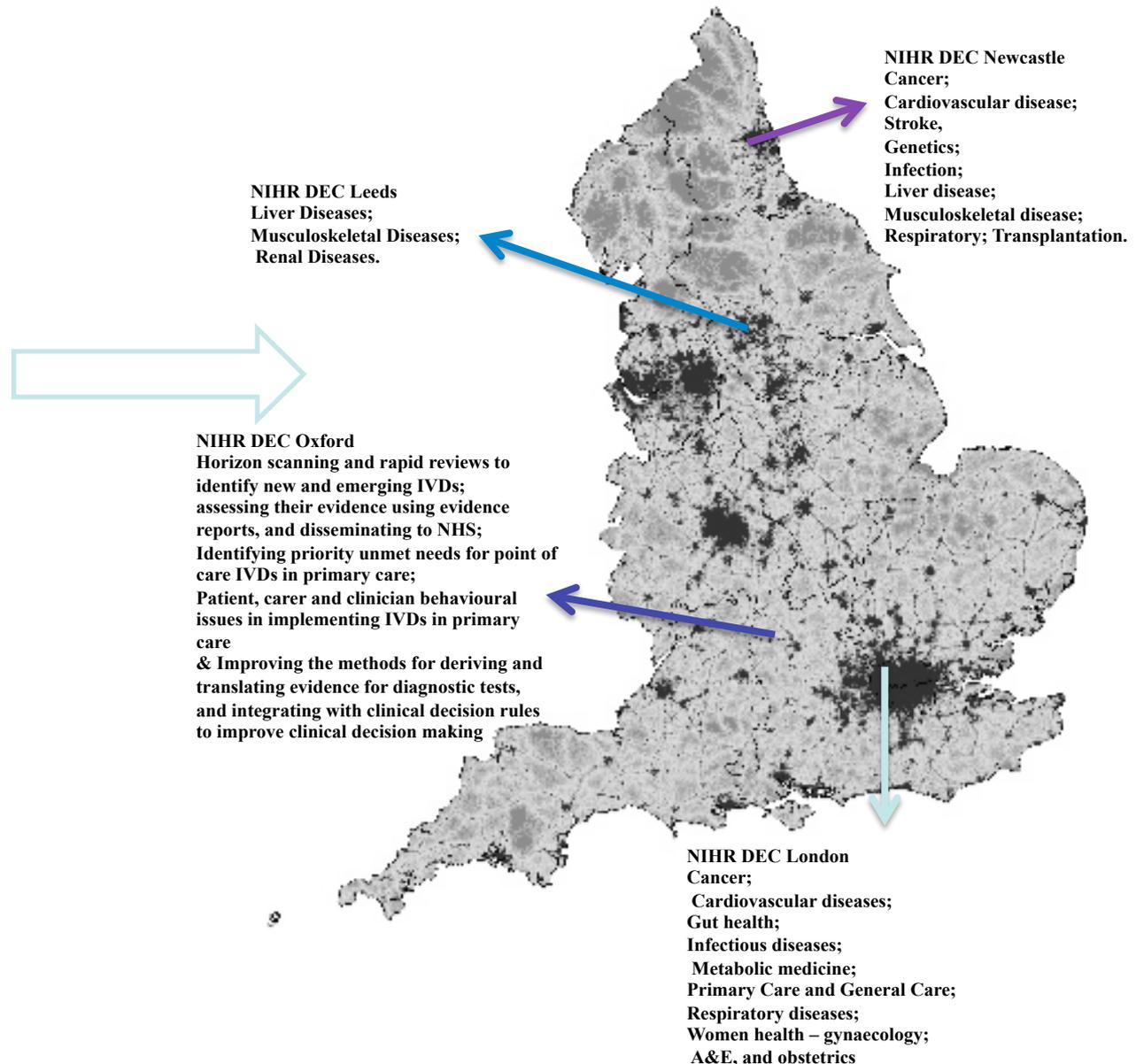


Diagnostic Evidence Cooperatives

Diagnostic Evidence Co-operatives focus on clinical areas or themes where evidence of the clinical validity, clinical utility, cost-effectiveness and care pathway benefits of in vitro diagnostic medical devices (IVDs) has the potential to lead to improvements in healthcare services and the quality of life of NHS patients.

The NIHR is providing over £4 million funding to 4 NHS Organisations for a four-year period starting 1 September 2013.

The Diagnostic Evidence Co-operatives bring together a wide range of experts and specialists from across the NHS and industry, including clinicians and other healthcare professionals, patients, NHS commissioners and researchers and investigate a number of different clinical areas.

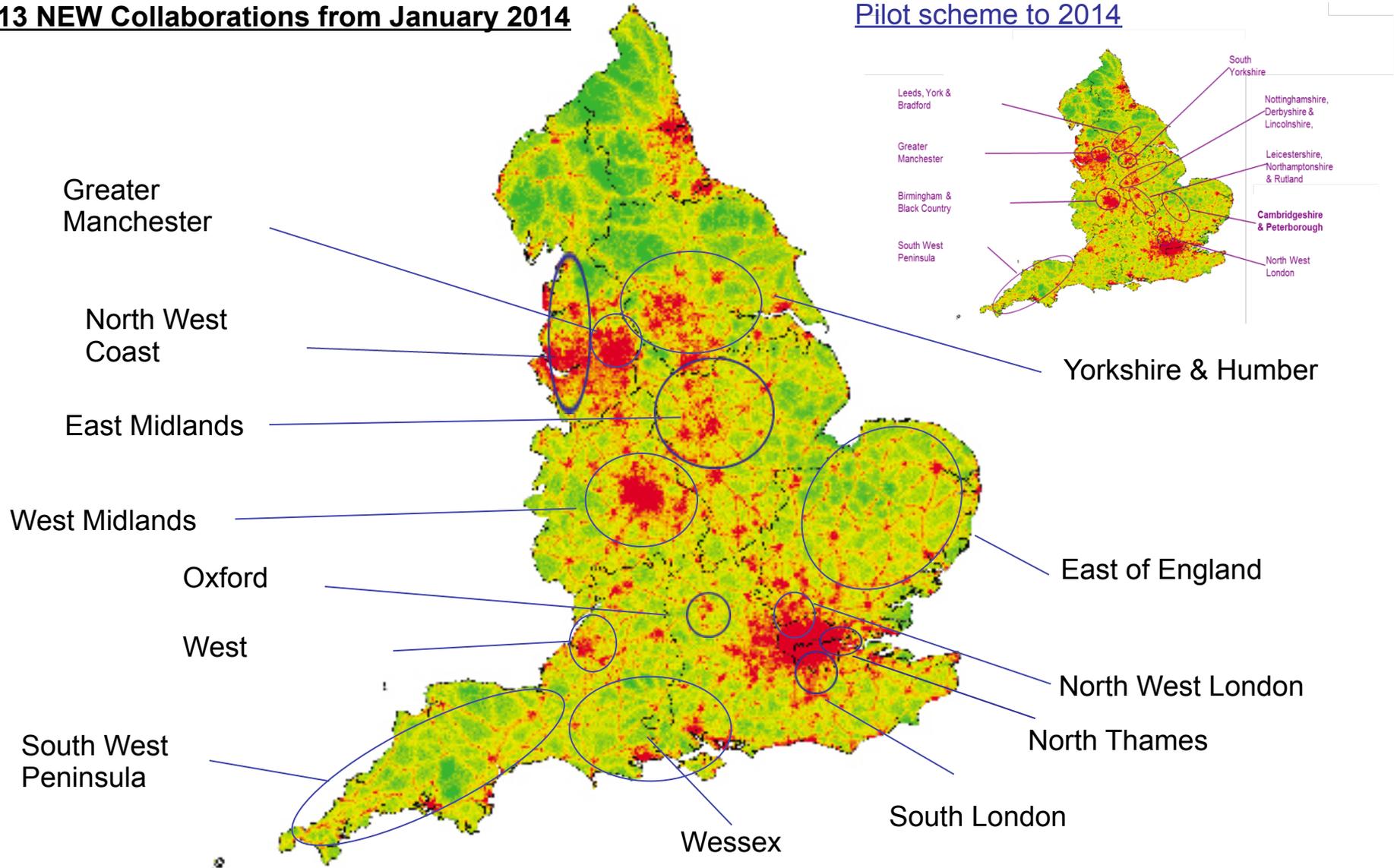


NIHR Collaborations for Leadership in Applied Health Research and Care (CLAHRCs)

National Institute for Health Research

13 NEW Collaborations from January 2014

Pilot scheme to 2014



NIHR CLAHRC performance

Overall CLAHRC Programme outputs 2008-2013



Subjects recruited

2,619,289



External income
generated

**£54
million**



Higher degrees

1079

* Dissemination and capacity building – international conferences, policy education and training, thematic conferences and local meetings and courses

NIHR Clinical Research Infrastructure



NOCRI supports industry through:

**Establishing
collaborations**



Introductions

**Managing
relationships**

Sign-posting

NIHR Office for Clinical Research Infrastructure (NOCRI)

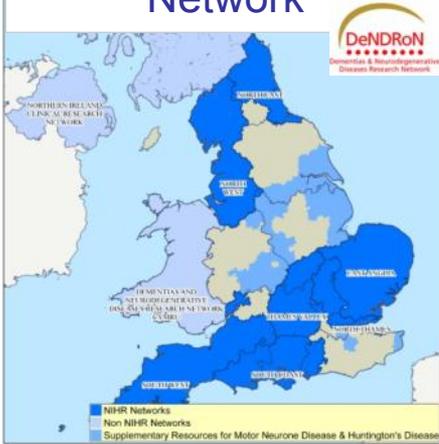
NOCRI@nihr.ac.uk
www.NIHR.ac.uk/NOCRI

NIHR Clinical Research Network



National Institute for
Health Research

NIHR Dementias & Neurodegenerative Diseases Research Network



NIHR Diabetes Research Network



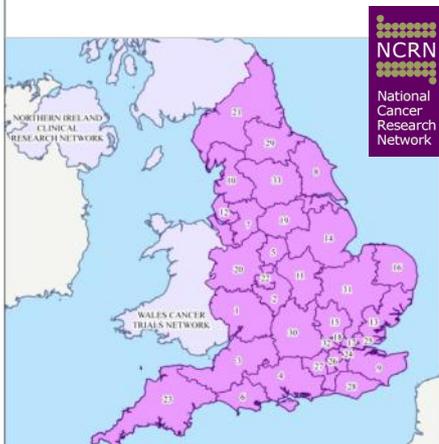
NIHR Medicines for Children Research Network



NIHR Mental Health Research Network



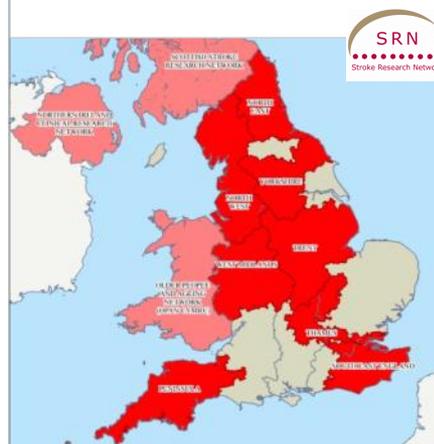
NIHR National Cancer Research Network



NIHR Primary Care Research Network



NIHR Stroke Research Network



NIHR Comprehensive Clinical Research Network

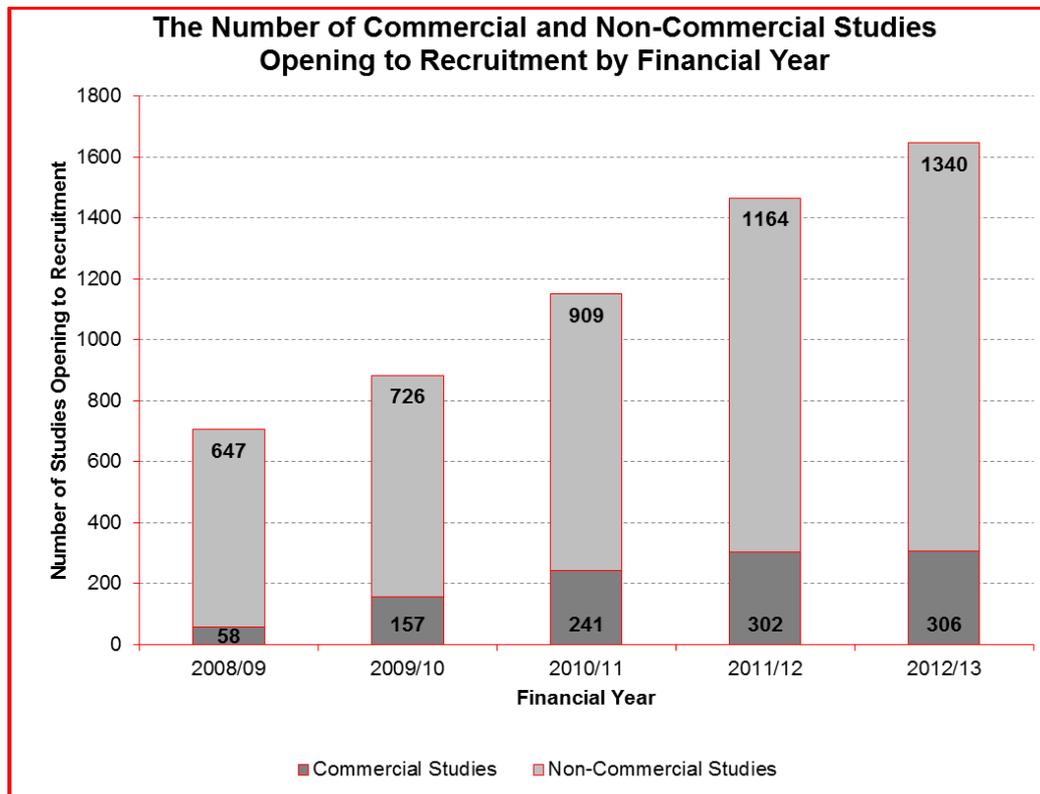


NIHR Clinical Research Network

Key achievements in 2012 / 13

- more than **630,000 participants** recruited to NIHR Clinical Research Network Portfolio studies
- **99% of NHS Trusts** participated in CRN Portfolio studies
- **63% of NHS Trusts** participated in CRN commercial Portfolio studies
- In the last nine months alone, 23 multi-centre commercial studies, supported by the NIHR Clinical Research Network, have achieved first global patient

NIHR Clinical Research Network performance



Recruitment in 2012/13

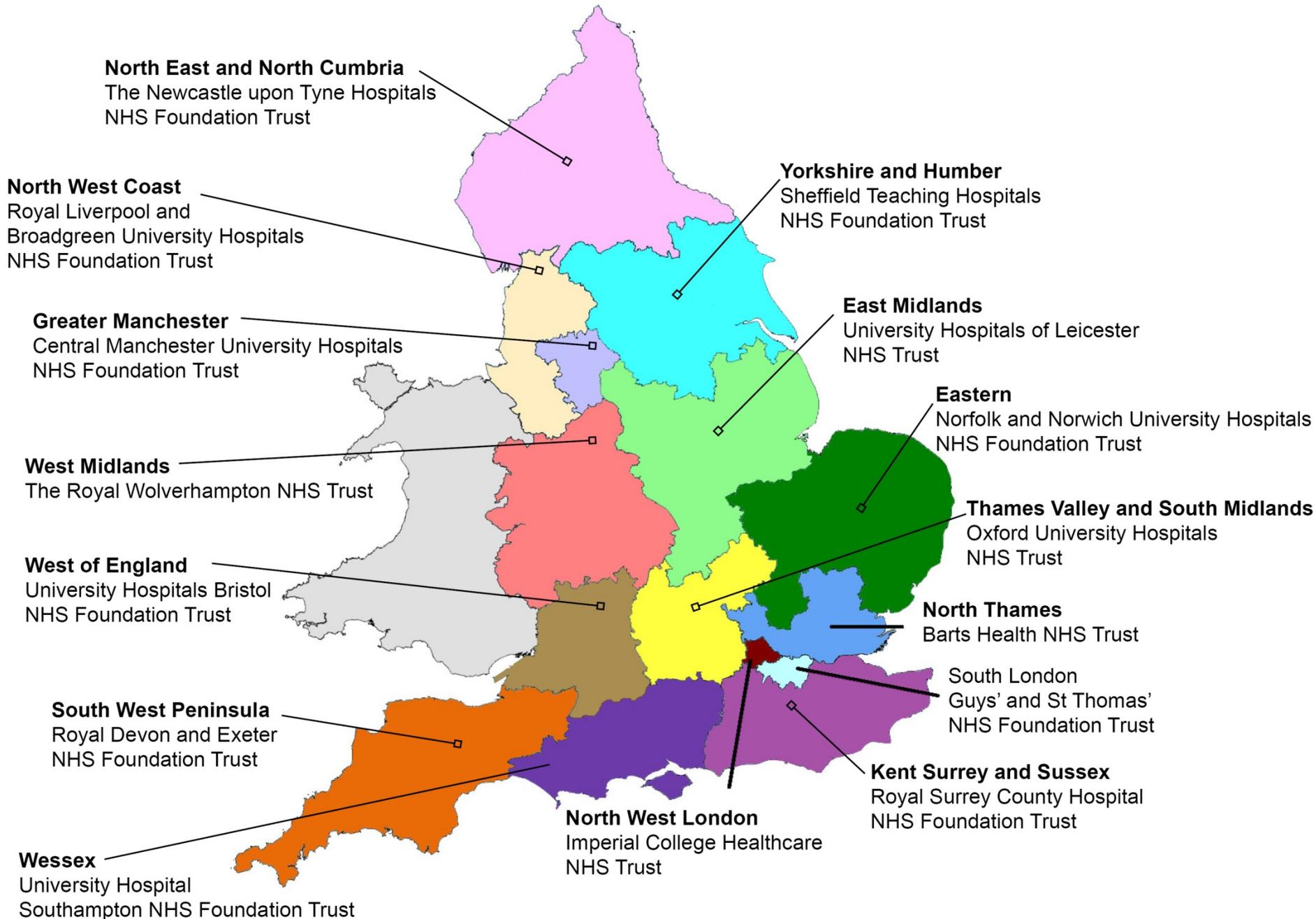
78,324 participants in total recruited into the NIHR-portfolio of cancer studies in England

49,347 cancer (& pre-malignant) patients
(**21.3%** of incident cases)

More than a **5 fold**
increase from 2001



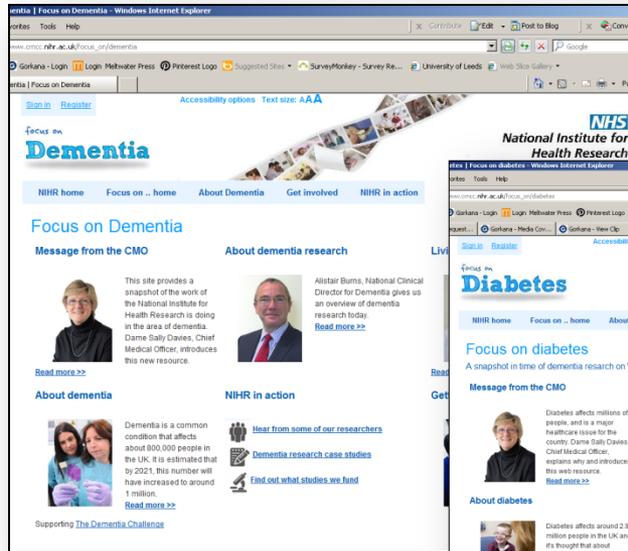
15 Local Clinical Research Networks



Patients and the public

97% of the public believe it's important the NHS supports research into new treatments

Source: Ipsos MORI poll (June 2012) commissioned by the Association of Medical Research Charities, Breast Cancer Campaign and the British Heart Foundation



INVOLVE



Why is the Government committed to Research in the NHS?

- improve **health outcomes** through advances in research
- improve **quality of care** by NHS participation in the research process
- strengthen International competitive position in **science**
- drive **economic growth** through investment by life science industries

Health and Wealth



Government Commitment to Health Research



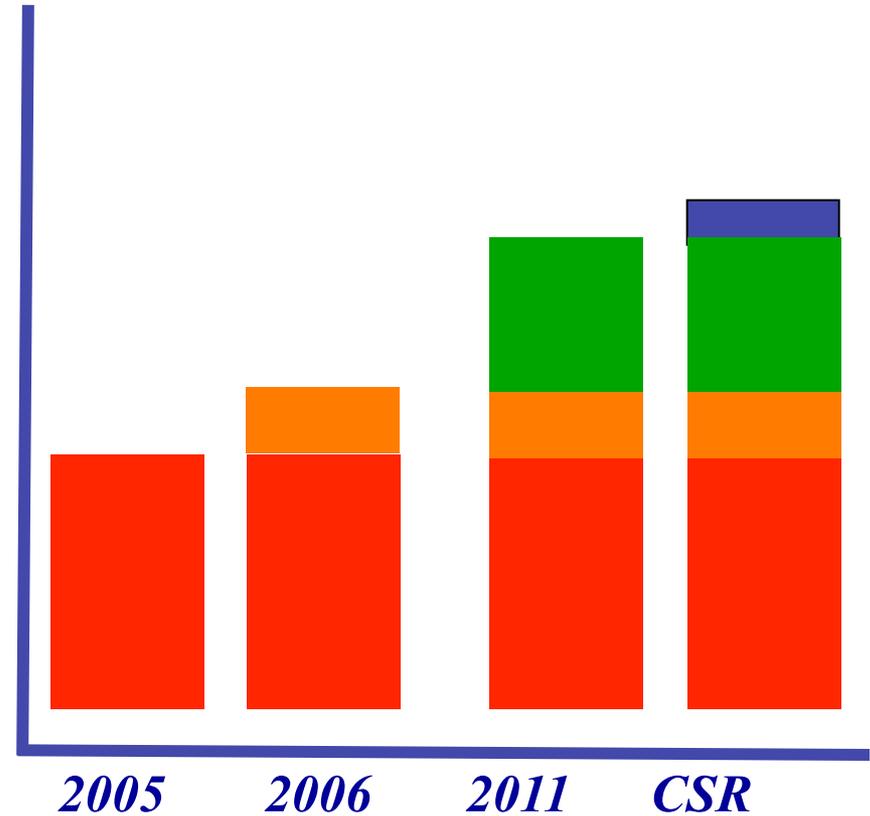
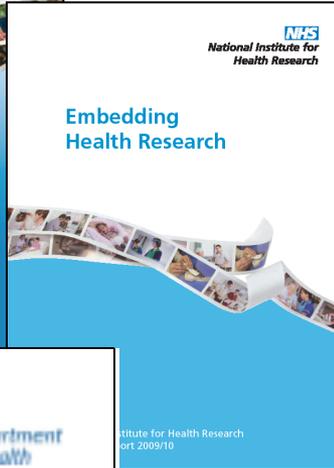
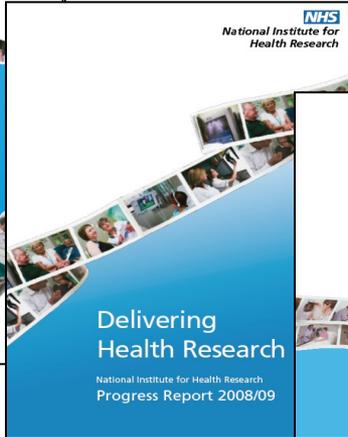
Spending Review 2012 Chancellor's statement

“Britain is a world leader in scientific research. And that is vital to our future economic success.

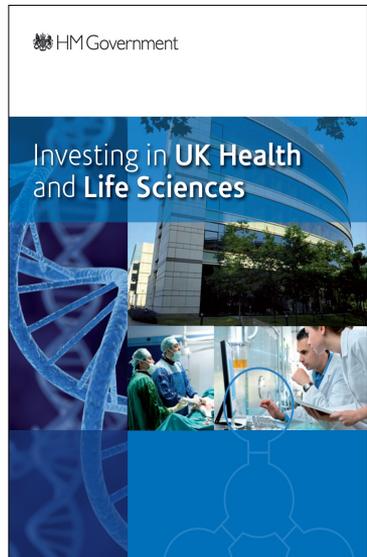
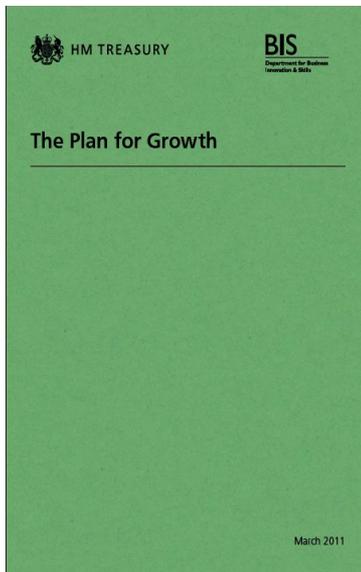
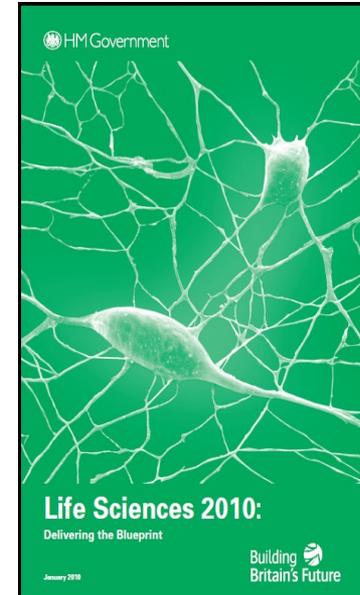
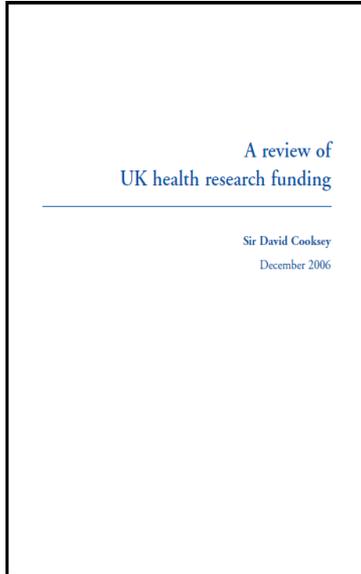
That is why I am proposing that we do not cut the cash going to the science budget.

Spending on health research will be protected.”

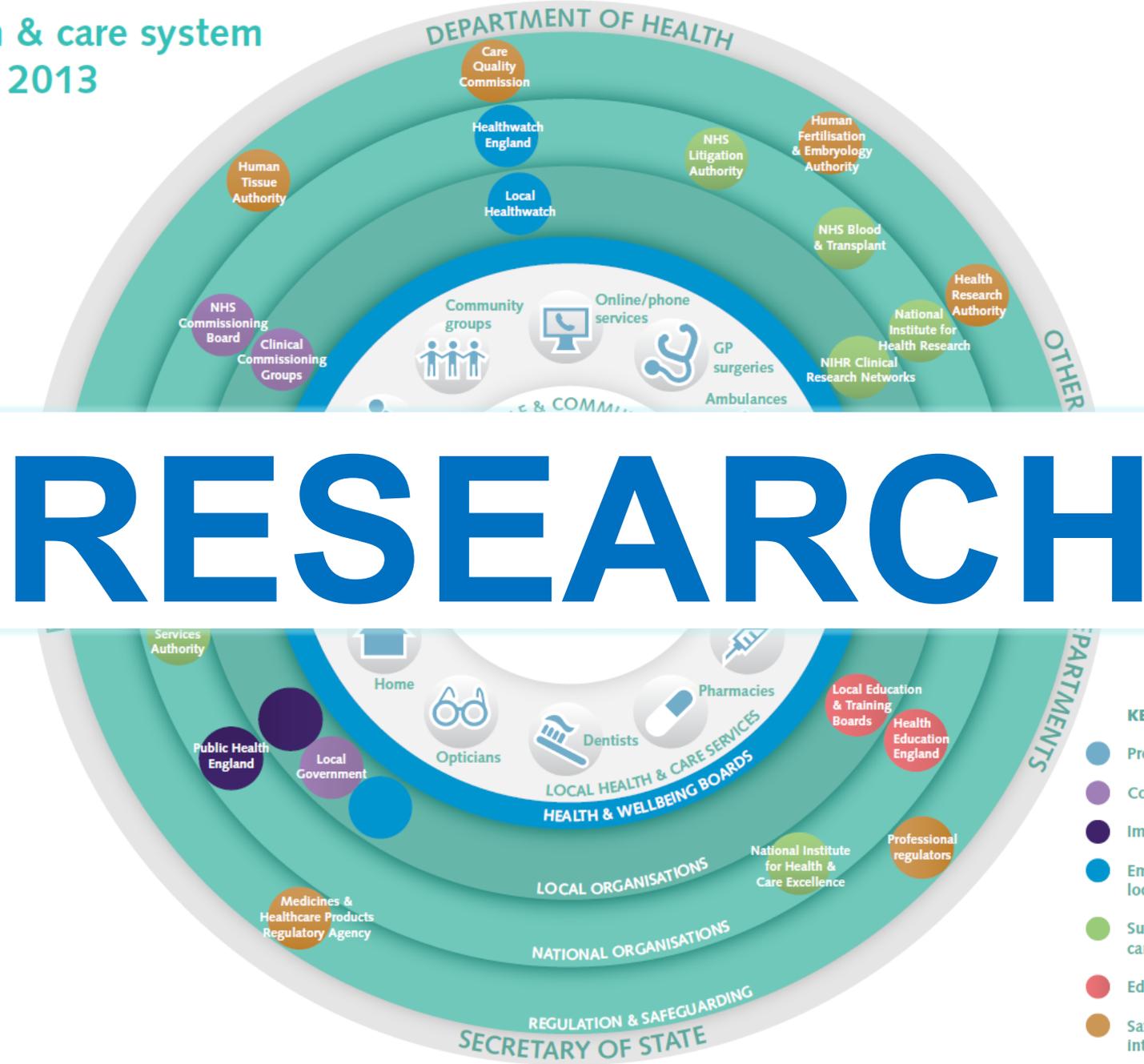
George Osborne
20 October 2010



Policy focus on growth



The health & care system from April 2013



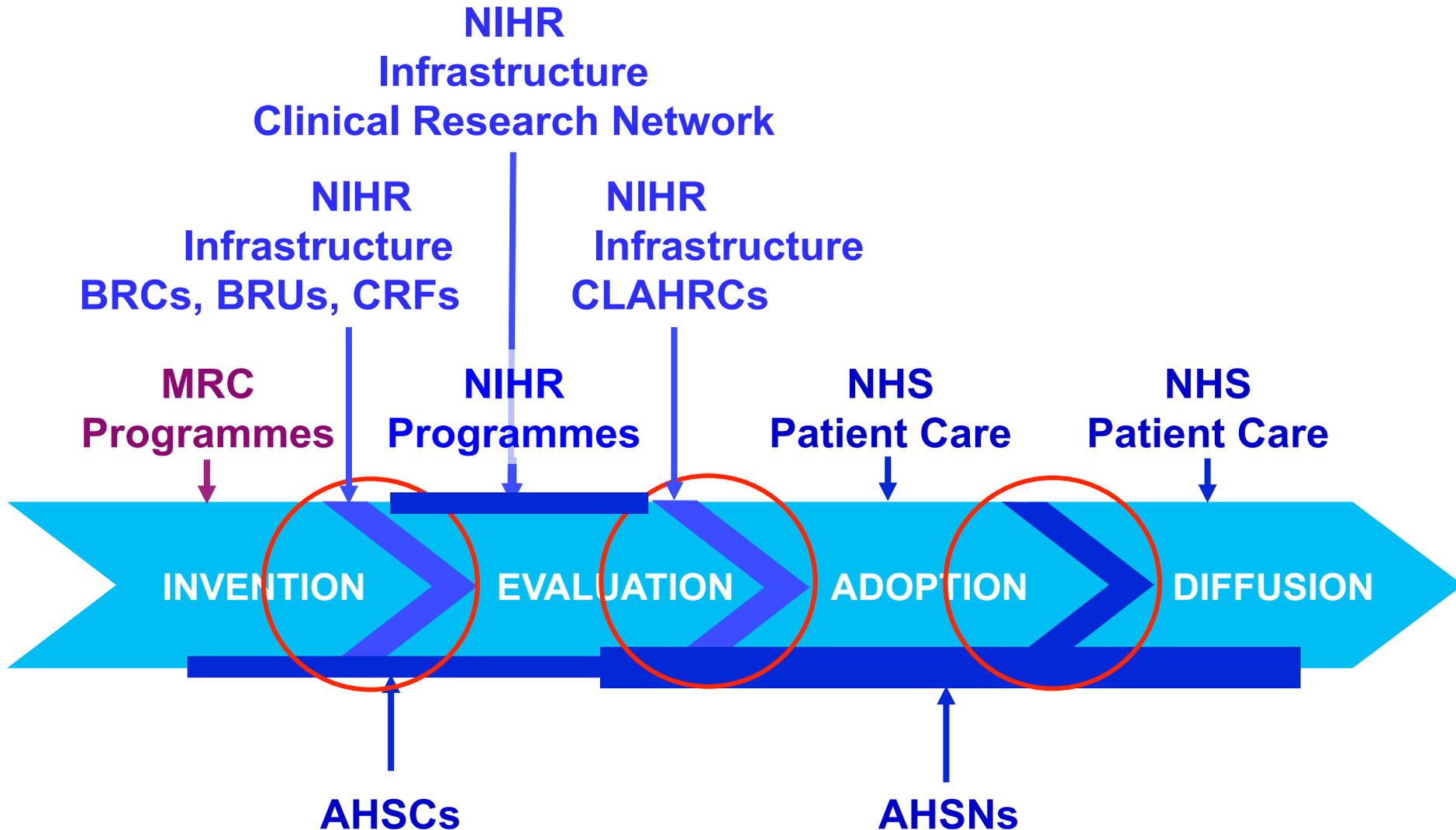
RESEARCH

- KEY**
- Providing care
 - Commissioning care
 - Improving public health
 - Empowering people and local communities
 - Supporting the health and care system
 - Education and training
 - Safeguarding patients' interests

Academic Health Science Networks



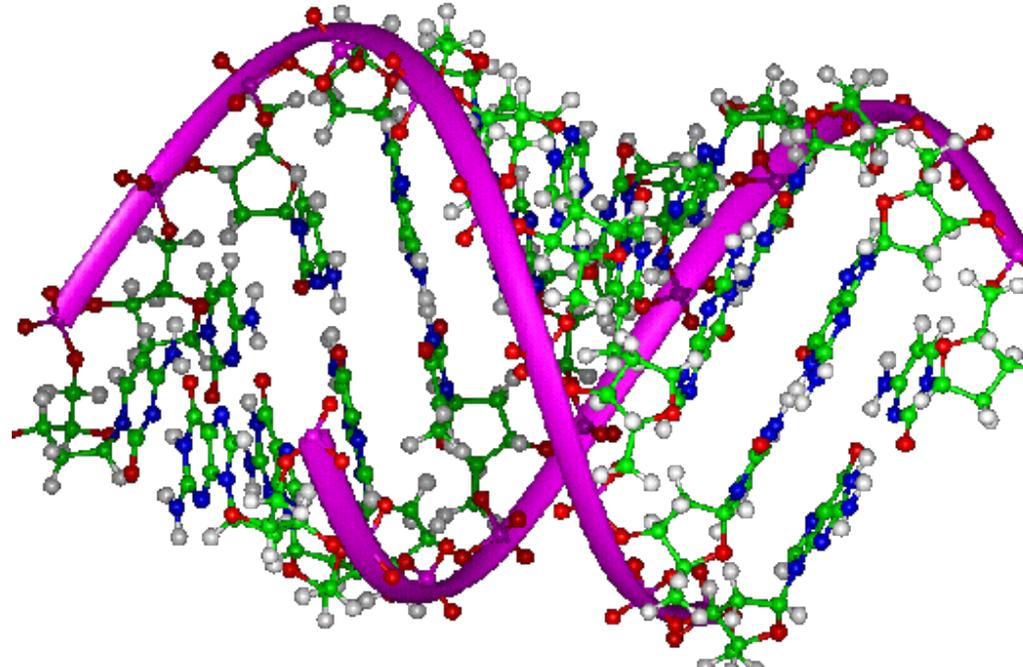
AHSNs, AHSCs and the research and innovation landscape





Genomic Technologies: 100,000 whole genomes

- Potential of Genomics, in the form of whole genome and exome sequencing, to transform healthcare
- Life Sciences One Year On announcement
- Unique position of the NHS as a single, national healthcare provider
- Genomics England established
- Wealth creating possibilities



Conclusion

1. A time of unprecedented opportunity

- Unprecedented opportunity for clinical and applied health research
- Political drive
- Clear national strategy
- Supportive national structures
- Alignment between major funders
- Increased funding
- Scientific advances across disciplines

Conclusion

2. A time of unprecedented expectation

- Unprecedented expectation on clinical and applied research
- Delivering health gain
- Delivering wealth gain
- Harnessing the research potential of NHS
- Faster translation of basic research into applied research
- Faster translation of applied research into patient benefit
- Transforming public health through better evidence

Conclusion

3. Successful delivery will be achieved through relentless focus on

- Partnership and collaboration
- Scientific opportunity
- Translation
- Health benefit
- Economic benefit
- Excellence
- Leadership



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