

**NOVEMBER 2022** 







# © ENTERPRISE IRELAND

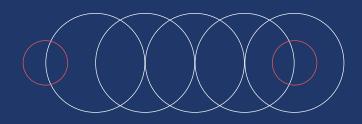
Enterprise Ireland is the innovation and development agency of the Irish Government.

Enterprise Ireland supports innovation activities across all industries, and we invest in the most innovative Irish companies through all stages of their growth. Enterprise Ireland supports Irish companies to grow and scale in the UK from our offices in London and Manchester with market advisors who are experts across a wide array of sectors.

Enterprise Ireland co-ordinates a cluster of client companies who are working closely with the UK's health and care sector, delivering innovative solutions to support and improve value and efficiency and improve outcomes for systems and patients. These companies are trusted partners to organisations across the UK's healthcare sector, including the NHS and are market leaders in cutting edge innovation, digitisation, quality, value and sustainability.

Our goal is to build successful, long-term relationships between the UK's healthcare system and Irish partners who very often have a UK office and local team. We support Irish companies to work with the UK health and lifescience sectors including the NHS, to support respective and shared objectives.

Enterprise Ireland is a trusted strategic partner for the NHS and the wider UK health sector and can help leverage cutting edge innovation to support digital transformation and improve the delivery of patient care. In addition to healthtech and medtech innovation, our client companies have demonstrated experience supporting NHS organisations, local authorities and other partners in many areas including infrastructure, transport, smart energy, waste & recycling, recruitment, education and skills, and more.



# Contents

1	Intr	oduction	7
	1.1	Innovate UK – Funding Support	3
	1.2	Medical Research Council (MRC) – Funding Support	ŧ
	1.3	National Institute for Health & Care Research (NIHR) – Funding Support	7
	1.4	National Institute for Health Research Artificial Intelligence – Funding Support	9
	1.5	Accelerated Access Collaborative (AAC) – Funding Support	1
	1.6	Academic Health Science Centres (AHSC) – Knowledge Support	13
	1.7	Biomedical Research Councils (BRCs) – Knowledge Support	16
	1.8	Academic Health Science Networks (AHSN) – Knowledge Support	20
	1.9	Applied Research Collaborations (ARCs) – Knowledge Support	24
	1.10	NHS Innovation Accelerator (NIA) – Business Support Services	27
	1.11	NHS Test Beds – Funding Support	29
	1.12	NHS Vanguard Sites – Knowledge Support	3
	1.13	National Institute for Health & Care Excellence (NICE) – Knowledge Support	34
	1.14	NHS Digital – Knowledge Support	37
	1.15	NHSX – Funding Support	39
	1.16	NHS Supply Chain – Procurement Support	4
	1.17	Health Technology Wales (HTW) – Knowledge Support	43
	1.18	Life Sciences Hub Wales (LSHubWales) – Business Support Services	45
	1 10	Scottish Health Technology Group (SHTG) - Knowledge Support	47



2	Acc	celerated Access Collaborative (AAC)	50
	2.1	Overview & Innovation Pipeline	50
	2.2	AAC Priorities	5 <sup>.</sup>
	2.3	AAC National Programmes	52
	2.4	Detailed overview: NHS Clinical Entrepreneur Programme	53
	2.5	Detailed overview: Rapid Uptake Products (RUP)	58
	2.6	Detailed overview: Pathway Transformation Fund (PTF)	57
	2.7	Detailed overview: Small Business Research Initiative for Healthcare (SBRI)	59
3	The	Academic Health Science Network (AHSN)	62
	3.1	Overview	62
	3.2	AHSN Policy Directions	63
	3.3	AHSN National Programmes	64
	3.4	AHSNs – Innovator Support Programme	65
	3.5	Accessing AHSNs – step-by-step guide	65
	3.6	AHSN – East Midlands	66
	3.7	AHSN - Eastern	67
	3.8	AHSN – Health Innovation Manchester	68
	3.9	AHSN – Health Innovation Network (South London)	69
	3.10	AHSN – Imperial College Health Partners	70
	3.11	AHSN – Kent, Surrey and Sussex	7
	3.12	AHSN – North East and North Cumbria	72

	3.13	AHSN – Innovation Agency North West C	Coast	73
	3.14	AHSN – Oxford		74
	3.15	AHSN – South West		75
	3.16	AHSN – UCLPartners		76
	3.17	AHSN – Wessex		77
	3.18	AHSN – West Midlands		78
	3.19	AHSN – West of England		79
	3.20	AHSN – Yorkshire and Humber		80
4	Cha	aritable Arms of Major Trusts		82
	4.1	Overview		82
	4.2	Chelsea and Westminster		83
	4.3	St Barts		84
	4.4	Great Ormand Street Hospital Charity		85
	4.5	Guy's and St Thomas' Foundation		86
	4.6	Leeds Hospitals Charity		87
	4.7	The Maudsley Charity		88
	4.8	The Royal Marsden Cancer Charity		89
	4.9	Royal Papworth Charity		90
5	Cor	nclusions		92





# 1 Introduction

This document is a simple comprehensive reference guide to the complex world of Government and Institutional support for health care innovation in the UK. It is not an analytical document but rather a descriptive one describing the role and support available from each institution and programme; it also provides extensive links to these organisations' websites which give further detail on how to apply for support, as well as case studies on companies they have supported. In each of the sections the relevance of the programme to innovators has been highlighted.

The document can be read in conjunction with a workshop, delivered in November 2022, which took a more analytical view on the issues confronting the NHS, the structural changes currently occurring in health care provision and the engagement and procurement challenge for innovators in winning adoption and diffusion in the UK's National Health Service. The documentation from this workshop is available.

The health care innovation support environment is dynamic, with Government prone to introducing new initiatives every eighteen months or so, whilst rarely curtailing existing schemes. Consequently, over time a wide range of institutions and programs evolve, as shown in the diagram below.

2011	Innovation, Health and Wealth: Accelerating Adoption and Diffusion in the NHS (report published by Department of Health in December 2011) Set out a delivery agenda for spreading innovation within the NHS	2016	Clinical Entrepreneur training programme launched Designed to offer opportunities for clinical, NHS staff and wider healthcare professionals to develop entrepreneurial aspirations Programme includes events, education, placements and mentoring	
2013	Small Business Research Initiative (SBRI) Delivered by Innovate UK Provides small and medium-sized enterprises a route to market, bridging the seed funding gap experienced by many early stage companies	2016	Innovation and Technology Payment (June 2017 – this built on the previous Innovation and Technology Tariff June 2016) Aims to support the NHS in adopting innovation by removing	
	NICE Technology Appraisals in the NHS in England and Innovation Scorecard Recommendations on the use of new and existing medicines		financial or procurement barriers to uptake of innovative products or technologies (particular response to FYFV)	
2013	and treatments Based on reviews of clinical and economic evidence Innovation Scorecard published quarterly since January 2013- used to monitor progress in implementing NICE technology appraisal recommendations	2016	Accelerated Access Collaborative Formed in response to the publication of the Accelerated Access Review Brings together industry, government and the NHS to remove barriers to uptake of innovations – enables NHS patients to	
2013-15	Nursing Technology Fund Two rounds of funding		have faster access to innovations	
2013	Academic Health Science Networks (AHSNs) established Established by NHS England to support scale and spread of innovation 15 AHSNs covering defined geographical areas	2016	NHS Testbeds Program Wave 1 (2016) and Wave 2 Brings together NHS organisations and industry partners together to test combinations of digital technologies with pathway redesign in real-world settings	
	Aim is to connect NHS and academic organisations, local authorities, the third sector and industry		NHS Long-Term Plan  Contains commitments on digitisation for organisations, the	
2014	NHS Five Year Forward View Included steps to accelerate innovation in new treatments, diagnostics and care pathways includinga focus on		workforce and patients Key commitment for all secondary care providers to be 'fully' digitised by 2024	
2014	'combinatorial innovation' Describes numerous ways of doing this including the Test Beds, healthy 'new towns' and a focus on expanding operational research within the NHS		NHSX established Brings together teams working on digital, data and technology across the Department of Health and Social Care	
2015	NHS Innovation Accelerator established NHS England initiative delivered in partnership with 15 AHSN Aim is to accelerate the uptake of high—impact innovations and provide real—time practical insights on scale and spread	2019	NHS England and NHS Improvement Purpose is to deliver The Future of Healthcare, building on the NHS Long-Term Plan and subsequently merged with NHS Digital in 2022	

As the chart illustrates, there have been over 14 programmes launched over the last decade. From a MedTech innovator's perspective the most important ones are marked in orange. There have been some attempts to make the system more navigable and to rationalise institutions.

The Accelerated Access Collaborative (ACC), formed in 2016, acts as a gateway to multiple initiatives and is the first point of reference for innovators as they assess the most relevant schemes. The other important role of the ACC is its work on demand signalling. These are published papers resulting from an extensive consultation process which indicate the type of innovations being sought by the NHS, how they fit within NHS long Term Plan (2019-2029) and the new institutional structures of the service which have been formally given legal status in July 2022. Both developments have been extensively discussed in the accompanying workshop.

There is support across the innovation cycle (innovation, evaluation, adoption, and diffusion). Historically the UK has been good at supporting primary science and the initial technical development of an innovation with strong funding, and often effective partnership between research institutions (universities and teaching hospitals) and commercial organisations. However, the support has tended to be weaker in the adoption and diffusion parts of the innovation cycle. This to some extent has been improved in the last five years with several institutions and programmes increasingly targeted to support adoption and diffusion. This is illustrated in the chart below.

Institution	Innovation	Evaluation	Adoption	Diffusion
Innovate uk				
Medical Research Council				
National Institute for Health Care				
National Institute for Health Care Al				
Accelerated Access Collaboration				
NHS Clinical Entry Programme				
Rapid Uptake Products				
Pathway Transformation Fund				
Small Business Research Initiative				
Academic Health Science Centres				
Academic Health Science Network				
Applied Research Collaboration				
NICE				
NHS Innovation Accelerator				
NHS Test Beds				
NHS Vanguard Sites				
NHS Digital and NHS X (NHS Transformation)				
NHS Supply Chain				
Life Science Hub Wales				
Scottish Health Technology Group				

Of the institutions listed, the most important for SME innovators are the Academic Health Science Networks and the Small Business Research Initiative.

The Academic Health Science Networks were established in 2013 and relicensed in 2018. They have increasingly found their role and are now established across England and can be a valuable source of advice and sponsorship.

Given that health is one of the responsibilities of the devolved authorities, the health delivery and innovation support structures are different in Northern Ireland, Scotland and Wales (as well as Jersey, Guernsey and the Isle of Man). These are detailed in the document.

The final part of the document looks at support provided by the Charitable Arms of the major teaching hospitals. Many of these bodies support innovation projects. Whilst often restricted to members of their Trust, this is not true in all cases and there are opportunities for partnering with members of the Trust. Although not a major source of funding, it is one which is worth being aware of and can be particularly useful when trying to build real world adoption data.



# 1.1 Innovate UK – Funding Support

## 1.1.1 Overview & Key Objectives:

- Established to pursue Government's vision of turning the UK into a global innovation hub by 2035
- Five strategic themes:
  - Future economy: pursue opportunities that are environmentally friendly and sustainable
  - Growth at scale: support businesses looking to grow quickly on a global scale
  - Global opportunities: develop collaborative opportunities overseas to attract investment
  - Innovation ecosystem: build an innovation network of public agencies, businesses, academia, etc.
     to encourage collaboration and diffusion and implementation of ideas
  - Government levers help government to develop legislation to drive innovation

#### 1.1.2 Entrepreneur Relevance:

- Funding is open to all UK registered organisations, delivering outcomes in the UK; and so a good place to look for funding opportunities
- Offers funding to small, medium, and large organisations making it useful for start-ups, as well as more established companies
- London and South-East is where most funding is received, but funding is available across the whole of the UK

#### 1.1.3 Budget:

- Funding pots range from £500,000 to £30m depending on programme
- Funding per project can range from £50,000 to £2M
- Examples:
  - Fast Start Innovation: funding per project up to £50,000
  - Innovate UK Smart Grant: funding per project £100,000 to £2M

#### 1.1.4 Key Programmes:

- Innovate UK Smart Grant: UK registered organisations can apply for a share of up to £25M for gamechanging and commercially viable research and development (R&D) innovation
- Fast Start Innovation: UK registered small and micro businesses can apply for a share of up to £30M for affordable, adoptable, and investable innovations in net zero and healthcare
- Establish a total-body PET facility: Submit an expression of interest for funding to establish a total-body positron emission tomography (PET) facility as part of a new national Total-Body PET programme
- Knowledge transfer partnerships (KTP): 2022 to 2023, round three: UK registered academic institutions, RTOs or catapults can apply for share of up to £9M to fund innovation projects with businesses or not for profits

#### 1.1.5 Access Details:

- Areas Funded: Funding programmes available for a range of business sector areas; general healthcare innovation being just one
- **Eligibility:** Majority of funding opportunities are open to all UK registered organisations delivering project outcomes in the UK
- **Funding Type:** Funding available via grant funding competitions, loans or fellowships to organisations (depending on funding programme)
- **Key Partners:** Many partners across innovation environment, including UKRI, MRC, Biotechnology & Biological Sciences Research Council (BBSRC), Science & Technology Facilities Council (STFC)
- Contact Details: Funding opportunities can be viewed here: <a href="https://www.ukri.org/opportunity/">https://www.ukri.org/opportunity/</a> (selecting Innovate UK on filter)

#### 1.1.6 Impact to Date:

- Provided funding opportunities since 2004 to over 17,000 organisations
- Just under £2BN awarded since 2004 to ageing society, health & nutrition sector (out of a total of approx. £10BN)
- £885M funding awarded in 2020/21
- 14% award rate to applicants, with a large number of grants going to small and micro-enterprises

## 1.1.7 Future Policy Direction:

- Future strategy in place for 2021-2025 to ensure continued investment in UK innovation
- Approx. 50% of total funding goes to the manufacturing industry, however, healthcare is becoming a larger area of focus, especially after Covid 19
- Largest funding grant in 2019 was £160M to a vaccine manufacturing and innovation centre

#### 1.1.8 Selected Case Studies:

- Hand-held lab helps cancer care patients test blood at home¹
- Stem cell innovation propels Edinburgh firm into global markets<sup>2</sup>
- Engineering Dis-Bondable Adhesives Inspired from Marine Mussel Foot Proteins for Applications as in Advanced Wound and Ostomy Care<sup>3</sup>
- Medwise.ai search engine designed specifically for medical staff to help them find answers to clinical questions<sup>4</sup>

#### Footnotes:

- 1. <a href="https://www.ukri.org/about-us/how-we-are-doing/research-outcomes-and-impact/innovate-uk/hand-held-lab-helps-cancer-care-patients-test-blood-at-home/">https://www.ukri.org/about-us/how-we-are-doing/research-outcomes-and-impact/innovate-uk/hand-held-lab-helps-cancer-care-patients-test-blood-at-home/</a>
- 2. <a href="https://www.ukri.org/about-us/how-we-are-doing/research-outcomes-and-impact/innovate-uk/stem-cell-innovation-propels-edin-burgh-firm-into-global-markets/">https://www.ukri.org/about-us/how-we-are-doing/research-outcomes-and-impact/innovate-uk/stem-cell-innovation-propels-edin-burgh-firm-into-global-markets/</a>
- https://webarchive.nationalarchives.gov.uk/ukgwa/20210901194010mp\_/https://assets.publishing.service.gov.uk/government/uploads/ system/uploads/attachment\_data/file/878586/Competition\_Results\_-\_UKI2S\_Accelerator\_Programme\_for\_Technology\_Development\_ Projects\_-\_Round\_10.pdf
- 4. <a href="https://www.med-technews.com/news/Medtech-start-up-news/start-up-receives-innovate-uk-backing-for-search-platform/">https://www.med-technews.com/news/Medtech-start-up-news/start-up-receives-innovate-uk-backing-for-search-platform/</a>
  Organisation website: <a href="https://www.ukri.org/councils/innovate-uk/">https://www.ukri.org/councils/innovate-uk/</a>



# 1.2 Medical Research Council (MRC) – Funding Support

## 1.2.1 Overview & Key Objectives:

- Funds research at the forefront of science to prevent illness, develop therapies and improve human health
- Four objective themes:
  - 1. Discovery science: investing in best research to push the frontiers of knowledge
  - 2. Investing in people: supporting researchers and strengthening diversity and mobility
  - 3. New technologies and infrastructure: ensuring access to cutting edge technologies, data and computing infrastructure
  - 4. Fostering collaboration: refreshing models of support for MRC centres to support new research challenges and create platforms for sharing expertise and equipment

#### 1.2.2 Entrepreneur Relevance:

- Funding is directed towards UK research organisations and researchers, meaning healthcare businesses would need to explore partnerships to access funding
- Useful avenue for exploring opportunities to launch pilot schemes in partnership with research organisations

#### 1.2.4 Budget:

- Total grant funding pots can range from £100,000 to £30M
- Funding per project depends on programme but typically ranges from £50,000 upwards
- Examples:
  - Developmental pathway funding scheme; no limit on funding
  - Public Health Intervention Development (PHIND); up to £150,000

#### 1.2.5 Key Programmes:

- **Developmental pathway funding scheme:** £30M total grant funding to develop and evaluate novel therapeutics, medical devices, diagnostics and other interventions
- Transformative healthcare technologies (phase two): £20M grant funding to deliver risky and ambitious ideas underpinned by science, engineering and emerging technologies in the healthcare space
- Public Health Intervention Development (PHIND): Grant funding total of £1M for the early-stage development of an intervention that seeks to address a UK or global public health challenge
- Clinical academic research partnerships: £5M total grant funding to develop research interests through a collaborative partnership
- Infections and immunity research: Funding to support research projects focused on infections and immunity
- Experimental medicine: £10M total funding grant to investigate the causes, progression and treatment of human disease

#### 1.2.6 Access Details:

- Areas Funded: All areas of medical research and innovation. Key themes being precision medicine, prevention/early detection medicine, mental health, antimicrobial resistance, multi-morbidities
- **Eligibility:** Researchers, industry, universities, NHS bodies, charities, non-governmental organisations (NGOs) and other institutions
- Funding Type: Grant and fellowship funding
- Key Partners: Work with UK Research and Innovation (UKRI) and the National Institute for Health Research (NIHR) and devolved administrations, the NHS, charities, and industry
- Contact Details: Funding opportunities can be viewed here: <a href="https://www.ukri.org/opportunity/">https://www.ukri.org/opportunity/</a> (selecting MRC on filter)

#### 1.2.6 Impact to Date:

- MRC set up in 1913 with long tradition of supporting healthcare innovation in UK
- £289M in funding awarded for 2020/21
- 17 percent award rate to those applying for funding

## 1.2.7 Future Policy Direction:

- Desire to create conditions for increased private sector investment in R&D
- Focus on joining up academic, business, policy and investor communities to support business growth in UK
- Looking to gain advantage in game changing tech such as AI, quantum computing and engineering biology

#### 1.2.8 Selected Case Studies:

- Sponge-based cancer test rolled out in Scottish hospitals¹
- Transforming diagnostics and virus tracking with nanopore sequencing<sup>2</sup>
- Research into autism, focusing on early life stages and on the potential for early intervention<sup>3</sup>
- Integrated human disease research projects<sup>4</sup>

#### Footnotes:

- https://www.ukri.org/about-us/how-we-are-doing/research-outcomes-and-impact/mrc/sponge-based-cancer-test-rolled-out-in-scottish-hospitals/
- 2. <a href="https://www.ukri.org/about-us/how-we-are-doing/research-outcomes-and-impact/mrc/transforming-diagnostics-and-virus-track-ing-with-nanopore-sequencing/">https://www.ukri.org/about-us/how-we-are-doing/research-outcomes-and-impact/mrc/transforming-diagnostics-and-virus-track-ing-with-nanopore-sequencing/</a>
- 3. https://www.ukri.org/what-we-offer/browse-our-areas-of-investment-and-support/autism-research/
- 4. https://www.ukri.org/news/integrated-human-disease-research-projects-awarded-7-million/

Organisation website: https://www.ukri.org/councils/mrc/



## 1.3.1 Overview & Key Objectives:

- UK government agency which funds research into health and social care focusing on all aspects of the research process, from translating laboratory findings to clinical research, to applying discoveries in health and social care
- Work focused on six core workstreams:
  - 1. Funding high quality, timely research
  - 2. Investing in world-class expertise, facilities, and a skilled workforce
  - 3. Partnering with patients, service users, carers, and communities
  - 4. Attracting, training, and supporting the best researchers
  - 5. Collaborating with other public funders, charities, and industry
  - 6. Funding applied global health research and training

#### 1.3.2 Entrepreneur Relevance:

- i4i programme largely targeted at SMEs and supporting early-stage projects (although is open to larger companies)
- Looks favourably upon applications for funding made by partnerships between life science organisations and education/NHS organisations

#### **1.3.3 Budget:**

- Funding can range from £100,000 to an unlimited amount, depending on the programme and potential health benefits of the project
- Applicants must justify all project costs to secure higher funding levels
- Examples:
  - i4i: No funding limit (£17.1M total spent 20/21)
  - EME: No funding limit

#### 1.3.4 Key Programmes:

- Innovation for Innovation (i4i): Translational funding scheme that supports development of innovative
  medical technologies from demonstrated proof-of-principle to clinical evaluation. Aims to de-risk
  early-stage projects that have a strong potential for commercialisation and acceptance for use in
  the NHS
- Efficacy and Mechanism Evaluation (EME): Funds studies that test the clinical efficacy of novel or repurposed interventions, where proof of concept in humans has already been achieved
- Health & Social Care Delivery Research (HSDR): Funds research to produce evidence on quality, accessibility and organisation of health services. Includes evaluations of how the NHS might improve delivery of services
- Health Technology Assessment (HTA): Funds research about the clinical and cost effectiveness and broader impact of healthcare treatments and tests for those who plan, provide or receive care in the NHS
- Public Health Research (PHR): Funds research on the benefit, cost and wider impact of non-NHS
  interventions intended to improve health of the public and reduce inequalities in health

#### 1.3.5 Access Details:

- Areas Funded: Research programmes span research innovation pathway, from innovation and product development to evaluative research including-scale, pragmatic clinical trials. Range of topics across entire healthcare spectrum, e.g., ageing, diabetes, anti-microbial resistance
- **Eligibility:** NHS organisations and Life Science companies in partnership with NHS & academic partners. Industry encouraged to apply with research partners. All organisations must be UK based
- Funding Type: Grant funding
- Key Partners: Industry, Charity, Local Authorities, MRC, NHS England
- Contact Details: Funding opportunities can be found here: <a href="https://www.nihr.ac.uk/researchers/">https://www.nihr.ac.uk/researchers/</a> funding-opportunities/

#### 1.3.6 Impact to Date:

- Established in 2006 under the Government's Best Research for Best Health Strategy and is funded by the Department of Health and Social Care
- Budget was over £1.2BN 2020/21 and was largest national clinical research funder in Europe
- £286M spent on research programmes (2020/21)

## 1.3.7 Future Policy Direction:

- Looking to build capacity and capability in preventative, public health, and social care research
- Invest in research to improve the lives of people with multiple long-term conditions through research
- Expand work with life sciences industry to improve health and economic prosperity

#### 1.3.8 Selected Case Studies:

- Pre-clinical development of a wound infection sensor¹
- Non-invasive Diagnosis and Monitoring of Gestational Diabetes<sup>2</sup>
- Developing the world's first patient-attached blood gas, electrolyte, and metabolite monitoring system<sup>3</sup>
- Development of a device for easier, cleaner, and more reliable urine sample collection<sup>4</sup>

#### Footnotes:

- 1. <a href="https://fundingawards.nihr.ac.uk/award/NIHR203841">https://fundingawards.nihr.ac.uk/award/NIHR203841</a>
- 2. https://fundingawards.nihr.ac.uk/award/NIHR202531
- 3. <a href="https://www.nihr.ac.uk/documents/case-studies/study-support-service-developing-the-worlds-first-patient-attached-blood-gas-electro-lyte-and-metabolite-monitoring-system/12128">https://www.nihr.ac.uk/documents/case-studies/study-support-service-developing-the-worlds-first-patient-attached-blood-gas-electro-lyte-and-metabolite-monitoring-system/12128</a>
- 4. <a href="https://www.nihr.ac.uk/documents/case-studies/development-of-a-device-for-easier-cleaner-and-more-reliable-urine-sample-collection/22563">https://www.nihr.ac.uk/documents/case-studies/development-of-a-device-for-easier-cleaner-and-more-reliable-urine-sample-collection/22563</a>

Organisation website: https://www.nihr.ac.uk/

# 1.4 National Institute for Health Research Artificial Intelligence – Funding Support

#### 1.4.1 Overview & Key Objectives:

- NHS AI Lab launched in 2019 using a £250M fund from the Department of Health and Social Care
  to develop AI tech which meets the strategic aims of supporting data-driven decision making and
  optimising interactions between existing systems
- Focus on 4 NHS priority areas: 1. screening, 2. diagnosis, 3. decision support and 4. improving system
  efficiency
- Support is available across four phases of development (similar to the phases of drug development)
  and provides assistance in navigating issues in the developmental process, especially the process for
  patient data access

#### 1.4.2 Entrepreneur Relevance:

- Specific to SMEs (and larger enterprises in some later funding phases) using AI and data science within a clinical environment
- Funding options available across development pipeline, from initial development and prototyping to evidence gathering for large scale commissioning or deployment

#### 1.4.3 Budget:

- Unlimited amount for AI Health and Care Award fund (all costs must be justified per project)
- £2.5-£5M approx. awarded for AI multimorbidity projects
- £175,000-£500,000 awarded for Al and Racial and Ethnic Inequalities in Health and Care projects

#### 1.4.4 Key Programmes:

- The AI in Health and Care Award: £140M funding to support AI tech across the spectrum of development, from initial feasibility to evaluation within clinical pathways in the NHS and social care settings, to the point that they could be nationally commissioned
- Artificial Intelligence for Multiple Long-Term Conditions (Multimorbidity): £23M funding supports
  research to systematically identify new clusters of disease and development of conditions over the
  life course
- Al and Racial and Ethnic Inequalities in Health and Care: £1.55M funding focused on enabling Al and data-driven technologies to deliver better health outcomes for minority ethnic communities
- Clinical Research Networks (CRNs): Supports patients, public and health and care organisations
  across England to participate in high-quality research, thereby advancing knowledge and improving
  care. Comprised of 15 Local CRNs and 30 Specialties who coordinate and support delivery of highquality research both by geography and therapy area. National leadership and coordination provided
  by CRN Coordinating Centre

#### 1.4.5 Access Details:

- Areas Funded: Al and advanced data science in clinical contexts
- Eligibility: SMEs, NHS or social care organisation or service providers, higher education institutions, charities or local authorities can apply for funding. Some of the funding phases are open to larger enterprises
- Funding Type: Grant awards
- Key Partners: Funded by NHS England & NHS Improvement, work closely with Accelerated Access Collaborative
- **Contact Details:** Competition can be found here: <a href="https://www.nihr.ac.uk/explore-nihr/funding-programmes/ai-award.htm#four">https://www.nihr.ac.uk/explore-nihr/funding-programmes/ai-award.htm#four</a>

#### 1.4.6 Impact to Date:

- Launched in 2019 using £250M fund
- 27 projects funded by AI in Health and Care Award in 2020
- 3 Al for Multiple Long-Term Conditions projects have been funded in 2021

#### 1.4.7 Future Policy Direction:

- Interested in development of solutions which will improve the quality of life and health outcomes for people with multi-morbidities
- Exploration of new approaches and future industry collaborations to diagnose disease early, progress drug development and address the burden of polypharmacy
- Implementation of measures to reduce progression to a greater number of conditions

#### 1.4.8 Selected Case Studies:

- Personalised Preoperative (Neoadjuvant) Chemotherapy (NACT) to optimize curative treatment in breast cancer
- Prognosis of epilepsy using at-home EEG monitoring Neuronostics Limited
- Development of AI techniques to predict eye cancer using big longitudinal data University of Liverpool
- Deep learning for effective triaging of skin disease in the NHS University of Dundee

#### Footnotes:

Further details on case studies: <a href="https://www.nihr.ac.uk/documents/ai-in-health-and-care-awards-funded-projects-2020/25625">https://www.nihr.ac.uk/documents/ai-in-health-and-care-awards-funded-projects-2020/25625</a>
Organisation website: <a href="https://www.nihr.ac.uk/explore-nihr/funding-programmes/ai-award.htm">https://www.nihr.ac.uk/explore-nihr/funding-programmes/ai-award.htm</a>



## 1.5.1 Overview & Key Objectives:

- Umbrella organisation for UK health innovation, acting as the front door for innovative support and setting the strategy for the entire health innovation ecosystem
- Oversees a range of innovation funding programmes (many detailed on separate slides)
- Six priorities identified to support innovation: 1. Innovation Service (easier access), 2. Demand Signalling, 3. Horizon Scanning, 4. World-Leading Testing Infrastructure, 5. Adoption & Spread, 6. Funding Strategy

#### 1.5.2 Entrepreneur Relevance:

- Range of funding opportunities available to industry
- Particularly relevant programmes are Rapid Uptake Products Programme, NIA and SBRI, which look to support SMEs with innovating and bringing new products to the NHS

#### **1.5.3 Budget:**

- Oversees a range of innovation funding programmes, many of which are detailed on other slides, e.g.,
   NHS Innovation Accelerator (NIA)
- Pathway transformation fund: Max. £250,000 per project
- SBRI: £100,000 to £1M funding per project
- ITP: National funding no longer available but AAC encouraging NHS trusts to sustain innovations through local funding agreements

#### 1.5.4 Key Programmes:

- Operate a range of programmes to support innovation across the entire product pipeline. Key examples are:
  - NHS Innovation Accelerator (NIA): Supports innovators to accelerate the uptake of high-impact innovations for patient, population, and NHS staff benefit
  - Pathway Transformation Fund: Funding to help NHS organisations integrate the rapid uptake products into everyday practice
  - Small Business Research Initiative for Healthcare (SBRI): Programme running competitions on innovations identified as an unmet need by the NHS
  - Rapid Uptake Products Programme: Tailored support for selected innovations which have been given NICE approval
  - The Innovation and Technology Payment Programme (ITP): Removing some of the financial and procurement barriers to introducing new technologies

#### 1.5.5 Access Details:

- Areas Funded: Medicines, diagnostics, devices, digital products, pathway changes, new workforce models
- **Eligibility:** Depends on programme but most open to all organisations in the UK pursuing innovative healthcare solutions, e.g., SMEs, NHS organisations, academic institutions etc.
- Funding Type: Grant funding
- Key Partners: Works with patient groups, government bodies, industry & NHS bodies, e.g., UKRI,
   NICE, AHSNs, AHSCs, NHS Digital, NIHR, ABHI
- Contact Details: Links for further details on AAC programmes can be found <a href="https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/">https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/</a>

#### 1.5.6 Impact to Date:

- AAC set up in 2018
- Currently working with 3,474 innovators in 2020/21
- 3,722 innovation projects are receiving support in 2020/21
- Helped organisations to secure £251M of investment in 2020/21

#### 1.5.7 Future Policy Direction:

- Working with the NIHR to develop a central horizon scanning platform that will be shared across the AAC partners to help the NHS to speed up patient access to newest and best tech and products
- Demand signalling currently identified three areas of interest: stroke, mental health and learning disability and autism
- Looking to identify next round of themes but was delayed by Covid 19

#### 1.5.8 Selected Case Studies:

- Measuring fractional exhaled nitric oxide (FeNO) concentration in asthma: products NIOX VERO and NObreath
- Lipid Management: High Intensity Statins, Ezetimibe and PCSK9 inhibitors
- Biologics for treating severe asthma: Reslizumab, Benralizumab, Mepolizumab and Omalizumab
- Placental growth factor (PIGF) based tests to help rule out pre-eclampsia quickly

#### Footnotes:

For further case study details: <a href="https://www.weahsn.net/our-work/transforming-services-and-systems/adopting-innovation/rapid-uptake-products/">https://www.weahsn.net/our-work/transforming-services-and-systems/adopting-innovation/rapid-uptake-products/</a>

Organisation website: https://www.england.nhs.uk/aac/



# 1.6 Academic Health Science Centres (AHSC) – Knowledge Support

## 1.6.1 Overview & Key Objectives:

- Since April 2020, eight AHSCs have been designated in England for a five-year period. An AHSC typically consists of a partnership between a teaching hospital and a university
- They utilise regional partnerships to bring together expertise from universities and NHS organisations to translate early scientific research and discoveries into benefits for patients to improve healthcare services

#### 1.6.2 Entrepreneur Relevance:

- Primarily good option for seeking support in testing innovative solutions due to the partnerships they
  rely on between teaching hospitals and universities
- Heavily focused on research rather than product development or implementation
- Requires partnerships with academic institutions and NHS Trusts to access support

#### 1.6.3 Budget:

- Budget is dependent on the individual AHSC, and programmes run
- For example:
  - Bristol AHSC secured £10M in research funding in 2021/22
  - King's Health Partners has funded epilepsy research studies (£210,000), mental health and erectile dysfunction in men (£200,000) and Leukaemia (£460,000)

## 1.6.4 Key Programmes:

- Programmes unique to each AHSC but aimed at building an innovation pipeline to NHS partners
- Programmes try to identify transformational innovations in healthcare at an early-stage and support them with specialist expertise, training and seed funds, to speed-up clinical development and maximise benefits for patients and NHS partners
- Examples of programmes include:
  - King's Health Partners Diabetes, Endocrinology and Obesity (IDEO) working with partners and the South East London Integrated Care System (SEL ICS) received £463,000 funding to continue the pilot for research helping patients with Type 1 diabetes and disordered eating (T1DE)
  - Bristol Health Partners secured £850,000 to extend three clinical trials focused on researching kidney disease

#### 1.6.5 Access Details:

- Areas Funded: Many different areas funded, e.g., UCLPartners AHSC focuses on Cancer, Cardiovascular disease, Respiratory disease, Mental health, Dementia
- Eligibility: NHS Trusts, academia, industry (e.g., GSK, Novartis); research projects are usually launched in partnership between organisations
- Funding Type: Grant funding, often secured from other organisations, e.g., NIHR
- Key Partners: NHS England, NIHR, UKRI, AHSNs, teaching hospitals, universities
- Contact Details: Links to each AHSC can be found <a href="https://www.england.nhs.uk/aac/what-we-do/">https://www.england.nhs.uk/aac/what-we-do/</a> introducing-revolutionary-medicines-to-the-nhs/academic-health-science-centres/

## 16.6 Impact to Date:

- Eight AHSCs have been designated since 2020
- They are: Bristol Health Partners, Cambridge University Health Partners, Imperial College Academic Health Science Centre, King's Health Partners, Manchester Academic Health Science Centre, Newcastle Health Innovation Partners, Oxford Academic Health Partners, UCL Partners

## 1.6.7 Future Policy Direction:

- Will likely continue to support research by building AHSC capabilities and expanding the number of AHSCs further
- Continue to strengthen regional partnerships between research organisations, NHS trusts and industry

#### 1.6.8 Selected Case Studies:

- Manchester AHSC: Cholesterol-reducing real world study<sup>1</sup>
- Cambridge AHSC: Developing machine learning for radiotherapy treatment<sup>2</sup>
- Bristol AHSC: Development of new toolkit to better manage dementia in Asian community (ADaPT)<sup>3</sup>
- UCL AHSC: Set up DATA-CAN as a research hub to explore how cancer data could be used to improve care<sup>4</sup>

#### Footnotes:

- 1. <a href="https://healthinnovationmanchester.com/our-work/cholesterol-reducing-real-world-study-2/">https://healthinnovationmanchester.com/our-work/cholesterol-reducing-real-world-study-2/</a>
- 2. <a href="https://www.cuhp.org.uk/media/case-studies/ai-project-innereye">https://www.cuhp.org.uk/media/case-studies/ai-project-innereye</a>
- 3. <a href="https://www.bristolhealthpartners.org.uk/latest-news/new-toolkit-launched-to-improve-dementia-care-for-south-asian-people">https://www.bristolhealthpartners.org.uk/latest-news/new-toolkit-launched-to-improve-dementia-care-for-south-asian-people</a>
- 4. https://uclpartners.com/impact-story/unlocking-the-power-of-health-data-to-improve-cancer-care/

Organisation website: <a href="https://www.england.nhs.uk/aac/what-we-do/introducing-revolutionary-medicines-to-the-nhs/academic-health-science-centres/">https://www.england.nhs.uk/aac/what-we-do/introducing-revolutionary-medicines-to-the-nhs/academic-health-science-centres/</a>



## 1.6.9 AHSCs - Overview

## AHSCs focus on six key priority areas:

- Cancer
- Cardiovascular disease
- Infection & antimicrobial resistance
- Lung disease
- Metabolic disease
- Neurological and neurodegenerative disease

AHSC	Website link	
Bristol Health Partners	https://www.bristolhealthpartners.org.uk/	
Cambridge University Health Partners	https://www.cuhp.org.uk/	
Imperial College Academic Health Science Centre	https://www.ahsc.org.uk/	
King's Health Partners	https://www.kingshealthpartners.org/	
Manchester Academic Health Science Centre	https://healthinnovationmanchester.com/partnerships/manchester-academic-health-science-centre/	
Newcastle Health Innovation Partners	https://www.newcastlehealthinnovation.org/	
Oxford Academic Health Partners	https://www.oxfordahsc.org.uk/	
UCL Partners	https://uclpartners.com/academic-health-science-centre-ahsc/	

# 1.7 Biomedical Research Councils (BRCs) – Knowledge Support

#### 1.7.1 Overview & Key Objectives:

- BRCs are collaborations between world-leading universities and NHS organisations, that bring together academics and clinicians to translate lab-based scientific breakthroughs into potential new treatments, diagnostics and medical technologies
- Centres receive substantial levels of sustained funding to create an environment where experimental medicine can flourish

#### 1.7.2 Entrepreneur Relevance:

- BRCs have leveraged nearly £9BN of funding from external organisations to undertake experimental medicine and early translational research
- The centres have collaborated with almost 3,000 small and medium-sized companies, as well as 2,000 other partners in the life sciences industry
- There have been 85 spin out companies, with IP from the centres, generating more than £800M in revenue

#### 1.7.3 Budget:

- £790M split between 21 BRCs over next 5 years (from 2022 onwards), e.g., last funding round Guy's and St Thomas' BRC awarded £64.4M over five years from April 2017
- £250M of which invested outside of London, Oxford & Cambridge

#### 1.7.4 Key Programmes:

- Each BRC has its own programmes to support research and development of new treatments and diagnostic techniques
- Examples include:
  - NIHR Birmingham Biomedical Research Centre: Research focuses on inflammatory arthritis, inflammatory gastroenterology, and inflammatory sarcopenia. Collaborate on research with companies e.g., Novo Nordisk, Mestag Therapeutics, Orbsen Therapeutics, Athersys, Aparito, TrakCel
  - Nottingham BRC: Offers industry project management support, data & IP sharing platforms, patient involvement, support with finding funding, medical device expertise etc.
  - Guy's and St Thomas' BRC: Covers cardiovascular disease, cutaneous medicine, genomic
    medicine, infection and immunity, imaging science, transplantation, oral health, regenerative
    medicine and cellular therapy etc. operates an experimental medicine hub with world class
    facilities, research groups and links with industry
  - Oxford Biomedical Research Centre: More than £150M has been invested in medical research by the BRC since 2007 in areas such as diabetes, cancer and surgery



#### 1.7.5 Access Details:

- Areas Funded: Range of research themes across many disease and therapeutic areas, such as genomics, stem cell therapy and regenerative medicine
- **Eligibility:** BRCs are collaborations between world-leading universities and NHS organisations, but work with industry on research and diagnostic treatments etc.
- Funding Type: Grant funding to support BRCs who collaborate with industry on research projects
- Key Partners: NHS, Industry, Universities
- Contact Details: Links to all BRCs: <a href="https://www.nihr.ac.uk/explore-nihr/support/experimental-medicine.htm">https://www.nihr.ac.uk/explore-nihr/support/experimental-medicine.htm</a>

#### 1.7.6 Impact to Date:

- 21 BRCs have been announced to date
- Previously had three rounds of funding and now on fourth
- Over past nine years, BRCs have supported almost 60,000 studies and published 55,000 research papers, as well as supported career development of more than 14,000 junior doctors and research scientists

#### 1.7.7 Future Policy Direction:

- Recently awarded £790M to translate scientific discoveries into new treatments, diagnostic tests and medical technologies to improve patients' lives
- Nearly £250M of total is to be invested outside of London, Oxford and Cambridge
- Focus of next 5 years is in areas such as cancer, mental health, dementia and infectious diseases

#### 1.7.8 Selected Case Studies:

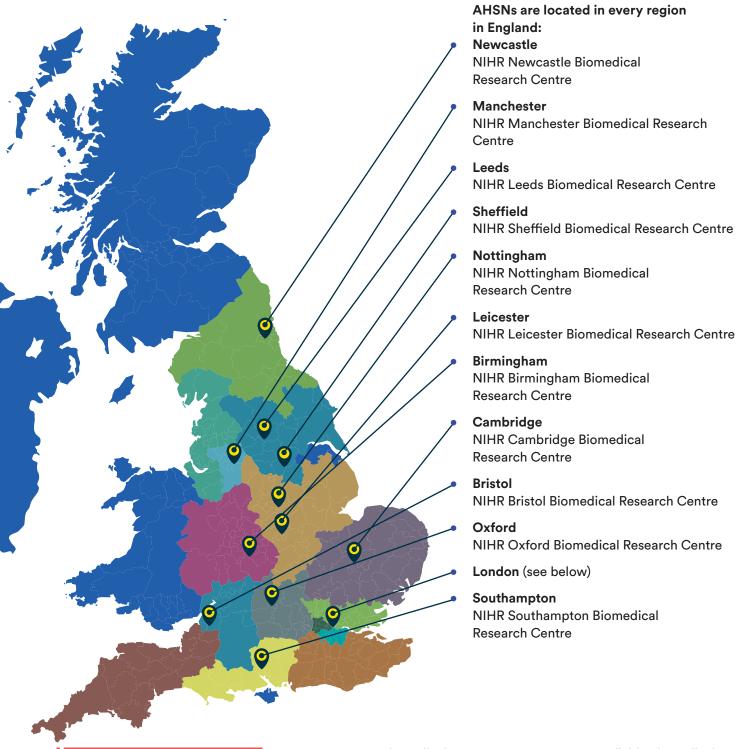
- NIHR UCL Hospitals Biomedical Research Centre: Worked with Mercedes Formula 1 to create a breathing machine for Covid 19 patients<sup>1</sup>
- Nottingham BRC: Developed an app to provide an exercise programme to patients suffering with knee osteoarthritis<sup>2</sup>
- Maudsley BRC: Worked with Bionomics Ltd to progress development of BNC210, a new drug designed to alleviate anxiety<sup>3</sup>

#### Footnotes:

- 1. <a href="https://www.uclhospitals.brc.nihr.ac.uk/making-difference-breathing-machines-avert-crisis">https://www.uclhospitals.brc.nihr.ac.uk/making-difference-breathing-machines-avert-crisis</a>
- 2. https://nottinghambrc.nihr.ac.uk/evidence/our-case-studies/musculoskeletal-case-studies/1541-exercise-and-rehabilitation-interventions
- 3. https://www.maudsleybrc.nihr.ac.uk/partnerships/case-studies/bionomics/

 $Organisation\ website - \underline{https://www.nihr.ac.uk/explore-nihr/support/experimental-medicine.htm}$ 

#### 1.7.9 BRCs - Overview





- NIHR Barts Biomedical Research Centre
- 2. NIHR Great Ormond Street Hospital Biomedical Research Centre
- 3. NIHR Imperial Biomedical Research Centre
- 4. NIHR Maudsley Biomedical Research Centre

- 5. NIHR Moorfields Biomedical Research Centre
- 6. NIHR The Royal Marsden Biomedical Research Centre
- 7. NIHR University College London Hospitals Biomedical Research Centre
- 8. NIHR Guy's and St Thomas' Biomedical Research Centre



#### **Links to BRCs**

- NIHR Barts Biomedical Research Centre
- NIHR Birmingham Biomedical Research Centre
- NIHR Bristol Biomedical Research Centre
- NIHR Cambridge Biomedical Research Centre
- NIHR Exeter Biomedical Research Centre (from December 2022)
- NIHR Great Ormond Street Hospital Biomedical Research Centre
- NIHR Guy's and St Thomas' Biomedical Research Centre
- NIHR Imperial Biomedical Research Centre
- NIHR Leeds Biomedical Research Centre
- NIHR Leicester Biomedical Research Centre
- NIHR Manchester Biomedical Research Centre
- NIHR Maudsley Biomedical Research Centre
- NIHR Moorfields Biomedical Research Centre
- NIHR Newcastle Biomedical Research Centre
- NIHR Nottingham Biomedical Research Centre
- NIHR Oxford Biomedical Research Centre
- NIHR Oxford Health Biomedical Research Centre
- NIHR The Royal Marsden Biomedical Research Centre
- NIHR Sheffield Biomedical Research Centre
- NIHR Southampton Biomedical Research Centre
- NIHR University College London Hospitals Biomedical Research Centre

# 1.8 Academic Health Science Networks (AHSN) – Knowledge Support

## 1.8.1 Overview & Key Objectives:

- Infrastructure network established in 2013 to significantly reform innovation landscape of England
  with the aim of improving regional health and creating wealth by coordinating regional NHS trusts,
  local government, charities and industry, to help identify and spread health innovations at pace and
  at scale
- All AHSNs share these core priorities: 1. Promoting economic growth (fostering opportunities for business to work with NHS), 2. Diffusing innovation, 3. Improving patient safety (bring together patients, healthcare staff and partners), 4. Optimising medicine use (medicine used to maximum benefit and NHS resources used efficiently), 5. Improving quality and reducing variation (spreading best practice), 6. Putting research into practice (turn research into clinical practice), 7. Collaborating on national programmes
- Helps to support MedTech Funding Mandate policy which states technologies must be:
  - 1. **Effective:** demonstrated through positive NICE Medical Technology Guidance (MTG) or Diagnostic Guidance (DG), published by 30 June 2021
  - 2. Cost-saving within three years of implementation: as demonstrated by NICE modelling and published in a NICE resource impact template
  - 3. Affordable to the NHS

#### 1.8.2 Entrepreneur Relevance:

- Partner with commercial organisations to run pilots or develop innovative concepts
- AHSNs also support innovators with advice on accessing NHS, building business cases, brokering partnerships, helping with prototype development
- Funding provided by commercial organisation partner in transfer of value agreements that enable AHSNs to conduct joint research; can help organisations with accessing other funding sources

#### **1.8.3 Budget:**

- Do not offer funding grants but partner with industry to jointly develop & test innovations (with funding provided by industry in transfer of value agreements); can also help organisations to access other funding sources
- Support is provided to industry in the form of business support services and forging partnerships between NHS organisations and commercial companies

#### 1.8.4 Key Programmes:

- National programmes that AHSNs are currently working towards are:
  - Early Intervention Eating Disorders
  - Improving Diagnosis of ADHD
  - Lipid management and Familial Hypercholesterolemia (FH)
  - Blood Pressure Optimisation Programme
  - Polypharmacy Programme: getting the balance right
  - Transforming Wound Care



## 1.8.5 Access Details:

- Areas Funded: Current areas of interest are cardiovascular disease, mental health, respiratory disease, maternal and neonatal health
- Eligibility: industry, NHS Trusts, academic institutions
- Funding Type: AHSNs funded by NHS England and NHS Improvement, but can sign joint working agreements with commercial organisations
- Key Partners: NHS England, regional NHS trusts, local government, charities and industry, ARCs, NICE, NIA
- Contact Details: More information on support provided to innovators can be found here: <a href="https://www.ahsnnetwork.com/supporting-innovators">https://www.ahsnnetwork.com/supporting-innovators</a>

#### 1.8.6 Impact to Date:

- 15 AHSNs set up in 2013
- In 2021/22:
  - 1,273 innovations were in the national pipeline of innovation
  - £455M investment was leveraged by companies supported by AHSNs
  - 565 jobs were created
  - 1,296 jobs were safeguarded

#### 1.8.7 Future Policy Direction:

- Cross-cutting themes undercutting work that AHSNs do now and in the future are:
  - Tackling health inequalities
  - Helping the NHS achieve net zero
  - Digital technologies
  - Innovations to support the workforce

#### 1.8.8 Selected Case Studies:

- East Midlands AHSN: ESCAPE-Pain is an evidence-based, group rehabilitation programme for patients with osteoarthritis<sup>1</sup>
- South West AHSN: Focus ADHD worked to improve assessment process for ADHD<sup>2</sup>
- Yorkshire & Humber AHSN: Delivered quality improvement project on atrial fibrillation detection with pharma organisation<sup>3</sup>
- Wessex AHSN: Use of FeNO (Fractional exhaled nitric oxide) for asthma diagnosis & management by primary care providers<sup>4</sup>

#### Footnotes:

- 1. <a href="https://emahsn.org.uk/our-work/previous-projects">https://emahsn.org.uk/our-work/previous-projects</a>
- 2. <a href="https://swahsn.com/programmes/focus-adhd/">https://swahsn.com/programmes/focus-adhd/</a>
- 3. https://www.yhahsn.org.uk/about-us/who-we-work-with/transfer-of-value-disclosure/
- 4. <a href="https://wessexahsn.org.uk/projects/421/case-studies">https://wessexahsn.org.uk/projects/421/case-studies</a>

Organisation website: https://www.ahsnnetwork.com/contact-the-ahsn-network

## 1.8.9 AHSNs - Overview

## AHSNs have three national programmes to focus on for 2022:

- Blood Pressure Optimisation Programme
- Polypharmacy Programme: getting the balance right
- Transforming Wound Care

## National programmes selected for spread in 2020 were:

- Early Intervention Eating Disorders
- Improving Diagnosis of ADHD
- Lipid management and Familial Hypercholesterolemia (FH)

AHSN	Website link	
East Midlands	https://emahsn.org.uk/	
Eastern	https://www.easternahsn.org/	
Health Innovation Manchester	https://healthinnovationmanchester.com/	
Health Innovation Network	https://healthinnovationnetwork.com/	
Imperial College Health Partners	https://imperialcollegehealthpartners.com/	
Kent, Surrey and Sussex	https://kssahsn.net/	
North East and North Cumbria	https://ahsn-nenc.org.uk/	
Innovation Agency: AHSN for the North West Coast	https://www.innovationagencynwc.nhs.uk/	
Oxford	https://www.oxfordahsn.org/	
South West	https://swahsn.com/	
UCL Partners	https://uclpartners.com/	
Wessex	https://wessexahsn.org.uk/	
West Midlands	https://www.wmahsn.org/	
West of England	https://www.weahsn.net/	
Yorkshire & Humber	https://www.yhahsn.org.uk/	



## 1.1.10 AHSNs - Innovator Support Programme

Distinctive
A unique offer provided depending on resource availability

#### Enhanced

14 services available to selected innovators where the solution meets a local priority or unmet need.

Transition to Enhanced Offer guided by meeting the AHSN threshold, e.g. is there a local demand or does it meet a priority of the AHSN

#### Universal

**4** core services available to all innovators at no cost - UK and International

Critical appraisal and evidence synthesis
Support for quantitative market research
Marketing, comms & stakeholder engagement
IP advice
Market access launch planning
Product development support

2.1 Broker connections to NHS and Social Care organisations	2.9 Broker evidence gathering
2.2 Support to develop value proposition	3.0 Support to apply for funding
2.3 Support for qualitative market research	3.1 Research & evaluation support
2.4 Budget impact & benefits modelling advice	3.2 Health economics support
2.5 Assess gaps in evidence & insights	3.4 Business case development advice and guidance
2.6 Evaluation advice	3.5 Provide showcase opportunities
2.7 Health economics advice	
2.8 Research & evaluation planning	
1.1 Review & Respond	1.3 Advise, Guide and Signpost

1.2 Assess & Triage

1.4 Develop Health & Care

understanding

# 1.9 Applied Research Collaborations (ARCs) - Knowledge Support

#### 1.9.1 Overview & Key Objectives:

- ARCs consist of 15 local partnerships that support applied health and care research that responds to, and meets, the needs of local populations and local health and care systems
- Their main aim is to improve outcomes for patients and the public, improve the quality, delivery and
  efficiency of health and care services and increase the sustainability of the health and care system
  both locally and nationally

#### 1.9.2 Entrepreneur Relevance:

- Each ARC focuses on a specific research national priority area; innovators should select the ARC most relevant to them
- Funding opportunities are available for research / submit an idea to work with an ARC; check individual ARC websites to view what options are open
- Partnership with academic or health organisation is usually necessary to access programmes

#### 1.9.3 Budget:

- NIHR awarded £13.25M to ARCs to fund research into seven national priority research areas
- ARCs have been awarded £1.857M to lead consortiums of ARCs looking into each research area
- Funding for research depends on individual ARC, e.g., East Midlands ARC offering up to £40,000 to research improving social care services

#### 1.9.4 Key Programmes:

- Research programmes cover seven national priority areas. ARCs have own programmes depending on area of expertise. The seven national priority areas are:
  - Adult Social Care: NIHR Applied Research Collaboration Kent, Surrey, and Sussex
  - Ageing, including dementia and frailty: NIHR Applied Research Collaboration Wessex
  - Child health and maternity: NIHR Applied Research Collaboration South West Peninsula
  - Health and care inequalities: NIHR Applied Research Collaboration North East and North Cumbria
  - Mental Health: NIHR Applied Research Collaboration East of England, NIHR Applied Research Collaboration South London
  - Multimorbidity: NIHR Applied Research Collaboration East Midlands
  - Prevention, including behavioural risk factors: NIHR Applied Research Collaboration North East and North Cumbria



## 1.9.5 Access Details:

- Areas Funded: Depends on ARC but adhere to seven national priorities areas, e.g., ageing society, multimorbidity, health and care inequalities
- **Eligibility:** Most programmes are open to academic & health professionals, but some industry research collaboration opportunities are available
- Funding Type: Receive funding from NIHR, some research funding likely made available for collaborations with industry
- Key Partners: Partnerships with AHSNs, NHS, universities and charities
- Contact Details: Each ARC has own specific website with information, e.g., ARC East Midlands https://arc-em.nihr.ac.uk/. ARC websites can be found here: <a href="https://www.nihr.ac.uk/explore-nihr/support/collaborating-in-applied-health-research.htm#three">https://www.nihr.ac.uk/explore-nihr/support/collaborating-in-applied-health-research.htm#three</a>

## 1.9.6 Impact to Date:

- ARCs were launched in 2019 to replace CLAHRCs (Collaborations for Leadership in Health Research and Care)
- Five year £135M funding plan to fund research by ARCs into their specified areas

## 1.9.7 Future Policy Direction:

- Will continue to build partnerships and further support for healthcare research
- Have a long-term aim to support Government's 'Grand Challenge' objective of enabling people to live
  at least five extra healthy, independent years of life by 2035, while narrowing the gap between the
  experience of the richest and poorest. Future research themes are likely to complement this

#### 1.9.8 Selected Case Studies:

- Helping people stay warm at home in later life¹
- Improving cancer diagnosis in primary care<sup>2</sup>
- Implementing improved maternity care on the front line<sup>3</sup>
- Identifying cancer recurrence within patient care pathways across linked national clinical datasets<sup>4</sup>

#### Footnotes:

- 1. https://www.nihr.ac.uk/documents/case-studies/helping-people-stay-warm-at-home-in-later-life/30086
- 2. https://www.nihr.ac.uk/documents/case-studies/improving-cancer-diagnosis-in-primary-care/29346
- 3. https://www.nihr.ac.uk/documents/case-studies/implementing-improved-maternity-care-on-the-front-line/26776
- 4. <a href="https://www.arc-nt.nihr.ac.uk/research/projects/identifying-cancer-recurrence-within-patient-care/">https://www.arc-nt.nihr.ac.uk/research/projects/identifying-cancer-recurrence-within-patient-care/</a>

Organisation website: https://www.nihr.ac.uk/explore-nihr/support/collaborating-in-applied-health-research.htm

# 1.9.9 ARCs - Overview

ARC	National Leadership Area	Website link
NIHR Applied Research Collaboration East of England	Mental health, Palliative and end- of-life care	https://arc-eoe.nihr.ac.uk/
NIHR Applied Research Collaboration East Midlands	Equality, diversity and inclusion of under-represented groups, Multimorbidity	https://arc-em.nihr.ac.uk/
NIHR Applied Research Collaboration Greater Manchester	Economics	https://arc-gm.nihr.ac.uk/
NIHR Applied Research Collaboration Kent, Surrey, and Sussex	Social Care	https://arc-kss.nihr.ac.uk/
NIHR Applied Research Collaboration North East and North Cumbria	Inequalities Prevention	https://arc-nenc.nihr.ac.uk/
NIHR Applied Research Collaboration North Thames	Population Health	https://www.arc-nt.nihr.ac.uk/
NIHR Applied Research Collaboration Northwest London	Cardiovascular	https://www.arc-nwl.nihr.ac.uk/
NIHR Applied Research Collaboration North West Coast	Care and Health Informatics	https://arc-nwc.nihr.ac.uk/
NIHR Applied Research Collaboration Oxford and Thames Valley	Behavioural Science	https://www.arc-oxtv.nihr.ac.uk/
NIHR Applied Research Collaboration South London	Mental health, Palliative and end- of-life care	https://arc-sl.nihr.ac.uk/
NIHR Applied Research Collaboration South West Peninsula	Child health, Operational research modelling	https://arc-swp.nihr.ac.uk/
NIHR Applied Research Collaboration Wessex	Ageing and Dementia	https://www.arc-wx.nihr.ac.uk/
NIHR Applied Research Collaboration West	Applied Health Informatics	https://arc-w.nihr.ac.uk/
NIHR Applied Research Collaboration West Midlands	Long Term Conditions, Acute Care Interfaces, Integrated Care in Youth Mental Health, Maternity Services	https://warwick.ac.uk/fac/sci/med/about/centres/arc-wm/
NIHR Applied Research Collaboration Yorkshire and Humber	Urgent and Emergency Care	https://www.arc-yh.nihr.ac.uk/

Note: ARCs are not restricted in their research to their national leadership area. They also have research projects in many other areas which can be viewed on their websites.



## 1.10.1 Overview & Key Objectives:

- NHS England initiative inviting applications from individuals (clinical, industry, academia) as part
  of an annual international call where chosen innovators receive bespoke support to develop
  innovative products
- Aim to help create the conditions and cultural change necessary for proven innovations to be adopted faster and more systematically in the NHS

## 1.10.2 Entrepreneur Relevance:

- Not suitable for those seeking funding grants or loans, or in very early stages of development
- Would provide valuable support for innovations already deployed in at least one site and ready to expand rapidly across NHS

#### 1.10.3 Budget:

- Funding grants not available to applicants
- Support comes in form of business support services, learning programmes and a bursary

## 1.10.4 Key Programmes:

- NIA programme runs a once yearly competition with set medical call themes:
  - Programme support includes a bespoke learning programme, mentorship and networking opportunities to equip applicants (Fellows) with critical knowledge, relationships and skills to scale innovation in the NHS
  - Applicants benefit from: access to a pool of mentors, networking opportunities with Academic Health Science Networks (AHSNs), quarterly learning events, peer-to-peer support, ad hoc specialist information sessions, as required (e.g., procurement, NHS commissioning, health economics, business case development, media training, etc.), access to a bursary

#### 1.10.5 Access Details:

- Areas Funded: Recent call themes: maternity, mental health and severe mental illness, cancer, respiratory disease, hypertension and cardiovascular disease, urgent and emergency care
- Eligibility: Open to SMEs, clinical entrepreneurs and academia. Competition format judged by commercial and healthcare experts. Innovation must be in use in at least one site and ready to spread across NHS quickly
- Funding Type: Bursary and business support (no grants or loans)
- Key Partners: Delivered in partnership with England's 15 AHSNs and hosted at UCLPartners
- Contact Details: Apply next year: <a href="https://nhsaccelerator.com/apply/">https://nhsaccelerator.com/apply/</a>

#### 1.10.6 Impact to Date:

- Has provided support to selected innovators since 2015
- Supported 82 innovators to date, currently supporting ten innovative healthcare solutions in 2022
- 2,839 NHS sites currently using NIA innovations
- £198M raised in external funding to date

## 1.10.7 Future Policy Direction:

- Upcoming competition themes are:
  - Maternity
  - Mental health and severe mental illness
  - Cancer
  - Respiratory disease
  - Hypertension and cardiovascular disease
- In addition, interested in elective recovery and operational challenges post-pandemic

#### 1.10.8 Selected Case Studies:

- DigiBete: a digital platform providing diabetes awareness, education, training and support to families at home
- Hear Glue Ear: an affordable solution for glue ear (most common type of hearing loss in childhood)
- Maxwell Plus: breakthrough technology for diagnosing prostate cancer early
- getUbetter: an evidence-based digital self-management platform for all common musculoskeletal conditions

#### Footnotes:

More detail on case studies - https://nhsaccelerator.com/innovations/

Organisation website: <a href="https://nhsaccelerator.com/">https://nhsaccelerator.com/</a>



# 1.11 NHS Test Beds - Funding Support

## 1.11.1 Overview & Key Objectives:

- Programme commissioned by NHS England and NHS Improvement to bring NHS organisations and industry partners together to test combinations of digital technologies with pathway redesign in real-world settings
- The goal is to test, and then use if successful, digital technologies to positively transform the way in which healthcare is delivered for patients and carers

## 1.11.2 Entrepreneur Relevance:

- Wave two is currently underway; applications to programme are now closed
- If another wave is agreed, it would be relevant to those seeking to run a pilot scheme with an NHS partner in a real-life environment

#### 1.11.3 **Budget:**

- £6M in total made available for wave two funding
- Project costs can range from £500,000 to £1.5M
- Micro and small businesses can receive up to 70% of their eligible project costs and medium-sized businesses can receive up to 60%

#### 1.11.4 Key Programmes:

- Wave two competition:
  - Focused on new healthcare technologies tackling cancer, diabetes, and necessary hospital visits
  - Seven sites have been selected to run trials of digital initiatives designed to address healthcare challenges in NHS
  - For example, Greater Manchester Test Bed, Southwest London Health and Care
     Partnership and North East Hampshire and Farnham CCG will run programmes focused on diabetes self-management

#### 1.11.5 Access Details:

- Areas Funded: Current areas of interest are cancer, diabetes, necessary hospital visits, mental health, secondary care, integrated care
- **Eligibility:** Can include academia, local government, and private sector. Businesses work with an NHS partner to test a product (AHSNs help to match businesses to suitable NHS partners)
- Funding Type: Grant funding
- Key Partners: NHS England and NHS Improvement
- Contact Details: Wave two currently underway; applications are currently closed

#### 1.11.6 Impact to Date:

- Seven test beds from wave one; finished in 2018
- Over 700 people attended wave two collaboration events, connecting innovators with the NHS to explore setting up new partnerships
- Over 8,000 connections were made between industry and NHS organisations
- Delivery of wave two started in 2018

## 1.11.7 Future Policy Direction:

- Depending on success of wave two, likely to run a wave three programme
- Medical themes for test beds follow NHS England strategy plans, e.g., current themes based largely on NHS England Five Year Forward Review and Next Steps

#### 1.11.8 Selected Case Studies:

- Care City in London: bringing together market-ready diagnostics, smartphone applications and management tools to support patients with long-term conditions
- East Midlands Radiology Consortium (EMRAD): Using Al and machine learning to improve breast cancer screening.
- Chelsea and Westminster NHS Foundation Trust: Providing patients with access to their digital health records with aim of reducing missed appointments

#### Footnotes:

More case study details available: <a href="https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/test-beds/first-wave-of-test-beds/">https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/test-beds/first-wave-of-test-beds/</a>

Organisation website: https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/test-beds/nhs-test-beds-programme/

#### 1.11.9 Test Beds - Overview

Test Beds	Focus Area	Website link
Care city innovation test bed	Older people with long term conditions, older people with dementia and carers	http://www.carecity.london/
Long term conditions early intervention programme	Management of Long-Term Conditions	https://www.england.nhs.uk/aac/ what-we-do/how-can-the-aac-help- me/test-beds/long-term-conditions- early-intervention-programme/
Lancashire and Cumbria Innovation Alliance (LCIA)	Support frail, elderly and people with long term conditions to remain well outside of hospital and avoid unnecessary admissions	www.lciatestbed.org.uk
The PErfect Patient PAthway (PEPPA) test bed (Sheffield region)	Create 'perfect patient pathway' to bring substantial benefits for patients suffering from long term health conditions, such as diabetes, mental health problems, respiratory disease, hypertension, and other chronic conditions	www.ppptestbed.nhs.uk
Integrated mental health urgent care test bed	Mental Health	www.wmahsn.org/
Diabetes digital coach	Mobile health self-management tools for those with diabetes to help with self-management of condition	www.diabetesdigitalcoach.org
Technology Integrated Health Management (TIHM)	Enabling those with Dementia to stay in own home for longer	www.sabp.nhs.uk/tihm



# 1.12 NHS Vanguard Sites - Knowledge Support

# 1.12.1 Overview & Key Objectives:

- Similar to test beds, Vanguard sites (50 in total) consisted of a group of stakeholders in a local area working together to test, measure and evaluate innovative new care models
- Though Vanguard sites are local pilots they received national support and were intended to lead innovation at a national level, operating in a range of fields, including general practice, acute care and care homes
- Key programme aim was to propel development of innovative care models which could be easily
  replicated and applied nationally, as well as reduce hospital use by moving specialist out of hospital
  and into community

### 1.12.2 Entrepreneur Relevance:

- Still a desire to spread new care models throughout NHS but progress has been limited due to funding issues
- May still be opportunities to partner with individual sites but limited online activity since 2018 for Vanguard websites and unlikely to be many funding opportunities available

## 1.12.3 Budget:

- £329M initially invested by NHS England into Vanguard programme to support 50 sites (as well as further £60M to support and monitor progress)
- Vanguard sites have been expected to be self-sustaining since 2018, unlikely any funding opportunities available to innovators now

#### 1.12.4 Key Programmes:

- Vanguard sites were selected along five themes:
  - Integrated primary and acute care systems: joining up GP, hospital, community and mental health services
  - Multispecialty community providers: moving specialist care out of hospitals into the community
  - Urgent and emergency care: new approaches to improve the coordination of services and reduce pressure on A&E departments
  - Acute care collaborations: linking hospitals together to improve their clinical and financial viability
  - Enhanced health in care homes: offering older people better, joined up health, care and rehabilitation services

#### 1.12.5 Access Details:

- Areas Funded: New NHS care models
- Eligibility: Local healthcare providers
- Funding Type: Initially Vanguard sites funded by NHS England, but funding stopped in 2018
- **Key Partners:** NHS England, the Care Quality Commission, Health Education England, NHS Improvement, Public Health England, NICE
- Contact Details: List of Vanguard sites can be found here: <a href="https://nhsproviders.org/topics/integrated-care-and-system-working/new-care-models/vanguard-sites">https://nhsproviders.org/topics/integrated-care-and-system-working/new-care-models/vanguard-sites</a>

# 1.12.6 Impact to Date:

- Set up in 2015, £329M was given to 50 Vanguard sites to support them in testing new care models
- However, short term financial pressures led to diversion of funds away from programme
- This weakened the programme and benefits of the programme are still unproven

## 1.12.7 Future Policy Direction:

- National funding to Vanguards ended in 2018 as it was expected that they would be sustainable by then
- Ambition to spread new care models from Vanguards to 50% of population by 2021
- Many of the Vanguards are planning to continue running their new care models and expanding it to a wider population
- Lack of investment since 2018 means the future of the programme is unknown

#### 1.12.8 Selected Case Studies:

Vanguard sites selected to test new models:

- Wirral Partners: Integrated primary and acute care systems model
- Greater Nottingham System Resilience Group: New urgent and emergency care model
- Tower Hamlets Together: Multispecialty community provider's model
- Royal Free London: Acute care collaborations model

#### Footnotes:

More details on Vanguard site case studies can be accessed here: <a href="https://www.england.nhs.uk/wp content/uploads/2015/11/new\_care\_models.pdf">https://www.england.nhs.uk/wp content/uploads/2015/11/new\_care\_models.pdf</a>

Organisation website: https://www.england.nhs.uk/category/vanguards/



33

## 1.12.9 NHS Vanguard Sites – Overview

# Integrated primary and acute care systems - joining up GP, hospital, community and mental health services

- 1 Wirral Partners
- 2 Mid Nottinghamshire Better Together
- 3 South Somerset Symphony Programme
- 4 Northumberland Accountable Care Organisation
- 5 Salford Together
- 6 Better Care Together (Morecambe Bay Health Community)
- 7 North East Hampshire and Farnham
- 8 Harrogate and Rural District Clinical Commissioning Group
- 9 My Life a Full Life (Isle of Wight)

# Multispecialty community providers - moving specialist care out of hospitals into the community

- 10 Calderdale Health and Social Care Economy
- 11 Wellbeing Erewash
- 12 Fylde Coast Local Health Economy
- 13 Modality Birmingham and Sandwell
- 14 West Wakefield Health and Wellbeing Ltd
- 15 All Together Better Sunderland
- 16 Dudley Multispecialty Community Provider
- 17 Encompass (Whitstable, Faversham and Canterbury)
- 18 Stockport Together
- 19 Tower Hamlets Together
- 20 Better Local Care (Hampshire)
- 21 West Cheshire Way
- 22 Lakeside Healthcare (Northamptonshire)
- 23 Principia Partners in Health (Southern Nottinghamshire)

#### Enhanced health in care homes - offering older people better, joined up health, care and rehabilitation services

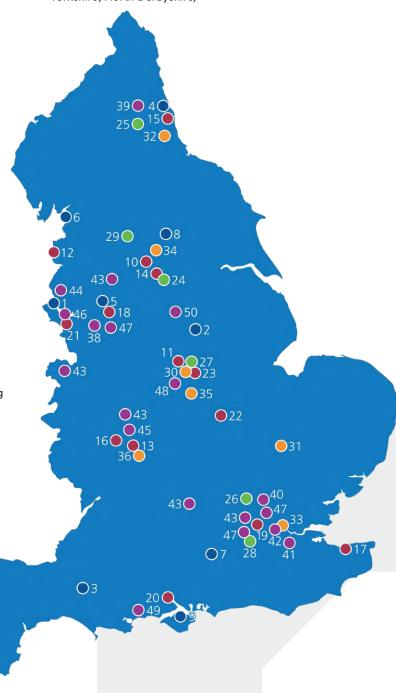
- 24 Connecting Care Wakefield District
- 25 Gateshead Care Home Project
- 26 East and North Hertfordshire Clinical Commissioning Group
- 27 Nottingham City Clinical Commissioning Group
- 28 Sutton Homes of Care
- 29 Airedale & Partners

# Urgent and emergency care - new approaches to improve the coordination of services and reduce pressure on A&E departments

- 30 Greater Nottingham System Resilience Group
- 31 Cambridgeshire and Peterborough Clinical Commissioning Group
- 32 North East Urgent Care Network
- 33 Barking and Dagenham, Havering and Redbridge System Resilience Group
- 34 West Yorkshire Urgent and Emergency Care Network
- 35 Leicester, Leicestershire & Rutland System Resilience Group
- 36 Solihull Together for Better Lives
- 37 South Devon and Torbay System Resilience Group

# Acute care collaborations - linking hospitals together to improve their clinical and financial viability

- 38 Salford and Wigan Foundation Chain
- 39 Northumbria Foundation Group
- 40 Royal Free London
- 41 Foundation Healthcare Group (Dartford and Gravesham)
- 42 Moorfields
- 43 National Orthopaedic Alliance
- 44 The Neuro Network (The Walton Centre, Liverpool)
- 45 MERIT (The Mental Health Alliance for Excellence, Resilience, Innovation and Training) (West Midlands)
- 46 Cheshire and Merseyside Women's and Children's Services
- 47 Accountable Cancer Network (ACN)
- 48 EMRAD East Midlands Radiology Consortium
- 49 Developing One NHS in Dorset
- 50 Working Together Partnership (South Yorkshire, Mid Yorkshire, North Derbyshire)



# 1.13 National Institute for Health & Care Excellence (NICE) – Knowledge Support

# 1.13.1 Overview & Key Objectives:

- Executive non-departmental public body, sponsored by Department of Health and Social Care, responsible for improving national health and wellbeing by putting science and evidence at the heart of healthcare decision-making
- Aim to: 1. Provide independent assessment of a wide range of complex evidence to help healthcare
  professionals make better decisions. 2. Work with those at the forefront of scientific advances to
  identify, assess and develop timely recommendations. 3. Work with partners across health and social
  care system to drive uptake of effective and cost-effective new treatments and interventions to
  benefit the population as a whole

## 1.13.2 Entrepreneur Relevance:

- NICE is responsible for guiding healthcare professionals and organisations towards new treatment options and offering guidance on newly available technology
- Collaboration with NICE on research topics opens a valuable door into NHS
- Office for Market Access is NICEs service for providing info and advice to industry on how to access NHS and other partners to promote new healthcare products

#### 1.13.3 Budget:

- Spent £9.1M on technology evaluation programme
- £2.6M spent on running number of programmes, e.g., activities supporting Cancer Drugs Fund and Managed Access, developing medtech innovation briefings, hosting national medical tech horizon scanning database (HealthTech Connect)

#### 1.13.4 Key Programmes:

- Medical Technologies Evaluation Programme: Considers technologies that could offer benefits to
  patients and the health and social care system over current practice. Anyone can submit their tech (so
  long as they meet the criteria)
- Innovative Licensing and Access Pathway (ILAP): Provides safe, early and financially sustainable access to innovative medicines by giving manufacturers access to coordinated support from partners across the health system; open to both commercial and non-commercial developers of medicines (UK based and/or global)
- Innovative Devices Access Pathway (IDAP): Aims to help manufacturers provide their devices to healthcare professionals and patients at the earliest safe opportunity. The pathway will help developers generate evidence that meets the needs of regulator and health tech assessment bodies. Will also offer post-market access support
- Office for Digital Health: Helps to accelerate adoption of new digital tech into the health and care system
- Guidance programmes: Also provide a range of guidelines and recommendations to healthcare
  professionals on topics, e.g., financial planning, quality standards, patient safety, data collection



#### 1.13.5 Access Details:

- Areas Funded: All areas of healthcare innovation
- Eligibility: Academia, NHS organisations, Industry
- **Funding Type:** Supports organisations in accessing funding from others and provides advice to industry on how to access NHS with new products and services, e.g., NIHR
- Key Partners: NHS organisations, Academic Institutions, Industry
- Contact Details: Office for Market Access helps industry engage with NICE and healthcare partners:
   https://www.nice.org.uk/about/what-we-do/life-sciences/office-for-market-access.

   For scientific advice to guide innovators on how to meet evidence standards for NHS and show value of their products: https://www.nice.org.uk/about/what-we-do/life-sciences/scientific-advice

#### 1.13.6 Impact to Date:

- Organisation founded in 1999
- 500th technology appraisal was published in 2018; 98 published in 2021/22 alone
- Responsible for recommending things such as new cancer treatments (CAR-T cell therapy) and first new recommended treatment for sickle cell in 20 years

### 1.13.7 Future Policy Direction:

- Will continue to develop guidance and support tech innovation in healthcare
- Desire to continue forming key strategic partnerships to make sure guidance is used
- Aim is to build a life sciences hub to help industry better understand and engage with NICE processes
- Consideration of wider society and environmental impact will also play a greater role in NICE guidelines when assessing new innovations

#### 1.13.8 Selected Case Studies:

- A feasibility trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 in a high school setting<sup>1</sup>
- Worked with University of Newcastle and AMLo Biosciences to provide consultation on evidence development plans for early prognostic tests for melanoma<sup>2</sup>
- Overview of NICEs work over last 20 years: https://indepth.nice.org.uk/20-years-of-NICE/index.html

#### Footnotes:

- 1. https://www.nice.org.uk/about/what-we-do/life-sciences/scientific-advice/case-studies
- 2. https://www.nice.org.uk/about/what-we-do/science-policy-research/research-funders

Organisation website: https://www.nice.org.uk/

# 1.13.9 NICE - Selected National Guidance Programme Details

- NICE National Guidance Organisation for Pharma, Diagnostic and Devices
- No legal requirement for licensing but considered best practices
- Accelerates National Adoption if Approved
- Strong International Credential

# Medical Technology Advisory Committee

- Formal Qualifying Criteria
- Formal Application and Assessment e.g. CE Approval
- 3 Medical Sponsors

Interventional Procedures	Technology Appraisal	Medical Technology	Diagnostic Assessment
Programme (2000)	(2000)	Guidance Programme (2010)	Programme (2010)
<ul> <li>Looks only at medical effectiveness not health economics</li> <li>Outcome if successful is a procedure code</li> <li>529 Assessment 2000-15</li> </ul>	<ul> <li>Assessment of clinical and cost effectiveness</li> <li>Independent Assessment Trials and Experts witness</li> <li>If Successful code and tariff-Commissioners have to comply with in 3 months</li> <li>344 Assessment 2000-15 only 10% devices</li> </ul>	<ul> <li>Introduce by Manufactures and Sponsors</li> <li>If included 10 Week confidential process to seek NHS Engagement</li> <li>38 Week Public Evaluation Process</li> <li>Recommendation against claimed cost and medical advantages</li> <li>Cost Neutral is mandatory</li> <li>Circa 200 assessment since 2010</li> </ul>	<ul> <li>Focus on evaluation of Innovative Diagnostic Technologies</li> <li>60 week evaluation programme</li> <li>Complex Health Economics – using QUAL formulas</li> </ul>

Engagement in these programmes can accelerate national adoption, as requires existing local traction and sponsorship to be included into evaluation programmes. Not an early stage approach. NICE approval doesn't guarantee adoption



# 1.14 NHS Digital – Knowledge Support

### 1.14.1 Overview & Key Objectives:

- Public-facing body providing most web-services, statistical publications and data management systems used within the NHS. Focus is centred on the current infrastructure of the NHS and tends to have a restricted role in early product development. Instead it innovates through continuous improvement of existing services, including NHS websites and the NHS app
- Has a specific drive for better data collection and easier patient-clinician interactions, i.e., via NHS app and better utilisation of data from patient records

### 1.14.2 Entrepreneur Relevance:

- Useful resource for understanding how to better access and utilise NHS data when testing innovative products
- No funding grants available for funding innovations
- Developer hub helps innovators to understand NHS systems and integrate with APIs

#### 1.14.3 Budget:

- £540M 2020/21 spent on maintaining and improving NHS systems
- Budget is used to improve NHS data collection and use, not to fund innovators

#### 1.14.4 Key Programmes:

- Acute data alignment programme (ADAPt): Move towards common set of standards for data collections, performance measurement methodologies & reporting systems across NHS & private healthcare
- **Digital inclusion for health and social care:** Guide to help healthcare providers, commissioners, and designers ensure that services delivered digitally are as inclusive as possible
- **Digital, research, informatics, and virtual environments (DRIVE) partnership:** New tech innovation centre to transform the use of technology including Al in healthcare and improve patient outcomes
- NHS digital, data and technology standards: Draft of new framework that will set out the core standards on technology and data by which all IT systems and digital services in the NHS must abide

#### 1.14.5 Access Details:

- Areas Funded: Focus on digital services for NHS
- Eligibility: Any organisation can seek advice on better using NHS digital services
- Funding Type: Funding not available to innovators
- Key Partners: Local Authorities, NHS Trusts
- Contact Details: Range of contact options depending on needs: <a href="https://digital.nhs.uk/about-nhs-digital/contact-us">https://digital.nhs.uk/about-nhs-digital/contact-us</a>

#### 1.14.6 Impact to Date:

- Founded in 2013 to deal with NHS's digital services
- Publishes over 260 statistical publications each year

# 1.14.7 Future Policy Direction:

- Aiming to make access to NHS data an easier process for users and improve data transparency
- Will continue to support and provide information for those building healthcare software to better integrate with NHS systems

#### 1.14.8 Selected Case Studies:

- API platform: API platform available to developers to help with building digital innovations that access NHS systems<sup>1</sup>
- Electronic Prescription Service: Allows prescribers to send prescriptions electronically to a dispenser<sup>2</sup>
- Developer Hub: Resources for developers to help them understand NHS APIs and utilise them in their own innovations<sup>3</sup>

#### Footnotes:

- 1. https://digital.nhs.uk/blog/transformation-blog/2022/making-building-apis-easier
- 2. <a href="https://digital.nhs.uk/services/electronic-prescription-service">https://digital.nhs.uk/services/electronic-prescription-service</a>
- 3. https://digital.nhs.uk/developer

Organisation website: <a href="https://digital.nhs.uk/">https://digital.nhs.uk/</a>



# 1.15 NHSX - Funding Support

# 1.15.1 Overview & Key Objectives:

- Oversight organisation defining the digital strategy envisioned by the Health Secretary and other long-term strategies, including future remit of NHS Digital (NHSX now part of NHS Transformation Directorate)
- Looking to establish a data-driven ecosystem that will allow patients to have easier and wider access to their personal data and enable easier circulation of collected data between patients, clinicians, and care systems

#### 1.15.2 Entrepreneur Relevance:

- Second year Adoption Fund open to Integrated Care Systems (ICSs) looking to adopt new digital innovations (ICSs offer opportunity to integrate health and care services across multiple settings including general practice, mental health and Improving Access to Psychological Therapies (IAPT) services, primary care, secondary care, community care and social care; NHS traditionally struggled to share information across healthcare settings)
- Industry would need to partner with an ICS to be involved in a funding bid for round two of the Adoption Fund
- Adoption Fund is useful for those with developed digital solutions looking for a clinical environment/ partner to pilot with

# 1.15.3 Budget:

- £6.5M awarded to 35 applications in first round of funding for Adoption Fund, for areas such as gastroenterology pathways, musculoskeletal pathways, initiatives to support digital inclusion and cardiology and cardiac surgery
- Second round of Adoption Fund offers up to £200,000 awards to ICSs looking to introduce or scale up digital innovations (out of a total of £5.2M)

#### 1.15.4 Key Programmes:

- Adoption Fund: Funding introduction and scaling up of digital innovations in various medical areas.
   Current focus on Gastroenterology, Musculoskeletal (MSK), Respiratory
- New Hospital Programme (NHP): Developing a digital blueprint to steer the design of digital hospitals and develop cost and benefit models to support business case development
- What Good Looks Like (WGLL): Providing clear guidance for health and care leaders to digitise, connect and transform services safely and securely

#### 1.15.5 Access Details:

- Areas Funded: Fund all digital innovation but the latest areas of focus are Gastroenterology, Musculoskeletal (MSK), Respiratory
- Eligibility: ICSs for second round of Adoption Fund
- Funding Type: Grant funding
- Key Partners: NHS Digital, ICSs, Industry
- Contact Details: Applications to Adoption Fund can be made here: <a href="https://transform.england.nhs.uk/">https://transform.england.nhs.uk/</a>
   key-tools-and-info/adoption-fund/

# 1.15.6 Impact to Date:

- Funded 35 applications previously with up to £6.5M split between them
- Now looking to award funding of £5.2M to ICSs looking to adopt new innovative technology

#### 1.15.7 Future Policy Direction:

- Announced 2021 NHSX would merge with NHS Digital and NHSX brand retired now part of NHS
   Transformation Directorate
- Focus on accelerating digitisation in NHS
- Desire to cut time spent by clinicians inputting and accessing data in NHS system and ensure secure and reliable access to essential diagnostic info in clinic
- Continued effort to create more innovator friendly environment by improving access to, and availability of, NHS data

#### 1.15.8 Selected Case Studies:

- Automated SMS and patient videos to improve bowel preparation quality for colonoscopy
- Home fecal calprotectin testing pilot in an area of high social deprivation
- Automated endoscopy bowel preparation, pre-assessment and patient education
- Video-based exercise rehabilitation and physiotherapy-led group exercise classes
- Using decision support tools to self-manage low back pain

#### Footnotes:

More details on case studies available - <a href="https://htn.co.uk/2021/11/19/innovations-in-focus-all-35-winners-of-nhsxs-new-adoption-fund/">https://htn.co.uk/2021/11/19/innovations-in-focus-all-35-winners-of-nhsxs-new-adoption-fund/</a>
Organisation website: <a href="https://transform.england.nhs.uk/">https://transform.england.nhs.uk/</a>



# 1.16 NHS Supply Chain - Procurement Support

# 1.16.1 Overview & Key Objectives:

- Manages sourcing, delivery and supply of healthcare products, services and food for NHS trusts and healthcare organisations across England and Wales
- Works closely with Integrated Care Systems (ICSs) to test new service offerings and ensure fit for purpose products are delivered that improve clinical outcomes through innovation and safety

### 1.16.2 Entrepreneur Relevance:

- Aimed at supporting NHS organisations. with procurement and logistics services more than product development
- Innovation scorecard can be used by innovators to submit their products for contract consideration by NHS Supply Chain outside of tender processes
- Also a contract and tender process to view and apply for current NHS contracts (e-procurement portal)

### 1.16.3 Budget:

Government target of 33% of public expenditure being placed with SME organisations

### 1.16.4 Key Programmes:

- Product Innovation/Innovation Scorecard: Provides the last step in bringing innovative products
  to market via legally compliant route; providing a clear procurement route for new innovations.
  Innovation scorecard is an online tool that allows suppliers to submit truly innovative products outside
  of the tender process, for contract consideration by NHS Supply Chain
- High-cost tariff-excluded devices: New system for purchasing HCTED used in specialised services
- Service improvements: Includes programmes for improving warehousing (CTR project) & IT infrastructure; improving online ordering experience and improved reporting
- National Wound Care Strategy Programme (NWCSP): Working to support NWCSP programme
- Small Changes, Big Differences: Work with NHS nurses to involve them in decision-making on products
- Value Based Procurement: Project looking at shifting from reduction in product costs to reduction in total costs within patient pathway

#### 1.16.5 Access Details:

- Areas Funded: Procure along 11 specialist buying functions delivering clinical consumables, capital
  medical equipment and non-medical products, such as food and office solutions. Along with two
  enabling services for logistics and supporting technology
- Eligibility: Industry
- Funding Type: Supply contracts awarded to industry
- Key Partners: NHS England, NHS Improvement, NICE, AHSNs
- Contact Details: For information on scorecard access: <u>innovation@supplychain.nhs.uk</u> and for eProcurement portal: <u>https://nhssupplychain.app.jaggaer.com/web/login.html</u>

## 1.16.6 Impact to Date:

- Founded in 2006
- Manages more than 8M orders per year, across 94,000 order points and 17,465 locations and delivers over 28M lines of picked goods to the NHS annually
- Scorecard was launched in 2009 and has received 300 submissions, 28 of which have made it to contract

# 1.16.7 Future Policy Direction:

- Procurement will be conducted under a single process across four defined product groups going forward:
  - Medical Consumables: surgical consumables and infection control
  - Medical Consumables: rehabilitation and community
  - Non-Medical: food
  - Non-Medical: facilities (including office supplies)
- Aim to deliver £2.4BN in savings by 2023

#### 1.16.8 Selected Case Studies:

- Products brought to NHS via innovation scorecard include:
  - Tournistrip: Developed by ASep Healthcare as single-use disposable tourniquet
  - Bailey Instrument's Nail Nipper: Podiatry clippers
  - Econix home birth delivery packs: Equipment box to support home births
  - SleepAngel pillow: Pillow designed to stop infection in medical industry

#### Footnotes:

More details on case studies: https://www.stateofflux.co.uk/ideas-insights/case-studies/nhs-supply-chain

Other case studies available: https://www.supplychain.nhs.uk/news/casestudies/

Organisation website: https://www.supplychain.nhs.uk/



# 1.17 Health Technology Wales (HTW) - Knowledge Support

# 1.17.1 Overview & Key Objectives:

- National body working to improve the quality of care in Wales (funded by the Welsh Government)
- Work focuses on three key areas: identifying upcoming tech/innovation, appraising it and offering guidance on its adoption, should it be judged appropriate
- Remit covers any technology or model of care and support in health and social care that isn't a
  medicine. For health, this could include medical devices and diagnostics and for social care, it could
  include equipment, or different models for supporting families, children, adults and the workforce

### 1.17.2 Entrepreneur Relevance:

- Option for innovators wishing to appraise their products (e.g., run pilot schemes or receive official endorsement)
- Holds influence with healthcare policy-makers; an influential body to engage with when seeking access to NHS organisations and product legitimacy

### 1.17.3 Budget:

 Funding not available to innovators; support comes in the form of advice and generating guidance for policy-makers on healthcare innovations submitted for appraisal

### 1.17.4 Key Programmes:

- **Digital Health Open Call:** Aimed at identifying the next big digital health technologies for Wales, by inviting applications from health and social care professionals to send in solutions for appraisal
- Social Care Open Call: Requesting technologies and models of care and support that offer benefits
  to those who use social care to be referred to HTW for assessment. Ideas could include support
  programmes, devices, therapies and any other technologies or models of care and support. Open
  to anyone
- Scientific Advice Service: Set up to help health technology developers and innovators optimise their plans, and route to market, via expert consultancy, that helps to generate evidence and demonstrate value that meets the needs of care commissioners, care providers, patients and service users

#### 1.17.5 Access Details:

- Areas Funded: All healthcare topics (that are non-medicine), examples of topics appraised and guidance delivered include: electronic blood management systems, transcranial magnetic stimulation, cardiopulmonary exercise testing, rapid antigen detecting tests, occipital nerve stimulation
- Eligibility: Anyone is able to contact HTW with innovative ideas
- **Funding Type:** Does not offer funding; support comes in the form of advice and appraisal of healthcare innovations submitted by innovators
- Key Partners: NHS Wales, Industry, Academic Institutions
- Contact Details: Scientific Advice Service provides advice and helps innovators plot their route to market. For information, visit: https://healthtechnology.wales/sas/

# 1.17.6 Impact to Date:

- Established in 2017 as a national Health Technology Assessment (HTA) body
- 308 topics for appraisal sent to HTW since 2017, 88 sent in 2021
- 22 topics have been progressed to evidence appraisal stage and 17 pieces of guidance published in 2021
- Industry is responsible for sending most topics in 2021 (just under 40)

# 1.17.7 Future Policy Direction:

 Long-term vision is to develop a world-class HTA organisation that facilitates the identification, appraisal and adoption of health technologies that offer most promise to deliver improved health outcomes and value for the people of Wales

#### 1.17.8 Selected Case Studies:

- META tool pilots with Rescape Innovation¹
- META tool pilots with Bevan Health Tech Exemplars<sup>2</sup>
- Hydrogen peroxide vapour to reprocess single-use PPE<sup>3</sup>

#### Footnotes:

- 1. <a href="https://healthtechnology.wales/case-study-meta-tool-pilots-with-rescape-innovation/">https://healthtechnology.wales/case-study-meta-tool-pilots-with-rescape-innovation/</a>
- 2. https://healthtechnology.wales/case-study-meta-tool-pilots-with-bevan-health-tech-exemplars/
- 3. https://healthtechnology.wales/case-study-hydrogen-peroxide-vapour-to-reprocess-single-use-ppe/

Organisation website: https://healthtechnology.wales/



# 1.18 Life Sciences Hub Wales (LSHubWales) – Business Support Services

# 1.18.1 Overview & Key Objectives:

- Arm's length body of Welsh Government that exists to catalyse innovation and collaboration between industry, health, social care and academia
- Overall mission is to accelerate the development and adoption of innovative solutions for better health and wellbeing and make Wales the place of choice for health, care and wellbeing innovation

#### 1.18.2 Entrepreneur Relevance:

- Offers a support service to innovators wishing to better understand innovation environment as does not directly provide funding
- Can help with bid writing and contacting other organisations who do offer funding

## 1.18.3 **Budget**:

• Does not currently offer funding support to innovators; helps to support applications to those that do

# 1.18.4 Key Programmes:

- Health & Social Care Innovation Support: Support includes e.g., Innovation project management and facilitation; facilitating engagement with industry specialists; event support, facilitation, and management. Business Innovation Support: Support includes, e.g., marketing intelligence reports and insights; inward investment and business relocation advice; business case support; Funding advice
- Accelerate Wales: Helps innovators in Wales to translate their ideas into solutions, enabling them
  to be adopted in health and care. Does this by helping with identifying research and development
  collaborations, connecting innovators to experts in health technology, user experience, and clinical
  engagement and helping to navigate the life sciences support ecosystem
- Digital Health Ecosystem Wales (DHEW): Brings together industry, clinicians, policy makers, academics, innovators and funders to create an environment of digital innovation in Welsh healthcare

#### 1.18.5 Access Details:

- Areas Funded: Current priority areas are Digital, Al and Robotics, Healthy Ageing, Precision Medicine, Advanced Therapies, Value-Based Health Care
- Eligibility: Industry, Health & Social Care Organisation
- Funding Type: Does not offer financial support offers support via business services for innovators
- Key Partners: Universities (e.g., Swansea university), Health Technology Wales (HTW), NHS
  organisations in Wales
- Contact Details: List of funding opportunities LSHubWwales can support application to can be viewed here: https://lshubwales.com/support/funding-opportunities

#### 1.18.6 Impact to Date:

- Established by Welsh Government in 2014
- Supported 781 organisations and helped secure £2.3M in funding in 2020/21 for innovators and researchers

# 1.18.7 Future Policy Direction:

- Long term strategic aims are to:
  - Improve health and wellbeing outcomes for people in Wales
  - Improve efficiency and value within the health and social care system
  - Drive economic development through business growth and jobs
- Currently consulting on a new innovation strategy for Wales that will help to select innovation priorities

#### 1.18.8 Selected Case Studies:

- Establishing a support service to reduce alcohol-related hospital admissions<sup>1</sup>
- Working collaboratively to improve eye care for patients across Wales<sup>2</sup>
- Improving outcomes with Heart Failure with Reduced Ejection Fraction<sup>3</sup>
- Improving emergency care for patients with Acute Kidney Injuries in Wrexham<sup>4</sup>

#### Footnotes:

- 1. https://lshubwales.com/success-stories/alcohol-liaison-servic
- 2. https://lshubwales.com/success-stories/improve-patient-eye-care
- 3. https://lshubwales.com/success-stories/heart-failure
- 4. https://lshubwales.com/success-stories/acute-kidney-injuries

Organisation website: https://lshubwales.com/



# 1.19 Scottish Health Technology Group (SHTG) – Knowledge Support

# 1.19.1 Overview & Key Objectives:

- SHTG is a national health technology assessment (HTA) agency that provides advice to NHS Scotland
  on the use of new and existing health tech (excluding medicines) likely to significantly impact
  people's care
- Health technology is often assessed by clinical effectiveness, safety, cost effectiveness (health
  economics) and the views of patients and healthcare professionals, as well as wider effects for the
  healthcare system

### 1.19.2 Entrepreneur Relevance:

- Useful for those seeking to gain access and legitimacy within healthcare system to e.g., launch pilot scheme with an NHS Trust, apply for funding from another organization, etc.
- Have links to multiple healthcare organisations in public and private sectors, which could be leveraged to build partnerships

### 1.19.3 Budget:

 Funding is not provided to innovators; support comes in the form of providing advice on new health technologies and offering guidance on adoption of new technologies to public health providers and policy-makers

### 1.19.4 Key Programmes:

- Health technology assessment (HTA) comes in a range of options:
  - SHTG Recommendation: Evidence-based SHTG recommendations developed by a national committee in consultation with stakeholders. Clinical effectiveness, safety and cost effectiveness evidence are considered, alongside patient and public views, professional expert views and social & organisational implications
  - SHTG Assessment: Targeted analysis to provide support for decision-making across health and social care in Scotland. Does not include recommendations. May include a critical appraisal or summary of existing evidence, primary analyses, such as economic modelling or budget impact assessment, qualitative synthesis
  - SHTG Adaptation: Evaluation of the applicability of an HTA conducted elsewhere in the UK or internationally. Includes consultation with health and care experts in Scotland
  - SHTG Innovative Medical Technology Overview: High-level summary of the emerging evidence surrounding health and care innovation in Scotland. Does not include recommendations

#### 1.19.5 Access Details:

- Areas Funded: Any health technologies that align with national strategy focus areas and make best use of resources
- Eligibility: Anyone can request advice
- Funding Type: No funding provided
- Key Partners: Policy-makers, decision making groups, service providers, professional groups (e.g., royal colleges), patient safety regulators, community/patient groups, innovation groups (e.g., AHSNs, regional innovation hubs), industry, NICE, NHSX
- Contact Details: To submit an advice request use: <a href="https://shtg.scot/request-advice/form-for-requesting-advice/">https://shtg.scot/request-advice/form-for-requesting-advice/</a>

# 1.19.6 Impact to Date:

- Currently working on advice for 11 research topics
- Provides 20+ published pieces of advice on health technologies quarterly

# 1.19.7 Future Policy Direction:

- · Will continue to offer advice to inform decision making in healthcare for Scotland
- Continue to raise awareness of health technologies and expand engagement with patient organisations, service users, public, industry, academia and government
- Further embed the role of HTAs in ensuring safe, equitable and sustainable use of health technologies

#### 1.19.8 Selected Case Studies:

- Al for reading chest X-Rays: Use of Al in reading chest x-rays and its clinical utility for patients
  presenting to primary care
- Bacteriophage therapy: Evaluation of bacteriophage therapy in patients whose clinical needs are not met by antibiotics
- **Bluetooth tagging:** Investigation of whether Floki Bluetooth Tagging system is a cost-saving intervention for tracking medical equipment in a hospital setting

#### Footnotes:

More details on case studies shown - <a href="https://shtg.scot/what-we-do/work-programme/">https://shtg.scot/what-we-do/work-programme/</a>
Organisation website: <a href="https://shtg.scot/">https://shtg.scot/</a>

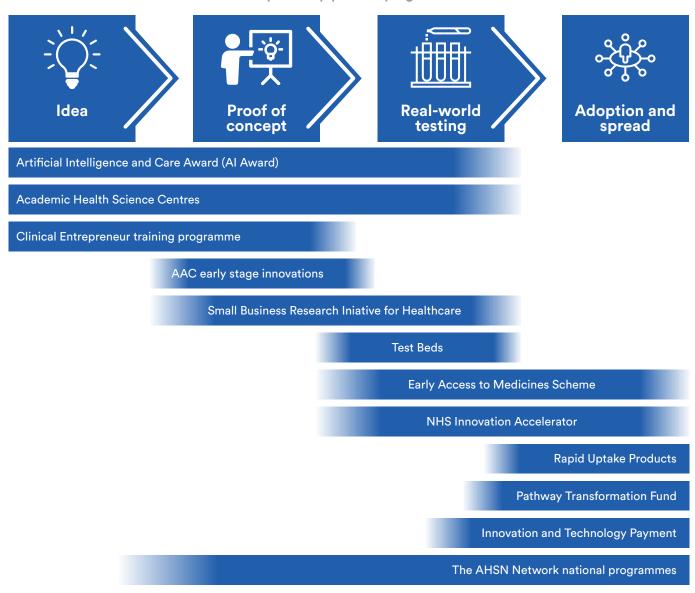


# 2 Accelerated Access Collaborative (AAC)

# 2.1 Overview & Innovation Pipeline

- AAC exists to get more proven innovations into the hands of clinicians and patients more quickly, and to make the NHS a great place to innovate so that development of innovations can be accelerated
- This is achieved by supporting a range of innovation programmes and working in partnership with other organisations, e.g., NHS organisations, government, academia, industry

**AAC product pipeline & programmes** 





#### **AAC Partner Organisations**

- Academic Health Science Networks (AHSNs)
- Academy of Medical Royal Colleges (AOMRC)
- Association of British HealthTech Industries (ABHI)
- Association of the British Pharmaceutical Industry (ABPI)
- Association of Medical Research Charities (AMRC)
- BioIndustry Association (BIA)
- Medicines and Healthcare Products Regulatory Agency (MHPRA)
- National Institute for Health and Care Excellence (NICE)
- National Institute for Health and Care Research (NIHR)
- National Voices
- NHS Digital
- NHS England
- The British In Vitro Diagnostic Association (BIVDA)
- The Department of Health and Social Care (DHSC)
- The Department for Business, Energy and Industrial Strategy (BEIS)
- UK Research and Innovation (UKRI)

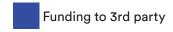
# 2.2 AAC Priorities

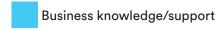
Priorities	Description	
Innovation service	Create a 'front door' to the innovation ecosystem, with information, support and signposting to partners all available in one place	
Demand signalling	Help innovators to understand the kinds of innovation the NHS really needs in order to meet its challenges	
Horizon scanning	Make it easier for NHS teams to have clear sight of the best new innovations, so that health systems are prepared and ready to support them	
World-leading testing infrastructure	Create an infrastructure that has vital opportunities for innovators to develop and improve their products and establishing high-quality evidence for adoption and spread	
Adoption & spread	Help the NHS become stronger in its adoption of innovations and in its support for the spread of the best new solutions, getting them into the hands of clinicians and patients much more quickly	
Funding strategy	Develop more practical funding for innovation support, which aligns with the government's health innovation funding and the work of charities, research organisations and investors	

# 2.3 AAC National Programmes

Programmes	Description
Clinical Entrepreneur training programme	Workforce development programme for clinical and non-clinical NHS staff, run by NHS England's Innovation, Research and Life Sciences group and delivered jointly with Anglia Ruskin University. Aims to provide commercial skills, knowledge and experience needed to successfully develop and spread innovative solutions to NHS
AAC early stage innovations	Advanced Medicinal Therapy Products (ATMPs) and Histology Independent Therapies (HITs) selected for AAC support because they both required system wide changes to smooth their introduction into NHS. Programme aims to ensure the healthcare system is ready to introduce more of these innovative treatments
Small Business Research Initiative for Healthcare (SBRI)	Programme supporting development of new innovations which meet known NHS challenges by running competitions for innovations identified as an unmet need
Test Beds	Bring NHS organisations and industry together to test innovations with pathway redesign in real-world settings (more details in overview of institutional support section)
The NHS Insights Prioritisation Programme (NIPP)	Designed to accelerate the evaluation and implementation of innovation that supports post- pandemic ways of working, builds service resilience and delivers benefits to patients
Early Access to Medicines Scheme (EAMS)	Helps to give people with life threatening or seriously debilitating conditions early access to new medicines that do not yet have a marketing authorization, but where there is a clear unmet medical need
NHS Innovation Accelerator (NIA)	Supports innovators to accelerate the uptake of high-impact innovations for patient, population and NHS staff benefit (more details in overview of institutional support section)
Rapid Uptake Products (RUP) programme	Programme designed to support stronger adoption and spread of proven innovations. It identifies and supports products with NICE approval that support the NHS Long Term Plan's key clinical priorities, but have lower than expected uptake to date. RUP examples incl., asthma biologics, FeNO testing (asthma diagnosis method)
Pathway Transformation Fund	Funding available through the new Pathway Transformation Fund (PTF) to help NHS organisations integrate the rapid uptake products into everyday practice. Delivered with the support of the Academic Health Science Networks (AHSNs) and in partnership with the rapid uptake product suppliers
The Innovation and Technology Payment programme (ITP)	Supports the NHS to adopt innovations by removing some of the financial and procurement barriers to introducing new technologies. It is a competitive process for innovations and technologies that have already proved their clinical effectiveness and are ready to be rolled out nationally
Academic Health Science Networks (AHSNs)	15 Academic Health Science Networks (AHSNs) across England that help to spread innovation at pace and scale, improving health and generating economic growth (more detail in AHSN section)
Academic Health Science Centres	Regional partnerships bringing together expertise from universities and NHS organisations to translate early scientific research and discoveries into healthcare (more details in overview of institutional support section)
Artificial Intelligence in Health and Care Award	Run by the AAC, NHSX and NIHR, the AI Health and Care Award will make £140 million available over three years to accelerate the testing and evaluation of the most promising AI technologies which meet the strategic aims set out in the NHS Long Term Plan (more details in overview of institutional support section)
The NHS Innovation Service	Developed to accelerate the spread of promising and impactful innovations into the NHS, it is an online service for health and care innovators, aiming to support individuals and companies at all stages of the innovation journey, e.g., help them to get their products, services or ideas adopted in the NHS

Funding to NHS staff/organisations







# 2.4 Detailed overview: NHS Clinical Entrepreneur Programme

### 2.4.1 Overview & Key Objectives:

- Workforce development programme for clinical and non-clinical healthcare professionals with interest in entrepreneurship and innovation
- The programme aims to provide the commercial skills, knowledge and experience needed by individuals, in order to allow them to successfully develop and spread innovative solutions for the challenges facing the NHS, for the benefit of patients, staff and the wider NHS

#### 2.4.2 Entrepreneur Relevance:

 Not relevant for businesses; only for individuals working in healthcare, seeking education opportunities within entrepreneurialism and innovation

### **2.4.3 Budget:**

 No grants or loans available to businesses; funding is for course places awarded to those who are selected to join the programme

## 2.4.4 Key Programmes:

- Clinical Entrepreneur Programme:
  - Curriculum covers all aspects of setting up and running a small business, including attracting investors, applying for funding, and ensuring appropriate corporate governance
  - Training on how to build a start-up and operate in competitive environment is delivered as a series
    of educational events attended by industry mentors, e.g., pitches, business planning sessions,
    lectures, webinars etc.

#### 2.4.5 Access Details:

- Areas Funded: Curriculum focused on entrepreneurship and innovation in healthcare, e.g., pitching, setting up a business, attracting investors
- Eligibility: Clinical and non-clinical healthcare professionals
- Funding Type: No grants or loans; an educational course
- **Key Partners:** Programme run by NHS England and NHS Improvement's Innovation, Research and Life Sciences Group and delivered jointly with Anglia Ruskin University
- Contact Details: Programme details: <a href="https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/clinical-entrepreneur-programme/">https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/clinical-entrepreneur-programme/</a>

# 2.4.6 Impact to Date:

- Programme started in 2016
- Supported more than 500 individuals including: doctors, scientists, nurses, midwives, pharmacists

#### 2.4.7 Future Policy Direction

- Continue to support healthcare workforce to develop and scale innovative ideas for the benefit of patients, staff and NHS
- Develop leadership capability to deliver on the promise of digital health, genomics, data analytics, advanced technology
- Support invention, commercialisation and adoption of new products, services, and care pathways by enabling commercial, social, public and charitable sector entrepreneurship

# 2.4.8 Selected Case Studies:

- Dr Krishan Ramdoo, Ear, Nose and Throat Research Fellow, GP, Founder and Chief Executive of Tympahealth and a clinical entrepreneur
- Dr Hinnah Rafique, Founder of Generation Medics

#### Footnotes:

 $\label{thm:case_studies} These case studies, plus others are available here: $$\underline{\text{https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/clinical-entrepreneurs/}$$ $$\underline{\text{https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/clinical-entrepreneurs/}$$ $$\underline{\text{https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/clinical-entrepreneurs/}}$$$ 

Organisation website: <a href="https://nhscep.com/">https://nhscep.com/</a>



# 2.5 Detailed overview: Rapid Uptake Products (RUP)

# 2.5.1 Overview & Key Objectives:

 Programme has been designed to support adoption and spread of proven innovations by identifying and supporting products with NICE approval, but have lower than expected uptake to date

### 2.5.2 Entrepreneur Relevance:

- Rapid uptake products are selected by an NHS expert panel and companies can apply in an open selection process
- Current programmes already selected but likely future selections will take place

### **2.5.3 Budget:**

• £2M was provided for 2017/20 programme to support adoption of new products, likely around this figure for latest programme

# 2.5.4 Key Programmes:

The following innovations were selected for 2020/22 programmes:

- Lipid Management: High Intensity Statins, Ezetimibe and PCSK9 inhibitors: Innovation aims to improve a person's lipid profile, by reducing cholesterol concentration in blood by treating patients with right medicine along the evidence-based pathway. The pathway includes 3 medicines: high intensity statins (HIST), ezetimibe, and PCSK9 inhibitors
- Measuring fractional exhaled nitric oxide (FeNO) concentration in asthma: products NIOX VERO
  and NObreath: FeNO testing is a method of diagnosing asthma by measuring fractional exhaled
  nitric oxide (FeNO) in the breath of patients suspected of having asthma. The aim of this innovation
  will be to improve patient care and outcomes by more effective diagnosis of patients suspected of
  having asthma
- Biologics for treating severe asthma: Reslizumab, Benralizumab, Mepolizumab and Omalizumab:
  Biological therapies can transform patient lives by reducing long-term side effects of other treatments
  (e.g. oral corticosteroids (OCS)) and can also reduce the number of exacerbations and life-threatening
  asthma attacks

#### 2.5.5 Access Details:

- Areas Funded: Various medical themes
- Eligibility: Open selection process; products must help patients, create cost savings and have clear barriers to adoption that the AAC could help address
- Funding Type: Support offered to NHS organisations; trialing products
- Key Partners: National Clinical Directors (in the area associated with the RUP), NHSE clinical and
  policy leads, NHS Specialised Commissioning, Academic Health Science Network (AHSN), Royal
  Colleges (in the area associated with the RUP), Academy of Medical Royal Colleges, Association of
  Medical Research Charities (AMRC)
- Contact Details: AHSNs have local RUP contacts

#### 2.5.6 Impact to Date:

 Programme launched successfully in 2017/20 with themes selected via an open, staged, selection process

# 2.5.7 Future Policy Direction

- Current wave of products (detailed in key programmes section) have been selected and are being rolled out
- Will likely be another selection of products in the future

#### 2.5.8 Selected Case Studies:

- HeartFlow: Non-invasive personalized cardiac test that reduces the need for unnecessary procedures
- PCSK9 inhibitors: for treatment of primary hypercholesterolemia and mixed dyslipidemia, costeffective drugs that significantly lower cholesterol
- Quantitative faecal immunochemical tests for colorectal cancer: Diagnostic tests that reduce referrals for patients with suspected colorectal cancer

#### Footnotes:

Programme website: https://www.england.nhs.uk/aac/what-we-do/introducing-revolutionary-medicines-to-the-nhs/rapid-uptake-products/



# 2.6 Detailed overview: Pathway Transformation Fund (PTF)

# 2.6.1 Overview & Key Objectives:

- Helps NHS organisations integrate the rapid uptake products into everyday practice. Delivered with the support of the Academic Health Science Networks (AHSNs) and in partnership with the rapid uptake product suppliers
- PTF can help providers overcome practical obstacles to introducing these products, such as: support
  set-up costs, e.g., training and accreditation of staff; pathway redesign and/or business support
  expertise; providing funding for specialist nurses and clinical staff needed to implement a new part of
  the procedure and covering double running costs

### 2.6.2 Entrepreneur Relevance:

- Funding for phase three has now closed and projects to support have already been selected for 2021/22
- Worth staying up to date on programme for when next selection of products is chosen
- Funding not provided to businesses but would provide an opportunity to partner with NHS organisations trialing innovative new treatments

### **2.6.3 Budget:**

- 51 projects worth almost £2.8M have been supported in 2020/21
- Project funding is up to £250,000 per project

### 2.6.4 Key Programmes:

- Phase three of the Pathway Transformation Fund (PTF) will support the 2021/22 Rapid Uptake Products (RUPs):
  - Lipid Management: High Intensity Statins, Ezetimibe and PCSK9 inhibitors
  - Measuring fractional exhaled nitric oxide (FeNO) concentration in asthma: products NIOX VERO and NObreath
  - Biologics for treating severe asthma: Reslizumab, Benralizumab, Mepolizumab and Omalizumab

#### 2.6.5 Access Details:

- Areas Funded: Products selected for the Rapid Uptake Products programmes, i.e., currently lipid management, FeNO and biologics
- Eligibility: NHS organisations running trials of selected products
- Funding Type: Grant funding
- Key Partners: AHSNs, NHS Trusts
- Contact Details: <a href="mailto:aac.innovation@nhs.net">aac.innovation@nhs.net</a> (AHSNs also offer information and support on the programme)

#### 2.6.6 Impact to Date:

- Have supported previous Rapid Uptake Products, e.g., HeartFlow and PCSK9 inhibitors
- Provided more than £370,000 to 16 projects in phase one of the Rapid Uptake Products programme

# 2.6.7 Future Policy Direction

 Likely to continue supporting Rapid Uptake Products in the future when next round of products selected

## 2.6.8 Selected Case Studies:

- UroLift: placental growth factor-based testing and high-sensitivity troponin testing in an under three-hour protocol
- West of England and South West AHSN regions: The South West Severe Asthma Network will work
  with all hospitals to create a common pathway for managing asthma care, streamlining the process of
  referral to severe asthma centres and access to asthma biologic therapy

#### Footnotes:

 $\label{lem:programme} \begin{tabular}{ll} Programme website: $https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/pathway-transformation-fund/#how-are-the-ptf-applications-judged \\ \end{tabular}$ 



# 2.7 Detailed overview: Small Business Research Initiative for Healthcare (SBRI)

## 2.7.1 Overview & Key Objectives:

 Initiative supports a programme of competitions inviting companies to come forward with their ideas and new technologies for known NHS challenges

### 2.7.2 Entrepreneur Relevance:

- Strong source of funding for businesses, especially SMEs and early-stage businesses needing funding for critical stage of product development
- Although currently no open competitions, a few are upcoming and more will likely be launched in the future
- Innovator also retains intellectual property on the innovation

## **2.7.3 Budget:**

- SBRI programme is based on taking a two-phased development approach:
  - Phase one contracts for feasibility testing are valued at up to £100,000 and last for six months
  - Phase two contracts for prototype development are worth up to £1M over 1 year

### 2.7.4 Key Programmes:

- Competition examples:
  - Delivering a net zero NHS: Clinical Innovation Competition: Second net zero competition seeks innovative solutions that focus on decarbonising clinical pathways that are the most carbon intensive
  - Stroke and Technology competition for development funding: Funding competition is open to small and medium sized enterprises (SMEs) and organisations from the private, public and third sectors, including charities. Applicants are invited to submit innovative solutions to tackle three specific challenges: pre-hospital diagnosis, rehabilitation, life after stroke
  - Respiratory diseases: projects to implement medical devices, in vitro diagnostics, digital
    health solutions, behavioural interventions, software, artificial intelligence and new models
    of care, to address challenges in the following themes: respiratory diseases and prevention of
    cardiovascular disease

#### 2.7.5 Access Details:

- Areas Funded: Range of medical topics (depends on competition)
- Eligibility: Open to all businesses with innovative healthcare products. Applicants must meet competition theme they are applying for, e.g., cardiovascular disease competition
- Funding Type: Competition style funding where winners are awarded funding. SBRI contracts are 100% funded and innovator retains intellectual property
- Key Partners: Industry, NHS organisations, AHSNs, Charities
- Contact Details: https://sbrihealthcare.co.uk/contact-us/

# 2.7.6 Impact to Date:

- Initially launched in 2009
- Supported over 200 companies to develop innovative technologies that match the needs of the health service
- Currently up to competition number 22

### 2.7.7 Future Policy Direction

- Will continue to support businesses with new competition launches
- Currently one upcoming competition focused on delivering a net zero NHS

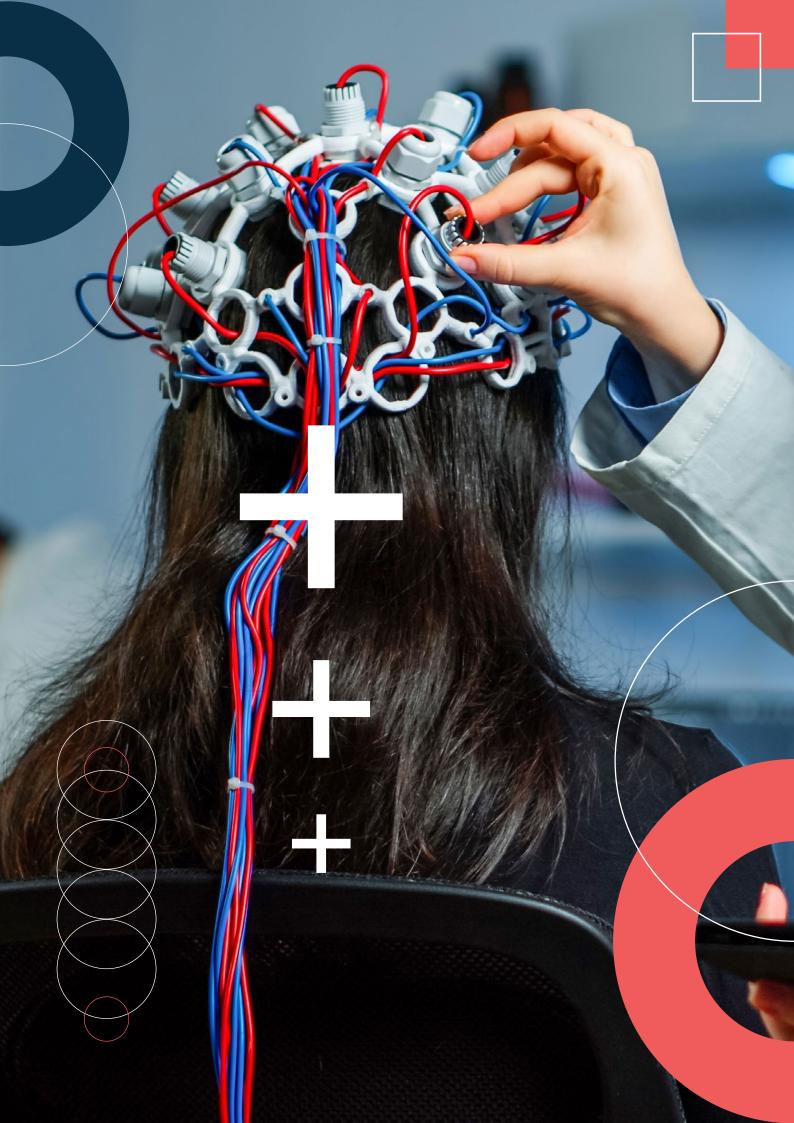
#### 2.7.8 Selected Case Studies:

- Health Navigator: Deploys artificial intelligence on NHS data to identify patients at risk of consuming avoidable non-elective bed days
- NeuroResponse: Application enabling people living with long-term neurological conditions to access expert advice 24/7 in the diagnosis and management of urinary tract infections from home
- RAIQC: A clinical simulation platform for medical image interpretation for training

#### Footnotes:

More case study details available – <a href="http://sbrihealthcare.co.uk/case-studies/">http://sbrihealthcare.co.uk/case-studies/</a>

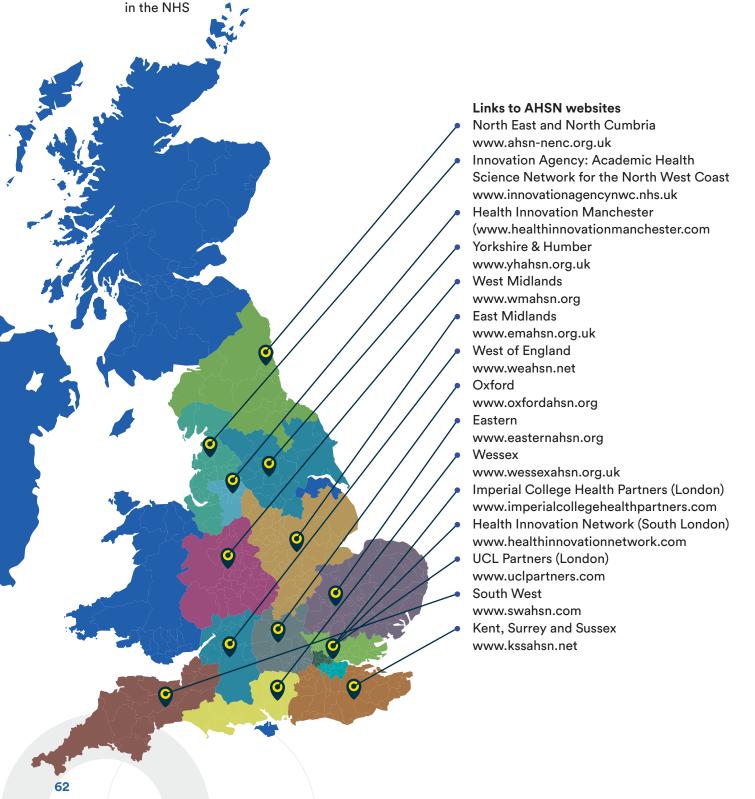
Programme website: https://sbrihealthcare.co.uk



# **The Academic Health Science Network (AHSN)**

# 3.1 Overview

- England's 15 AHSNs were set up by NHS England in 2013 and relicensed in April 2018 to operate as the key innovation arm of the NHS
- They provide support to innovation businesses in the form of e.g., product development advice & guidance, networking and spread and adoption, in collaboration with their many healthcare partners





# **3.2 AHSN Policy Directions**

Policy themes	Description
Drive national innovation spread programmes	Work to deliver local work programmes based on the needs of regional systems and collectively drive initiatives that tackle national priorities and are expected to have a universal impact at scale
Accelerate patient access to NICE- approved technology & treatments	AHSN Network works in partnership with NHS England and NHS Improvement's Accelerated Access Collaborative (AAC) to bring together industry, Government, regulators, patients and the NHS to remove barriers and accelerate the adoption and spread of new treatments and diagnostics which can transform care
Support innovators and drive economic growth	Bridge the gap between the NHS and industry, bringing the very best innovative solutions to the NHS and helping to create economic growth by harnessing NHS investment
Improve safety	Support Patient Safety Collaboratives (PSCs) that play an essential role in identifying and spreading safer care initiatives throughout the health and care system and embedding new pathways of care
Work in partnership	Work closely and develop partnerships with a range of organisations who also support the health and care system, incl., industry, and academia to have the most significant impact, e.g., NICE, NIHR Applied Research Collaboration (ARCs), NHS Confederation, the Health Foundation, Health Education England, NHS England
Pursue cross-cutting priorities of work	Committed to developing and supporting best practice approaches in selected priority areas and dedicated to being a driving force to bring about progress. Priority areas are: diversity & inclusion, health inequalities, patient & public involvement and co-design, digital solutions & AI, workforce, sustainability & the environment, patient safety

# **3.3 AHSN National Programmes**

National programme themes 2022	Description
Blood pressure optimization programme	Will support Primary Care Networks (PCNs) to implement the UCLPartners Proactive Care Framework for hypertension, to optimise clinical care and self-management of people with hypertension
Polypharmacy Programme: getting the balance right	Work across 3 pillars to improve medicine prescription: 1. better population health management, e.g., identify patients in need of Structured Medication Review 2. improved education & training to upskill primary care workforce 3. public behaviour change to encourage patients to open up on medicine concerns & expectations
Transforming Wound Care	Support local healthcare organisations to establish a dedicated Lower Limb Wound Service which suit the needs of the local population, i.e., with better staff training, improved wound management processes and implementation of better technology for treating wounds
National programme themes 2020/2	1
Focus ADHD	Programme involves working with trusts across England to implement an objective assessment tool, the QbTest, (measuring attention, impulsivity and activity) to supplement current clinical assessment processes
Early intervention eating disorders	Trialling FREED (First episode Rapid Early intervention for Eating Disorders) approach, an evidence-based, specialist care package for 16-25-year-olds with a first episode eating disorder of less than three years' duration
Lipid management & familial hypercholesterolaemia (FH)	Joint AAC and AHSN Network programme to support primary care in prevention and management of cardiovascular disease (CVD). Will introduce targeted interventions for people with high cholesterol, incl., identifying and treating people with FH and further regional activity focusing on atrial fibrillation (AF) and high blood pressure
National programme themes 2018/2	0
Atrial fibrillation (AF)	Focused on 3 key elements of AF pathway: 1. Detect – raising public awareness of AF 2. Protect – supporting healthcare professionals to offer optimal anticoagulation medication 3. Perfect – supporting patients with anticoagulation medication & supporting clinicians to review patients
Emergency laparotomy	Funded by the Health Foundation, the Emergency Laparotomy Collaborative was formed in 2015 to use a quality improvement (QI) approach to tackle high mortality rate present with an emergency laparotomy
ESCAPE-pain	Supported uptake of the ESCAPE-pain rehabilitation programme for people with chronic joint pain of the knees and hips, providing self management support in the community
PINCER	To deal with prescribing errors PINCER intervention programme rolled out which involved searching GP clinical systems using computerised prescribing safety indicators to identify patients at risk from their medications and then taking acting to correct them
Prevention of cerebral palsy in preterm labour (PReCePT)	Worked with all maternity hospitals in England to make magnesium sulphate available to mothers who go into labour at less than 30 weeks to reduce risk of cerebral palsy in preterm labour
Serenity integrated mentoring (SIM)	Supported the national rollout of Serenity Integrated Mentoring (SIM), an innovative mental health workforce model that takes a multiagency approach to better support people with complex mental health needs
Transfers of care around medicines (TCAM)	Programme involves identifying patients discharged from hospital needing extra support, who are then referred through a safe and secure digital platform for advice from their local community pharmacist



# 3.4 AHSNs - Innovator Support Programme

# Distinctive A unique offer provided depending on resource availability

#### Enhanced

14 services available to selected innovators where the solution meets a local priority or unmet need.

Transition to Enhanced Offer guided by meeting the AHSN threshold, e.g. is there a local demand or does it meet a priority of the AHSN

#### Universal

4 core services available to all innovators at no cost - UK and International

Examples	Critical appraisal and evidence synthesis
	Support for quantitative market research
	Marketing, comms & stakeholder engagement
	IP advice
	Market access launch planning
	Product development support

2.1 Broker connections to NHS and Social Care organisations	2.9 Broker evidence gathering
2.2 Support to develop value proposition	3.0 Support to apply for funding
2.3 Support for qualitative market research	3.1 Research & evaluation support
2.4 Budget impact & benefits modelling advice	3.2 Health economics support
2.5 Assess gaps in evidence & insights	3.4 Business case development advice and guidance
2.6 Evaluation advice	3.5 Provide showcase opportunities
2.7 Health economics advice	
2.8 Research & evaluation planning	

1.1	Review & Respond	1.3 Advise, Guide and Signpost
1.2	Assess & Triage	1.4 Develop Health & Care understanding

# 3.5 Accessing AHSNs – step-by-step guide

#### IDENTIFY SUITABLE AHSN

- Review AHSN network website to understand geographical coverage of AHSNs
- Select AHSN located in part of country you are based or wish to target

#### REVIEW AHSN WEBSITE

- Review AHSN
   website to
   understand if
   innovation support
   offered meets needs,
   e.g., business case
   planning support,
   networking events,
   clinical trialling
- Also identify where AHSNs health focus may be to gauge potential levels of interest, e.g., mental health, cancer etc.

#### SELECT INNOVATION PROGRAMME

- Examine current programmes on website, noting criteria, funding (if offered), support offered etc. to choose most suitable
- Important to understand where programme sits on innovation pipeline, i.e., development stage, spread & adoption etc.
- Note some AHSNs invite general submissions of innovation ideas even if a suitable programme does not exist

# COMPLETE APPLICATION

- Fill out application form for selected programmes
- Depending on programme, may need details on e.g., business plan, costs, innovation status, previous trial data

#### CONTACT AHSN INDUSTRY LEAD

 Identify on website and contact person responsible for industry partnerships to receive additional support and information, as well as raise awareness of the innovation within AHSN

# 3.6 AHSN - East Midlands

Most current projects in innovation portfolio are focused on demonstrator phase (piloting new innovations) and adoption and spread.

Work Areas		
Cardiovascular Disease (CVD)	Supporting the health and care system in the prevention and management of cardiovascular disease – working with NHS Trusts and Primary Care Services	
Care Homes	Developing training resources for care home staff and NHS professionals covering topics, e.g., pressure ulcers, infections, hydration, falls	
Demonstrator Projects	Run pilot projects of new treatments and care systems, e.g., remote monitoring in care homes, testing Alpha-Stim device that manages symptoms of anxiety	
Digital & Artificial Intelligence	Trialling solutions that use AI to improve healthcare outcomes, e.g., ChatHeaIth – safe and secure messaging app for patients talking to healthcare professionals	
HealthTech	Technologies which improve treatment and management of patients, e.g., trialling ADHD assessment test developed by Qbtech Ltd	
Medicines Pathways	Piloting programmes that aim to make drug roll out more efficient, e.g., testing of asthma biologics as part of rapid uptake products	
Mental Health	Supporting NHS trusts to implement and evaluate new care models for mental health treatment	
Workforce	Optimising the primary care workforce to proactively manage patients with long term conditions	

Support to Industry Partners		
Accelerator Programmes	Programmes supporting companies to spread their digital health technologies and innovations, with tailored packages of support available to the successful applicants, e.g., East Midlands Digital Health Accelerator and East Midlands AHSN Accelerator Programmes (delivered by BioCity)	
Getting ready for NHS market entry programmes	In collaboration with Medilink East Midlands, offer a number of innovator workshops to support SMEs and innovators, providing guidance and expert insight into the NHS and social care market	
MedTech Trials Grants (MTT)	Delivers projects to support businesses and individuals to develop and commercialise new technologies, processes, products and services	
Opportunities for funding	Signpost funding opportunities for businesses	
Signposting to specialist support	If company requires specialist advice, can signpost to support services that help those looking to expand sales into the NHS or public health markets	
National support for health innovators	Can help individuals and businesses obtain national support to develop innovations and access NHS markets	
NHS Entrepreneur programmes	Offer advice & support to NHS Entrepreneurs, from initial idea to launching healthcare products, devices or service	
Patient and Public Involvement support insight	Work across programmes and projects to understand and give insights into needs of patients when introducing new services and innovations into healthcare	

#### Key organisation information:

- CEO: Nicole McGlennon, Managing Director
- Industry Partner Lead: Tim Robinson, Commercial Director
- Link to annual report or strategy plan: <a href="https://emahsn.org.uk/resource-hub/annual-report">https://emahsn.org.uk/resource-hub/annual-report</a>
- Contact Details: emahsn@nottingham.ac.uk

#### **Selected Case Studies:**

- **iEthico:** Developed an Al powered digital platform to mitigate increasing problem of global drug shortages to ensure optimal sourcing & distribution of existing supplies in a timely and logistically efficient manner
- Islacare Ltd: Web-based platform that utilises existing device hardware to capture images, videos, voice, and text data and submits this to health practitioners
- Kids Speech Labs: Delivered data driven solutions to support providers of speech and language therapy in the NHS
- TCC-CASEMIX: Brought stepwise approach to managing operating theatre capacity

#### Footnotes:

Link to more details on case studies - <a href="https://emahsn.org.uk/our-work/industry-and-enterprise/east-midlands-digital-health-accelerator">https://emahsn.org.uk/our-work/industry-and-enterprise/east-midlands-digital-health-accelerator</a>
Organisation website: <a href="https://emahsn.org.uk">https://emahsn.org.uk</a>



### 3.7 AHSN - Eastern

Support all stages of innovation pathway but have a special focus on innovations within mental health, cancer, genomics and ageing.

Work Areas	
Mental Health	Run programmes addressing care for mental health issues, e.g., MedTechBOOST in partnership with Judge Business School and local companies to support development and mentoring of Al innovations that address mental health and ageing challenges
Cancer	Working with researchers and companies to enable faster access to new treatments and to help with identifying potential new treatments and solutions for earlier diagnosis in NHS
Rare diseases & personalised medicine	Supporting projects focused on potential of genomics, e.g., supported the use of a proprietary rare diseases diagnostic platform in local CCG
Living and ageing well	Focus on prevention and well-being agenda that will help support older people to stay out of hospital and better manage long-term conditions

Sı	Support to Industry Partners	
Insight expertise	Offer expertise and access to specialists to help businesses understand clinical and patient needs. Have a range of toolkits to help with guidance on understanding NHS, running clinical trials, engaging patients etc.	
Idea development	Offer insight to impact workshops, clinical entrepreneur scale-up academy events to meet peers, expert talks, debates on key topics and 1:1 support to help commercialise ideas	
Implementation planning	Help innovators navigate complex systems and generate value propositions, support healthcare providers to adopt innovations into practice and provide a framework to adopt and scale projects at national levels, e.g., offer procurement toolkit to help with adoption of a product into NHS	
Roll out support	Assist with implementing business strategy and communicating ideas to healthcare providers and decision makers to help turn product ideas into clinical practice	
Opportunities for funding	Provide links to funding opportunities and support on choosing and applying to appropriate programmes and partners	

#### Key organisation information:

- CEO: Piers Ricketts, Chief Executive Officer
- Industry Partner Lead: Dr Louise Jopling, Commercial Director
- Link to annual report or strategy plan: https://www.easternahsn.org/impactreview/
- Contact Details: enquiries@eahsn.org

#### **Selected Case Studies:**

- Invisible Systems: Developed to enable virtual temperature monitoring, reduced time spent manually monitoring fridge temperature and improved insight into energy usage
- Paramedic Stroke Telemedicine Digital Pioneer Project: Explored use of a videoconferencing telemedicine app to connect paramedics easily and rapidly with a stroke consultant to support prehospital diagnosis of suspected stroke patients
- Washseat: Safely delivers a gentle but effective warm water stream to wash the user whilst still sitting
  on a raised toilet
- Medic Bleep: App allowing hospital and community staff to communicate in real time, sharing vital information and updates about patients accurately and safely

#### Footnotes:

Link to more details on case studies - <a href="https://www.easternahsn.org/about-us/our-projects/">https://www.easternahsn.org/about-us/our-projects/</a>
Organisation website: <a href="https://www.easternahsn.org/">https://www.easternahsn.org/</a>

### 3.8 AHSN - Health Innovation Manchester

Major focus for the next three years is on the delivery of healthcare innovation and improvements to patients in Greater Manchester, particularly interested in clinical trialing of new treatments and services.

Work Areas	
Health and Care Innovations	Work directly with doctors, nurses and practitioners to help develop and deploy healthcare innovation into frontline services via innovation project programmes, e.g., Focus ADHD
Industry Innovation	Run a range of programmes to support SMEs to develop new innovative products and solutions that can be trialled and tested in clinical settings before being launched for wider adoption and spread
Digital technologies	Focused on ways to support and invest in disruptive technologies that will help improve treatment and make services more accessible to patients
Research and education	Continued support for research into areas of excellence: Cancer, Cardiovascular disease, Inflammation and repair, Women and children, Mental health and Neuroscience

Support to Industry Partners	
Innovation Nexus	Brings together expertise across all aspects of working with the NHS and innovation, from trials, evaluation and market needs analysis to procurement and adoption
Accelerator programmes	Number of accelerator programmes available to SMEs to help with research and development of new products and services, e.g., Digital North accelerator programme, STEP Into Healthcare, Cheshire and Warrington Health Matters, Research and Innovation Health Accelerator
Knowledge sharing networks	Consortiums and networks focused on health areas that bring together industry, academia and healthcare to share knowledge, e.g., Dementia Consortium, Polypharmacy Programme

#### Key organisation information:

- CEO: Ben Bridgewater, Chief Executive
- Industry Partner Lead: Richard Deed, Associate Director of Industry
- Link to annual report or strategy plan: <a href="https://healthinnovationmanchester.com/about-us/our-strategy/">https://healthinnovationmanchester.com/about-us/our-strategy/</a>
- Contact Details: info@healthinnovationmanchester.com

#### **Selected Case Studies:**

- **Keep On Keep Up:** App encouraging activity among older people jointly developed by The University of Manchester, Jigsaw Homes Group and Reason Digital
- **Gendius:** Helped company complete a final piece of market research to better understand diabetic patients journey to help develop diabetes management app
- CLiFF study: Research study using new tech to improve outcomes in treatment of bowel cancer
- WoundPad by MDSAS Ltd: Digital platform bringing together all different components required for the remote management of complex wounds in a community setting

#### Footnotes:

 $\label{link-to-more-details-on-case} Link to more details on case studies - \underline{https://healthinnovationmanchester.com/the-innovation-nexus/innovation-support/innovation-programmes/$ 

 $Organisation\ website: \underline{https://healthinnovationmanchester.com/}$ 



### 3.9 AHSN - Health Innovation Network (South London)

Highly focused on innovative products and services that have already been developed and need help being adopted and spread across the NHS. Members include St George's, King's Health Partners, The Royal Marsden, London Ambulance Service NHS Trust and The Royal Hospital for Neurodisability.

	Work Areas
Diabetes	Work includes project management of new clinics, adapting pathways and finding technological and digital solutions to support self-management
Healthy ageing	Primarily focused on promotion of healthy living and prevention and management of illness and disability in older people
Mental Health	Play a key role in encouraging & supporting the spread and adoption of evidence-based good practice in mental health
Musculoskeletal	Support people with osteoarthritis through early intervention & focus on prevention & self-care
Cardiovascular	Work with local CCGs and providers to support improved detection and treatment of Atrial fibrillation in population
Patient safety & involvement	Spread and adopt patient-centred, evidence- based innovations and connect people with shared problems, as well as involve patients more in sharing their feedback & experiences
Technology & Digital	Introduce technology transformation throughout NHS
Patient experience	Create positive experiences by looking at patient safety and experience from a system perspective, involving staff, carers and patients
Workforce	Run workforce development projects, e.g., improving training, schedule management

Support to Industry Partners	
Innovation clinics and signposting	Run clinics for commercial innovators seeking to work with healthcare sector to help them understand challenges and the financial & clinical evidence requirements. Also signpost funding opportunities and business support opportunities.
DigitalHealth. London Accelerator	Innovation Accelerator where selected innovators receive support and guidance in developing their product/service. Given opportunities to network with experts and senior health-decision makers
Horizon scanning, evaluation & evidence gathering	Undertake evaluations to build knowledge and evidence bases for innovations, as well as connect innovators with healthcare organisations to run pilot schemes and promoting research partnerships
Networking opportunities	Provide opportunities to meet clinicians and others within the health and care system to help businesses understand their requirements

#### Key organisation information:

- CEO: Rishi Das-Gupta, Chief Executive
- Industry Partner Lead: Anna King, Commercial Director
- Link to annual report or strategy plan: <a href="https://healthinnovationnetwork.com/hin-annual-report-21-22/">https://healthinnovationnetwork.com/hin-annual-report-21-22/</a>
- Contact Details: hin.southlondon@nhs.net

#### **Selected Case Studies:**

- Healum: Helped provide care planning software and patient facing digital services for people with type 2 diabetes
- Lantum: Worked with Lantum on their workforce management platform to mobilise primary care staff
- Medishout: Used AI to predict and prevent operational issues including equipment failure, infrastructure or logistical problems
- SmokeFree: Behavioural change app used to support people giving up smoking

#### Footnotes:

Link to more details on case studies - <a href="https://healthinnovationnetwork.com/projects/hin-industry-case-studies/">https://healthinnovationnetwork.com/projects/hin-industry-case-studies/</a> Organisation website: <a href="https://healthinnovationnetwork.com/">https://healthinnovationnetwork.com/</a> organisation website: <a href="https://healthinnovationnetwork.com/">https://healthinnova

### 3.10 AHSN - Imperial College Health Partners

Strong focus on utilising and giving access to real-world data to test innovative solutions, as well as a close partnership with North West London ICS that would be a helpful opening into a regional NHS organisation for product testing and adoption.

Work Areas	
Strategy & planning	Help organisations develop change plans using data- led insights and communication skills
Data analysis & insight	Support development of research projects, feasibility studies and clinical and real-word trials
Solution sourcing	Scout for and find solutions, mapping on to clinical and operational challenges through extensive international innovation networks
Change implementation	Provide skills, experience and understanding of NHS to facilitate implementation of complex change, including whole pathway redesign
Stakeholder engagement	Help facilitate engagement of complex sets of stakeholders such as clinicians, patients and citizens and policy makers
Communications and storytelling	Help to create clear and compelling narratives to support change and implementation of new ideas

Support to Industry Partners	
Signposting of innovation to local health system	Work with North West London ICS to introduce innovative new treatments and services that meet priority areas: respiratory, neurosciences, gynaecology, children and young people, cardiovascular disease and chronic kidney disease
Real-world data validation	Hosts Discover-NOW, a health data research hub that supports businesses looking to evaluate and test the real-world feasibility of their products, e.g., access to studies, patient data sets, patient identification and recruitment for pilot schemes
Innovation Pathway Tool	Tool provides guidance and assessment for businesses with new ideas on, e.g., Research, Ideation and Concept Development, Feasibility, Planning and Market Investigation, Prototype and Proof of Concept, Development through to Launch, Adoption and Spread

#### Key organisation information:

- CEO: Dr Axel Heitmueller, Managing Director
- Industry Partner Lead: Nasreen Adamson, Interim Business Development Lead
- Link to annual report or strategy plan: <a href="https://imperialcollegehealthpartners.com/ichp-impact-report-2022/">https://imperialcollegehealthpartners.com/ichp-impact-report-2022/</a>
- Contact Details: EA@imperialcollegehealthpartners.com

#### **Selected Case Studies:**

- Safe Tracheostomy Care: rapidly and effectively increased adoption of three tracheostomy safety interventions into all acute-based tracheostomy care settings
- Sepsis insights dashboard: Dashboard providing fast, consistent, accurate and reliable data on sepsis outcomes
- Diabetes app testing: Helped to trial a number of diabetes management apps over four months
- Online consultation: Commissioned a study to understand patients' opinions on online consultations to see how they can be best implemented

#### Footnotes:

Link to more details on case studies - <a href="https://imperialcollegehealthpartners.com/our-impact/">https://imperialcollegehealthpartners.com/our-impact/</a> Organisation website: <a href="https://imperialcollegehealthpartners.com/">https://imperialcollegehealthpartners.com/</a>



## 3.11 AHSN - Kent, Surrey and Sussex

Offer quite a comprehensive service for innovators looking for support in understanding how the NHS adopts new technology as much work is focused on helping NHS organisations ready themselves to implement innovative new technologies.

Work Areas	
Technology navigation	Offer a 'bridging the gap' advisory service that works closely with NHS organisations to support spread of well evidenced innovations once they have an insightful and credible value proposition and budget impact model
Patient safety	Support projects looking into patient safety, e.g., analysing quality improvement models and leading on planning improvements
Cardiovascular disease (CVD)	Driving improvement and reducing variation in care to improve outcomes for patients with CVD
Respiratory	Running a multidisciplinary network aimed at collaboratively improving respiratory care across Kent, Surrey & Sussex
Wound care and workforce	Facilitate transformation and improvement of how wound care is handled in NHS

Support to Industry Partners	
Market insight briefings	Help to inform market access strategies and then help to find contacts for businesses to work with
Innovation surgeries	Focuses on helping businesses formulate their value proposition to NHS, covering topics, e.g., budget impact model, generated evidence, customer pathway, pilot schemes, market testing
Idea validation	Sessions intended to help identify and overcome any challenges to adoption, such as integration with other technology or staff training needs
Diffusion of innovative idea	Help businesses to diffuse their ideas across NHS network using organisation contacts with other AHSNs and NHS organisations to speed market access
Risk mitigation	Offer insight and knowledge on how to identify and address risks of launching new product into NHS, e.g., who controls budgets, which healthcare staff will use product

#### Key organisation information:

- CEO: Des Holden, Chief Executive Officer
- Industry Partner Lead: Nuala Foley, Portfolio Lead: Commercial and Partnerships
- Link to annual report or strategy plan: <a href="https://kssahsn.net/wp-content/uploads/2019/10/KSS-AHSN-Business-Plan-2016-2020.pdf">https://kssahsn.net/wp-content/uploads/2019/10/KSS-AHSN-Business-Plan-2016-2020.pdf</a>
- Contact Details: kssahsn.bridgingthegap@nhs.net

#### **Selected Case Studies:**

- CardMedic¹: Offered business support services (e.g., on pricing model) to app that helps to improve communication between patient and healthcare system
- **Physiobuddie**<sup>2</sup>: provides users with remote step-by-step progressive rehabilitation, using a mix of expert help and video tutorials, along with text and picture-based descriptions and information
- Leo Cancer Care<sup>3</sup>: Looking to improve the quality of radiation therapy for patients

#### Footnotes:

Link to more details on case studies:

- 1. https://btg.kssahsn.net/2022/04/04/meet-the-innovator-rachael-grimaldi-of-cardmedic/
- 2. https://btg.kssahsn.net/2021/10/06/meet-the-innovator-matt-booth-of-physiobuddie/
- 3. https://btg.kssahsn.net/2021/08/23/meet-the-innovator-stephen-towe-of-leo-cancer-care/

Organisation website: https://kssahsn.ne/

### 3.12 AHSN - North East and North Cumbria

More focused on working closely with healthcare partners (i.e., NHS Trusts, CCGs and ICSs) to drive innovation and reform within the healthcare system, although work with industry as well to introduce new technologies and ideas.

Work Areas	
Improving population health	Work to implement and evaluate clinical pathways, with programmes in e.g., ageing well, cardiovascular disease prevention, digital health, mental health, musculoskeletal, respiratory
Patient safety	Run a patient safety improvement network focusing on priority areas incl., maternity & neonatal, mental health, medicines safety, deteriorating patients
Digital transformation	Work with local ICSs to form networks between healthcare professionals and digital experts to smooth introduction of digital health initiatives

Support to Industry Partners	
Signposting and partnership facilitation	Act as a port of call signposting commercial organisations to local issues faced by NHS and facilitating collaboration between NHS organisations And industry when testing and piloting new solutions
Innovation support	Provides advice and expertise to innovators looking to develop and grow ideas, especially those working on NHS frontline who develop an innovative idea. Innovation Forum set up as a means of bringing together innovators across healthcare network
Hosting health awards	Hosts Bright Ideas in Health Awards that helps to raise profile of award winners across health service and attract investment

#### Key organisation information:

- CEO: Dr Nicola Hutchinson, Chief Executive Officer
- Industry Partner Lead: Russ Watkins, Commercial Director
- Link to annual report or strategy plan: 2021/22 not available
- Contact Details: enquiries@ahsn-nenc.org.uk

#### **Selected Case Studies:**

- CliniCabin¹: portable modular self-contained unit that allows patients and clinicians to meet safely in two sealed areas, where they can communicate through a glass screen
- The Tees Remote ECG Pathway<sup>2</sup>: developed a remote ECG pathway using the KardiaMobile 6L device—the world's only six-lead CE marked, and FDA cleared personal six-lead ECG
- PREPWELL programme<sup>3</sup>: identify ways that healthcare teams can help patients prepare for treatments and surgery to help them to make a better recovery

#### Footnotes:

Link to more details on case studies:

- 1. <a href="https://ahsn-nenc.org.uk/clinicabin-respiratory-diagnostic-services/">https://ahsn-nenc.org.uk/clinicabin-respiratory-diagnostic-services/</a>
- 2. https://ahsn-nenc.org.uk/what-we-do/driving-digital-transformation/remote-monitoring-scaling-programme/the-tees-remote-ecg-path-way/
- 3. https://ahsn-nenc.org.uk/what-we-do/developing-nhs-innovation/innovation-forum/

Organisation website: https://ahsn-nenc.org.uk/



### 3.13 AHSN - Innovation Agency North West Coast

Offer full range of support services to SME innovators across entire development pathway, but also offers innovation support services accessible to European start-ups wishing to engage with NHS.

Work Areas		
Cardiovascular diseases (CVD)	Continue to national ambitions for CVD and ambitions in North West Coast to reduce heart attacks and strokes, with strong focus on health inequalities	
Respiratory	Work includes programmes of prevention and approaches to improve detection and treatment of asthma, Chronic Obstructive Pulmonary Disease (COPD) and other breathing conditions	
Maternity and neonatal	Aiming to improve safety and outcomes of maternal and neonatal care by reducing unwarranted variation and providing high-quality healthcare experience for all women and babies	
Mental Health	Looking to reduce restrictive practices (restraint, seclusion etc.) when dealing with mental health patients	
Medicines and pharmacy	Focused on encouraging better medicine decisions and reducing inappropriately high opiate prescriptions	
Remote care	Exploring ways of introducing more remote care options for patients, e.g., blood pressure testing, virtual wards	

Support to Industry Partners		
Business support services	Offer a range of advice services for SMEs to help develop and deploy solutions incl., directing business to the right people, identifying funding opportunities, relationship brokering, network building and introductions, real-world validation of products and services, understanding the NHS landscape, business case development, pitching & presenting support, intellectual property advice	
International business support services	Support European start-ups and scale ups to access NHS with package of support incl., regulatory support, market engagement, procurement, business case development etc.	
Coaching academy	Delivers coaching and leads innovator communities to support a culture of innovation and improvement. Aimed at leaders, innovators and others involved in improvement & innovation	

#### Key organisation information:

- CEO: Dr Phil Jennings, Chief Executive
- Industry Partner Lead: Lorna Green, Director of Enterprise and Growth
- Link to annual report or strategy plan: <a href="https://www.innovationagencynwc.nhs.uk/media/">https://www.innovationagencynwc.nhs.uk/media/</a>
   Downloads/2021/Business%20plan%202021\_22.pdf
- Contact Details: info@innovationagencynwc.nhs.uk

#### **Selected Case Studies:**

- RESTORE2 tool: Care home staff have been trained to use tool which identifies early signs of deterioration in elderly patients
- Glow New Media: developed an app that provides community workers with easy-to-use smartphone
  app allowing them to quickly notify other staff if they need help and gives managers a live command
  dashboard showing operations in real time
- everyLIFE PASSsystem: New system introduced to care homes to monitor when visits are made, for how long and how the person responded, all viewable on an app

#### Footnotes:

Link to more details on case studies - <a href="https://www.innovationagencynwc.nhs.uk/case-studies">https://www.innovationagencynwc.nhs.uk/case-studies</a> Organisation website: <a href="https://www.innovationagencynwc.nhs.uk/">https://www.innovationagencynwc.nhs.uk/</a> case-studies

### 3.14 AHSN - Oxford

Leads on a national programme to improve care of respiratory conditions and runs a successful accelerator programme that has helped 120+ start-ups connect with key stakeholders and build and test robust value propositions since 2019.

Work Areas	
Cardiovascular disease	Focused on improved detection and management of atrial fibrillation, hypertension and high cholesterol (in partnership with Heart UK)
Patient safety and clinical improvement	Establishing and sustaining relationships with key partners including NHS staff and patients through quality improvement collaboratives, communities of practice and shared learning
Research & development	Work with partners to support research, e.g., working with Oxford Biomedical Research Centre, Research Design Service South Central
Care homes	Projects aiming to improve safety & wellbeing of care home residents and care providers, e.g., improving hydration in care homes
Maternity & neonatal	Focus on optimisation and stabilisation of the preterm infant and early recognition and management of deterioration in women and babies
Clinical innovation adoption	Helps implement evidence-based innovation in line with NHS needs, improving patient outcomes and reducing NHS costs
Asthma biologics/ respiratory	Focused on optimising pathways that help with early identification & treatment of people with uncontrolled asthma – lead org. on asthma
Mental Health	Currently developing a sustainable work programme that aligns with local needs
Community involvement & workforce	Working to understand impacts of programmes on health inequalities, NHS staff and where support can be improved

Support to Industry Partners		
Innovation support services	Have specialist expertise in: bid writing support, evaluation delivery support, early health economic evaluation, lean Assessment Process methodology	
Needs definition	Match new and existing healthcare innovations to local needs, working with clinicians and industry towards integrating them into everyday practice.	
Real world evaluation	Support new innovation by identifying where to test them based on local needs and priorities, project managing the process of baseline data collection, protocol creation and implementation	
Spread and adoption	Help to spread innovations chosen by MedTech funding mandate, e.g., SecurAcath, a device to secure peripherally inserted central catheters for medium to long stay patients	
Diagnostic partnerships	Looking to build partnerships between NHS and industry to develop better diagnostic tools (inspired by Covid 19)	
Accelerator programme	Innovator programme that offers a launchpad for innovators and early-stage companies in the Thames Valley and helps them get their ideas translated into clinical practice in the NHS	
Support and signposting	Support translation of research and development into clinical practice and provides effective signposting and advice to companies seeking to develop and evaluate new diagnostic, digital, medical device and artificial intelligence technologies – especially focused on cardiovascular, respiratory and elective recovery areas	

#### Key organisation information:

- CEO: Professor Gary A Ford CBE, Chief Executive
- Industry Partner Lead: Simon Greenstreet, Strategic and Industry Partnerships Programme
- Link to annual report or strategy plan: <a href="https://www.oxfordahsn.org/about-us/documents/quarterly-reports/">https://www.oxfordahsn.org/about-us/documents/quarterly-reports/</a>
- Contact Details: info@oxfordahsn.org

#### **Selected Case Studies:**

- Brainomix Ltd: e-Stroke Suite supports physicians in identifying patients who'd benefit from acute stroke treatments
- **Ufonia:** Supported development of Dora, an autonomous telemedicine assistant, for use in routine clinical conversations as an alternative to hospital visits
- Sapien Health: Virtual programme that helps people prepare their mind and body for surgery via sustainable lifestyle changes
- RCube Health: Product Resony is a therapeutic mobile app offering evidence-based interventions to manage symptoms of anxiety disorders

#### Footnotes:

Link to more details on case studies: <a href="https://www.oxfordahsn.org/our-work/strategic-and-industry-partnerships/econom-ic-growth-case-studies/">https://www.oxfordahsn.org/our-work/strategic-and-industry-partnerships/econom-ic-growth-case-studies/</a>

Organisation website: <a href="https://www.oxfordahsn.org/">https://www.oxfordahsn.org/</a>



### 3.15 AHSN - South West

Particularly interested in how innovations meet the needs of the health and care system, while also supporting health equity; launched second Health Equity Innovation Challenge in 2022.

Work Areas		
Asthma	Working with West of England AHSN, to support South West Asthma Network to ensuring appropriate patients are offered treatment	
Cardiovascular disease (CVD)	Supporting national pathway transformation by co-working with clinicians and enabling patients' self-management and behaviour change	
Autism spectrum disorder	Launched pilot 'First Steps' which aims to change use of language and facilitate joint working around autism treatment	
Workforce	Working with health and care partners in the South West to improve effectiveness of workforce teams in primary & secondary care settings	
Transfer of care around medicine	Enabling digital transfer of information from the hospital pharmacy team to the patient's usual community pharmacist upon discharge	
Patient safety	Aim to support and encourage a culture of safety, continuous learning and improvement across healthcare system	
Premature births	Working to reduce brain injury and death caused by preterm birth, by at least half	
Care homes	Working to reduce deterioration and medicine related harm in care homes	
Parkinson's care	Implementing smart and wearable technology to enable Parkinson's patients to monitor their condition at home	

Support to Industry Partners		
Innovation exchange	Support innovators via pathfinder website where applicants apply and are selected to receive business support, e.g., advice on navigating NHS system, networking, quality improvements	
Capability building	Offer leadership training and a spread academy where launch-ready projects are accelerated to rapidly spread and scale life-changing innovation	
Evaluation and application of learning	Support partners to evaluate impact and apply evidence and learning to improve the delivery of a wide range of services, as well as providing actionable insights to enable service and innovation changes	

#### Key organisation information:

- CEO: Jon Siddall, Chief Executive Officer
- Industry Partner Lead: Ben Hugill, Project Manager (Innovation Funding & Enterprise Support)
- Link to annual report or strategy plan: <a href="https://swahsn.com/wp-content/uploads/2022/07/SWAHSN-Annual-Review-2022-Published.pdf">https://swahsn.com/wp-content/uploads/2022/07/SWAHSN-Annual-Review-2022-Published.pdf</a>
- Contact Details: info@swahsn.com

#### **Selected Case Studies:**

- Tickertest: Offering convenient, secure, and accessible health checks for those who can't or won't visit GPs
- MySunrise: Cancer app, boosting virtual consultation and creating significant time savings for healthcare staff
- CONNECTPlus by HCI: Tool which remotely supports and educates patients, providing education and guidance for over 50 conditions, procedures and treatments, and a 60+ symptom tracker

#### Footnotes:

 $\label{link-to-more-details-on-case} Link to more details on case studies (pg. 22-23) - \\ \underline{https://swahsn.com/wp-content/uploads/2022/07/SWAHSN-Annual-Review-2022-Published.pdf}$ 

Organisation website: https://swahsn.com/

### 3.16 AHSN - UCLPartners

Hosts the NHS Innovation Accelerator (NIA), the national MedTech innovation accelerator that is supported by all the other AHSNs as well – has great access to knowledge, expertise, and networks

Work Areas		
Cancer	Expertise in innovative multi-disciplinary cancer research and translation of cutting-edge therapies into patient benefit	
Cardiovascular diseasew prevention (CVD)	Range of programmes aimed at improving health outcomes for CVD, e.g., blood pressure optimisation, lipid management	
Health data	Helps health and care teams measure and understand impact of new innovations and support adoption of digital tech across NHS	
Health tech	Support pilots and introduction of new tech into NHS, e.g., via DigitalHealth.London that aims to accelerate adoption of tech in NHS	
Learning health systems	Help organisations implement a learning health system approach that allows them to rapidly make decisions backed by data & evidence	
Mental health	Run programmes improving mental health management, e.g., early intervention eating disorder, mental health crisis hub	
Patient & public involvement & safety	Working with patients & carers to understand their experiences of being tested and treated and to improve safety	
Quality improvement	Helping NHS organisations maximise their economic & social impact in local communities	
Workforce development	Provide education and training programmes in areas including mental health, research, quality improvement	

Support to Industry Partners		
NHS insight briefing meetings	Run meetings and workshops that provide innovators with knowledge and expertise on NHS needs, advice on the various stages of the innovation journey, guidance on how to launch a product to market and a platform for networking opportunities – more for early stage technology	
Real-world data validation	Run a real world validation process in partnership with the innovator and a health or social care organisation	
Adoption & spread (via innovation surgeries)	Provide recommendations and advice on market access strategy, how funding within the NHS might impact ability to sell, how to successfully approach healthcare purchasers and how to improve value proposition to make it more compelling	
Signposting	Can put innovators in touch with the right people for e.g., clinical development, clinical validation, market research	
Funding opportunities	Share information on funding opportunities for innovators and providers	

#### Key organisation information:

and patient safety

- CEO: Dr Chris Laing, Chief Executive Officer
- Industry Partner Lead: Suzanne Ali-Hassan, Deputy Director, Commercial and Innovation
- Link to annual report or strategy plan: https://uclpartners.com/about-us/our-impact-report-2021-22/
- Contact Details: office@uclpartners.com

#### **Selected Case Studies:**

- **FibriCheck¹:** smartphone application that allows patients to check their heart rhythm at home without any additional equipment
- Oxehealth<sup>2</sup>: Oxevision software platform for inpatient wards allows clinicians in mental health trusts to plan patient care and to intervene proactively
- HeartFlow Analysis<sup>3</sup>: digital tool that uses standard CT scans to create a 3D model of each person's heart and computes blood flow characteristics in arteries of the model
- Piloting learning & insights app<sup>4</sup>: UCL Partners invited 4 trusts across partnership to apply to pilot
  the 'Bedside Learning Coordinator' app, an app designed to capture staff insights on patient care,
  workplace efficiency and staff well-being

#### Footnotes:

Link to more details on case studies:

- 1. https://uclpartners.com/impact-story/detecting-heart-arrhythmias-with-fibricheck-app-during-the-pandemic/
- 2. https://uclpartners.com/impact-story/enabling-safety-and-trust-on-mental-health-wards-through-innovation/
- 3. https://uclpartners.com/impact-story/using-technology-for-better-heart-care/
- 4. https://uclpartners.com/news-item/new-opportunity-for-nhs-trusts-to-pilot-learning-and-insights-app/

Organisation website: https://uclpartners.com/



### 3.17 AHSN - Wessex

Identified adoption of innovations that speed the diagnosis of cancer at stage one and two rather than stages three and four as a key deliverable, partnering with the Wessex Cancer Alliance to support this aim.

Work Areas		
Patient safety	Work included spreading best practice in tracheostomy care, maternity and neonatal safety and managing and spotting deterioration	
Digital implementation	Helped health and social care services adapt to the new digital and socially-distanced way of delivering care	
Cardiovascular disease (CVD)	Started programme to roll out Lipid Management and Familial Hypercholesterolaemia innovations	
Supporting older people	Delivered a variety of e-learning, resources, campaigns and learning for the NHS and social care in the past year	
Medicines	Support patients taking multiple medicines more safely with GPs, pharmacists and nurses trained in improving shared decision-making consultations	
Mental health	Improved assessment process for ADHD and helped to speed up the diagnosis and treatment of eating disorders	

Support to Industry Partners		
Identify need and communication demand	Work with regional clinicians who have identified clinical issues where there are no current solutions and match them to innovators	
Signposting	Build networks throughout the local and national innovation landscape to support innovators in establishing working relationships across NHS	
Broker Real- World Validation Opportunities	Utilise network of colleagues across the locality to offer opportunities to promising innovations to generate evidence in real-world environments	
Supporting adoption and spread	Support uptake of promising innovations across the locality through network of colleagues across the healthcare environment	

#### Key organisation information:

- CEO: Bill Gillespie, Chief Executive
- Industry Partner Lead: Frank Ratcliff, Director of Industry and Innovation
- Link to annual report or strategy plan: https://wessexahsn.org.uk/annual-review-2020-21
- Contact Details: https://wessexahsn.org.uk/contact-us

#### **Selected Case Studies:**

- GenomeKey: Rapid sepsis diagnosis using bacterial DNA
- **Behold.ai:** Chest x-ray analysis using artificial intelligence technology, reducing specialist workload and speeding up lung cancer diagnosis
- Sooba Medical: Urinary stents and catheters developed to improve patient care and reduce financial burdens for healthcare services
- PeRSo: A personal respirator hood developed in Southampton to reduce Covid infections amongst frontline NHS staff

#### Footnotes:

Link to more details on case studies - <a href="https://wessexahsn.org.uk/img/publications/Innovator%20support%20case%20study.pdf">https://wessexahsn.org.uk/img/publications/Innovator%20support%20case%20study.pdf</a>
Organisation website: <a href="https://wessexahsn.org.uk/">https://wessexahsn.org.uk/</a>

### 3.18 AHSN - West Midlands

Operates in a diverse region with many of the most deprived, challenged and vulnerable communities in the country; high degree of focus on health equality, patient safety and quality of care.

	Work Areas	
Patient improvement	Work focuses on five safety improvement programmes: Managing Deterioration, Maternity and Neonatal, Adoption and Spread, Medicines Safety, Mental Health	Defining needs
Cardiovascular Disease Prevention and	Programme introduced to implement new or modified models of care to reduce cardiovascular morbidity and mortality, address and reduce health inequalities	Horizon scanning
Management (CVD)	and improve the overall health and well-being of the population	Innovator support
Medicines Optimisation Programme	Projects being delivered focus on: Transfer of Care Around Medicines, High Risk Drugs, Polypharmacy, Women's Health, Antimicrobial Stewardship, Environmental sustainability of medicines, Integrated	Real world validation
Asthma	Pharmacy and Medicines Optimisation  Supporting innovations selected by national rapid uptake products programme, e.g., severe asthma management, biologics for treating severe asthma	Spread and adoption of supported innovations
Mental health	Supporting national programmes focused on ADHD management and treating eating disorders	

Support to Industry Partners		
Defining needs	Supports NHS organisations to understand how innovation can help them and identify proven solutions to existing challenges, linking them to industry where appropriate	
Horizon scanning	Innovators able to submit an innovation if it doesn't meet criteria of any current challenges/ programmes and receive feedback and support	
Innovator support and signposting	General innovation business support services provided by 'Meridian', the West Midland AHSN's health innovation exchange hub	
Real world validation	Informed by regional and local need and seeks to help provide the information and evidence needed to enable adoption of innovation in a variety of settings	
Spread and adoption of supported innovations	Supports the adoption of innovations identified by the Accelerated Access Collaborative and also identifies and supports the adoption of innovations on a regional and cross-regional basis	

#### Key organisation information:

- CEO: Professor Michael Sheppard, Chair
- Industry Partner Lead: Tony Davis, Innovation & Commercial Director
- Link to annual report or strategy plan: <a href="https://www.wmahsn.org/wp-content/uploads/WMAHSN-">https://www.wmahsn.org/wp-content/uploads/WMAHSN-</a> Impact-Report-2022-FV.pdf
- Contact Details: info@wmahsn.org

#### **Selected Case Studies:**

- **Dignio**<sup>1</sup>: digital remote care solution and mobile app for the management of COVID-19 patients, which aims to improve the care of those self-isolating
- QI NOTIFY-EMLAP<sup>2</sup>: digitally assisted solution to support clinicians with using their National Emergency Laparotomy Audit (NELA) data more efficiently
- **Deterioration in care homes**<sup>3</sup>: project aimed to increase the uptake of implementation and adoption of deterioration management tools within care home settings

#### Footnotes:

Link to more details on case studies:

- I. <a href="https://www.wmahsn.org/our\_impact/case-study-dignio/">https://www.wmahsn.org/our\_impact/case-study-dignio/</a>
- 2. https://www.wmahsn.org/wp-content/uploads/WMAHSN-Impact-Report-2022-FV.pdf (pg 15)
- 3. https://www.wmahsn.org/wp-content/uploads/WMAHSN-Impact-Report-2022-FV.pdf (pg 11)

Organisation website: https://www.wmahsn.org/



### 3.19 AHSN - West of England

Have identified two major health challenges for future health innovators to solve: 1. Keeping Healthy at Home and 2. Young People and Mental Health Resilience. Particularly interested in innovators addressing these themes.

Work Areas			
Mental health	Programmes aim to reduce restrictive practice, improve sexual safety and reduce deliberate self-harm and suicide within in-patient services and improve care of people with learning disabilities		
Maternity & neonatal	Running programmes to improve care, e.g., developing maternal early warning score framework, reducing inequalities, Covid@home guidance		
Medicines safety	Working locally on projects such as reducing Multiple Compliance Aid prescribing, increasing rates of electronic repeat dispensing, community pharmacy lean working & polypharmacy		
Long term conditions	Working on projects focused on cardiovascular disease, asthma treatment, tracheostomy care, respiratory disease		
Deterioration	Exploring ways to better identify and treat deterioration in patients, e.g., Paediatric Early Warning Score, care home programme		
People	Launched innovation challenge to identify innovative solutions to improve workforce capacity, capability & wellbeing for home care workers		
Integrating & optimising care	Trialling health improvement treatments identified from MedTech Funding Mandate		

Support to Industry Partners			
Triage and initial support	Initial discovery and appraisal of innovations against priorities. Provision of light touch support and signposting		
Market readiness	Promising innovations receive more in-depth support, liaison with member organisations to explore potential need and gap analysis		
Project proposal to business case	Further exploration of gap analysis and identification of specific support and resources required		
Proof of value project	Real world validation projects which may include further evaluation, cost benefit analysis and commissioning case development		
Deployment support	Support innovations ready for spread and adoption within the West of England and beyond, in collaboration with member organisations and the wider AHSN Network		
Funding opportunities	Have funding and support opportunities available for businesses wanting to innovate in health, incl., funded accelerator programmes, open innovation calls and health challenges		

#### Key organisation information:

- CEO: Natasha Swinscoe, Chief Executive Officer
- Industry Partner Lead: Alex Leach, Acting Director of Innovation and Growth
- Link to annual report or strategy plan: https://www.weahsn.net/wp-content/uploads/2021/06/West-of-England-AHSN-Business-Plan-2021-23-FINAL.pdf
- Contact Details: weahsn.contactus@nhs.net

#### **Selected Case Studies:**

- **getUBetter**<sup>1</sup>: digital self-management physiotherapy platform, for all common musculoskeletal (MSK) injuries and conditions
- LatchAid<sup>2</sup>: easy-to-use breastfeeding support app which utilises 3D interactive and Artificial Intelligence (AI) technology to help parents learn vital breastfeeding skills
- **Precission**<sup>3</sup>: collaborative involving all hospitals in the West of England aimed at reducing incidence of surgical site infection after elective colorectal surgery

#### Footnotes:

Link to more details on case studies:

- 1. https://www.weahsn.net/our-work/case-study/getubetter/
- 2. <a href="https://www.weahsn.net/our-work/case-study/latchaid/">https://www.weahsn.net/our-work/case-study/latchaid/</a>
- 3. https://www.weahsn.net/our-work/case-study/precission-preventing-surgical-site-infection-across-a-region/

Organisation website: <a href="https://www.weahsn.net/">https://www.weahsn.net/</a>

### 3.20 AHSN - Yorkshire and Humber

Have a strong partnership with British HealthTech Industries (ABHI) to help companies export their MedTech products to international markets. Also supports Nexus at University of Leeds, a £40M innovation hub which provides commercial advice, investment connections and funding opportunities.

Work Areas			
Acting against climate change	Launched Propel@YH Net Zero, a new sustainable health accelerator pilot programme for SMEs who either have new innovations that can support the NHS' drive towards 'net zero' or have existing products that can be made more sustainable		
Transforming care in the home	Helped to identify, fund and support NHS organisations in procuring new technologies that assist with remote care in the home		
Mental health	Working on a range of projects that seek to tackle issues such as eating disorders and ADHD		
Asthma	Working NHS organisations to support population health management approach and better treat airway inflammation		
Safety in health & care system	Working to improve medicine use, mental health treatment, deterioration treatment		
Public & patient engagement	Encouraging shared decision making in medical treatment when appropriate, e.g., prescribing medicines		
Cardiovascular disease (CVD)	Improve treatment & management of CVD via, e.g., lipid management and blood pressure optimization programmes		

Support to Industry Partners			
Innovation business support	Introduce healthcare organisations to industry innovators and Local Enterprise Partnerships (LEPs) around the region to support the inward investment of healthcare companies to the region. Also run innovation workshops to support innovative product development		
Health Innovation Exchange Portal	Work with AHSN for North West Coast to provide an innovation platform for businesses looking to showcase their products to healthcare professionals and decision makers by sharing it on the platform		
Global innovation support	Partner with the Association of British HealthTech Industries (ABHI) to provide opportunities for companies who are ready for export to attend trade missions in the USA, Middle East and China		
Funding opportunities	Help to identify funding opportunities to enable the NHS and industry to work together and have access and contacts with a wide range of funding sources		

#### Key organisation information:

- CEO: Richard Stubbs, Chief Executive Officer
- Industry Partner Lead: Neville Young, Director of Enterprise & Innovation
- Link to annual report or strategy plan: https://www.yhahsn.org.uk/publications/
- Contact Details: info@yhahsn.com

#### **Selected Case Studies:**

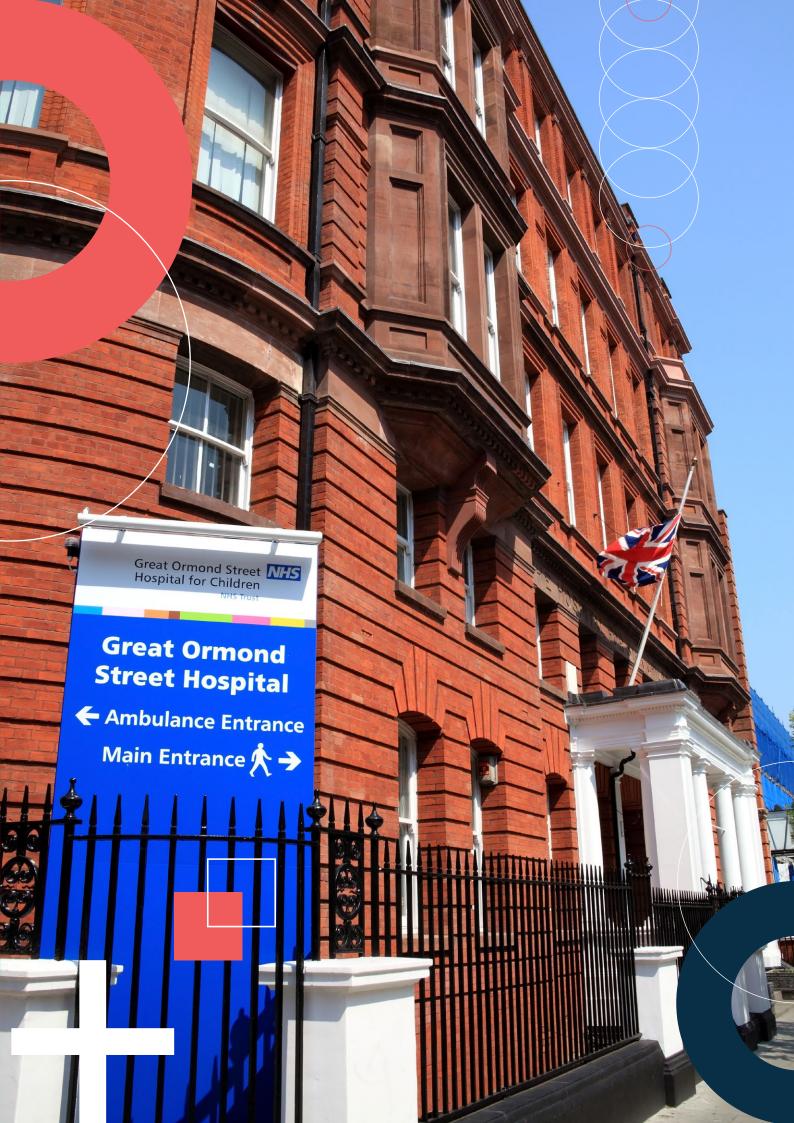
- Aseptika¹: Technology company that has developed an app called Asthma+me which helps children and their families self-manage their severe asthma
- **Healthy.io**<sup>2</sup>: Dip.io is smartphone-based urinalysis device built around existing urine dipstick, a test kit and smartphone app
- Tookie Ltd<sup>3</sup>: Developed Tookie Vest which provides maximum safety and protection over the patient's body and at the exit site of the Central Venous Catheter line (CVC) to prevent infection when administering medicine through CVC in cancer patients
- Doc Abode<sup>4</sup>: software platform which improves workforce capacity and resilience in out-of-hour and primary care settings

#### Footnotes:

Link to more details on case studies:

- 1. https://www.yhahsn.org.uk/how-we-can-help-you/industry/case-studies/helping-children-to-manage-their-severe-asthma/
- 2. https://www.yhahsn.org.uk/how-we-can-help-you/industry/case-studies/using-a-smartphone-for-home-urine-testing/
- 3. https://www.yhahsn.org.uk/how-we-can-help-you/industry/case-studies/tookie-ltd-helping-patients-to-lead-alifemorenomal/
- 4. https://www.yhahsn.org.uk/how-we-can-help-you/industry/case-studies/delivering-better-care/

Organisation website: https://www.yhahsn.org.uk/



# 4 Charitable Arms of Major Trusts

### 4.1 Overview

- All hospital trusts now have charity arms
- There is an umbrella charity organisation: NHS Charities, formally associated 2020. The aim of the organisation is to:
  - Provide support for NHS staff
  - Be a bridge and forum between the NHS and the voluntary sector
  - Support members with expertise
- Most trusts are now members of the organisation
- However, trust charites are independent legal entities with their own governance structures. Fund
  raising and grant giving is determined at a trust/local level and there is a wide discrepancy in the
  range and scope of the work

Types of Charity Trust				
	Activities	Trusts	Implications	
Level 4	<ul> <li>National funding raising</li> <li>Strong governance</li> <li>Ability to support third party innovation</li> <li>Have grant and a partnering capability</li> <li>Local and Regional Fund Raising</li> </ul>	<ul><li>Major Teaching Hospitals</li><li>Specialist National Centres</li></ul>	<ul> <li>Potential sources of grant</li> <li>Most likely to adopt new technologies in pilots</li> <li>Potentially some could joint venture</li> <li>10-15 who broadly fill this description</li> <li>Grant giving is normally restricted to Trust members</li> </ul>	
Level 3	<ul> <li>Fund medical and innovation research</li> <li>Focus is on supporting Trust employees in research innovation</li> </ul>	Teaching Hospital	<ul> <li>Focus is more likely to be on early stage treatment of process innovation trials</li> <li>Potentially interesting if the entrepreneur can partner with a Trust KOL</li> </ul>	
Level 2	<ul> <li>Local Fund Raising</li> <li>Specific campaigns for capital equipment</li> <li>Funds for staff and patient facilities</li> </ul>	Larger Local General Hospitals	<ul> <li>No early stage opportunity, charity could potentially support the acquisition of more complex higher value capital products</li> </ul>	
Level 1	<ul> <li>Local fund raising</li> <li>Funds mainly used to support comfort and recreational facilities for patients and staff</li> </ul>	Smaller Local General Hospital	No opportunity	

A number of leading level Charitable Trusts are profiled below.



### 4.2 Chelsea and Westminster

 CW+ is the official charity of Chelsea and Westminster Hospital NHS Foundation Trust

**Overview of Charitable Trust** 

- Work involves:
  - Building and enhancing clinical facilities to create an outstanding healing environment for patients and staff
  - Delivering a unique art in health programme to transform the experience and wellbeing of our patients
  - Investing in health innovation to deliver exceptional patient care

#### **Research and Grant Areas**

- Innovative ideas: 'Small change big impact' and 'Big Ideas' are grants dedicated to funding NHS staff ideas that improve healthcare and patient experience
- Training, education and development: Funding is available for staff wishing to undertake education and development opportunities outside of their own hospital/clinic or to bring in specialist trainers to share and disseminate best practice
- Staff wellbeing & amenities:
   Funding to support and improve staff wellbeing and morale, making every day a little bit easier and improving the workplace

#### Case Studies<sup>1</sup>

- Electronic milk warmer for the Special Care Baby Unit at West Middlesex University Hospital
- An innovative mouthcare project to help reduce hospital acquired pneumonia across the Trust
- A Virtual Reality headset to be used as distraction therapy on the Adult Burns Unit at Chelsea and Westminster Hospital
- Crash mats to reduce the incidence of harm to more vulnerable patients, and resources to increase awareness of new falls risk assessment tools
- Equipment to ensure efficient and effective care of newborns in Children's A&E at Chelsea and Westminster Hospital
- The use of Sensium sensors remotely monitors three key indicators of patient deterioration: heart rate, breathing rate and temperature every two minutes, compared with current monitoring standards of 4-6 hours

#### **Grant Types**

- Core grants programme awards funding to hospital staff for projects which will help them to deliver better patient experience and car
- Projects which promote innovation, transformation and new service development
- Projects which support staff in the delivery of front line patient care
- Fast track awards (up to £2,000) to support patient experience
- Staff development and educational opportunities
- Big ideas programme offers funding up to £100,000 to promote innovation, transformation and new service development or support staff in the delivery of front line patient care
- Staff wellbeing and amenities grant offers up to £500 to fund support which improves staff wellbeing and morale

#### **Eligibility and Application Process**

- Eligibility: Grant funding open to all hospital staff across all hospital sites
- Application Process: Application form to complete. Depending on amount of money requested, 3 levels of approval – higher bids requiring endorsement from Divisional Director and Trust Exec Board and approval by CW+ Grants Committee
- Contact details: <a href="https://www.cwplus.org.uk/get-involved/apply-for-a-grant/">https://www.cwplus.org.uk/get-involved/apply-for-a-grant/</a>

### **Contact Details**

Contact details: <a href="https://www.cwplus.org.uk/get-involved/apply-for-a-grant/">https://www.cwplus.org.uk/get-involved/apply-for-a-grant/</a>

#### Footnotes:

1. Grants programme: <a href="https://www.cwplus.org.uk/our-work/grants-programme/">https://www.cwplus.org.uk/our-work/grants-programme/</a> Organisation website: <a href="https://www.cwplus.org.uk/">https://www.cwplus.org.uk/</a>

### 4.3 St Barts

#### **Overview of Charitable Trust**

- Dedicated to supporting improvements to healthcare and transformative research for local health benefit
- Work alongside Barts Health NHS
   Trust hospitals and Barts and the
   London School of Medicine and
   Dentistry to support care excellence
   in East London and fund world leading medical research
- Over last five years have given £144M to fund transformative research and healthcare projects in East London

#### **Research and Grant Areas**

- Research grants: Help advance research focused on healthrelated problems of local and international significance
- Everyday impact ideas: support ideas that will improve the care, experience and wellbeing of patients and their families, friends, and carers. Focuses on ideas where a relatively straightforward and easyto-implement change could have a big impact
- Developing, Piloting and Testing: Support Barts Health NHS Trust to develop, pilot and implement innovative healthcare solutions which will lead to long-lasting positive impact
- Care Transformation: Support opportunities for significant growth, transformational change and extraordinary impact for East London in healthcare
- Clinical research areas include: cancer, preventing brain disease, safeguarding women and children and reducing rates of heart disease

#### **Case Studies**

- Robotic surgery<sup>1</sup>: Awarded £5.1M for robotic surgery equipment to deliver better outcomes for patients at St Bartholomew's and The Royal London Hospitals
- Awarded grant of £2.6M to the Faculty of Medicine and Dentistry Blizard Institute at Queen Mary University of London, to establish a cross-disciplinary network to gain a better understanding of how metabolism can lead to obesity and the significant long-term health problems that it causes
- Barts Heart Centre<sup>3</sup>: Providing £10.2M in funding to support research and clinical care at cuttingedge heart centre. Funding focused on, e.g., medical devices, genomics, drug treatments, clinical trials

#### **Grant Types**

- Research Seed Grants: Funding up to £75,000
- Research Project Grants: Funding from £75,000 to £600,000
- Everyday Impact Funding Scheme: Funding from £2,000 - £50,000
- Advancing Healthcare Grants:
   Advancing Healthcare Grants (Small), from £5,000 to £50,000 for up to 18 months and advancing Healthcare Grants (Large) from £50,000 to £500,000 for up to 36 months
- Healthcare Delivery Improvement Grant: Funding from £5,000 -£50,000
- Transformational funding: No limit specified, depends on opportunity
- Funds with a restricted or specific purpose: Funding from £20-£5,000
- Funding for Corporate Events: No limit specified, depends on event

### **Eligibility and Application Process**

- Eligibility: Most need a lead applicant who works for the Trust, but Advancing Healthcare Grants can include co-applicants who are not part of the Trust if they possess required expertise for project
- Application Process: Online forms can be completed for each grant type. There is a funding & impact team available for questions and support

### **Contact Details**

Contact details: <a href="https://www.bartscharity.org.uk/apply-for-funding/">https://www.bartscharity.org.uk/apply-for-funding/</a>

#### Footnotes

Link to more details on case studies:

- 1. https://www.bartscharity.org.uk/case\_studies/cutting-edge-robotic-surgery/
- 2. <a href="https://www.bartscharity.org.uk/our\_news/tackling-the-obesity-epidemic-with-new-research-cloned-19674/">https://www.bartscharity.org.uk/our\_news/tackling-the-obesity-epidemic-with-new-research-cloned-19674/</a>
- 3. https://bartscharity.org.uk/case\_studies/saving-lives-at-the-world-leading-barts-heart-centre/

Organisation website: https://www.bartscharity.org.uk/



### 4.4 Great Ormand Street Hospital Charity

0	verview of Charitable Trust	Research and Grant Areas	Case Studies
•	Country's leading centre for treating sick children and has the widest range of specialists under one roof  Together with the UCL Institute of Child Health they are one of the world's leading research centres for children  Charity arm supports the hospital to provide world class care to sick children	Research into children's health: UK's largest dedicated charitable funder of child health, helping to save young lives every day. Priorities for research are birth defects and tailor-made transplants, cancer, heart conditions, hormone and cell function disorders, immune system disorders, muscle-wasting diseases  Support for families & children: provide services to ease burden on families, raise spirits, and support children and young people through life-saving treatment, e.g., funding accommodation, funding meals  Rebuilding & refurbishment: Support the design, construction and fitting of new buildings and the renovation of older areas to give our patients the best care and experience possible  Lifesaving medical equipment: Provide high-tech hardware to ensure children at GOSH have access to the least invasive and most effective	<ul> <li>Recently funded research projects incl':</li> <li>Establishing a platform for high-content drug screening in neurological diseases using CLN5 Batten disease iPSC-derived neurons</li> <li>Donor derived Cell Free DNA, a liquid biopsy following solid organ transplantation</li> <li>Development of a measure of parental informed consent for whole genome sequencing at Great Ormond Street Hospital</li> <li>Preventing ventilator associated pneumonia on intensive care: Bacteriophage therapy</li> <li>Development of micro-CT technology for fetal and perinatal minimally invasive autopsy</li> </ul>

-	ra	-	- 1 -	/ IO		6
•			- 1	<i>/</i> LJ	-	٠

- National Funding Call for Researchers: Up to £2M available in total funding. With £50,000 to £200,000 per project
- Redevelopment programme: Money goes to enable the creation of patient-centred spaces, designed to deliver world-class care for some of the UK's most seriously ill children – not innovator relevant
- Patient and family support projects:
   Projects that seek to support family and patients more details not yet available
- Medical equipment & capital infrastructure: More details to be made available but more to fund purchase of equipment rather than innovation/research

### **Eligibility and Application Process**

treatments available

- Eligibility: National funding call is open to independent researchers based anywhere in the UK. Also open to joint funding opportunities for projects focusing on e.g., curing Ataxia-Telangiectasia, treatments for Norrie Disease, advancing understanding of Ewing's Sarcoma
- Application process: Applications can be made online via a form and are assessed by a research assessment panel

#### **Contact Details**

Contact details: <a href="https://www.gosh.">https://www.gosh.</a>
org/about-us/contact-us/

#### Footnote:

1. Link to case study: <a href="https://www.gosh.org/what-we-do/grant-funding/recently-funded-projects/clinical-research-starter-grants/">https://www.gosh.org/what-we-do/grant-funding/recently-funded-projects/clinical-research-starter-grants/</a>
Organisation website: <a href="https://www.gosh.org/">https://www.gosh.org/</a>

### 4.5 Guy's and St Thomas' Foundation

#### **Overview of Charitable Trust**

- Independent foundation investing in a healthier society, backing people and investing in ideas that drive more equitable health
- Hold a £1BN endowment used to invest in improving positive health outcomes and generate financial returns
- Have provided £4.2M (out of £92M) to commercial organisations across 4 years (2017-21) who have provided research, evaluation and other forms of support to partners across urban health programmes

#### **Research and Grant Areas**

- Using assets for health: Managing and investing an endowment worth nearly £1BN. Consists of a diverse portfolio of investments, property and other assets. Dual objectives for it: to achieve financial returns and to deliver health impact
- Unlocking potential for cities to be healthier: Exploring health inequity in cities, and what can help to turn them into healthier places for all
- Supporting NHS staff and exceptional healthcare: Support staff and healthcare by backing people, innovation and inspiration across Guy's, St Thomas', and Evelina London hospitals
- Research areas: Research focuses on medical devices, better healthcare delivery, life sciences (research, development and manufacture of biomedical solutions and technology) and food & nutrition

#### **Case Studies**

- Investing in life sciences startups': Back two funds dedicated to investing in start-ups in the life sciences sector. The SV7 Impact Medicine Fund, a biotech-focused venture capital fund of SV Health Investors, which invests in companies exploring new drug discoveries and development and Medicixi III which invests in biopharma companies from discovery to late-stage clinical assets
- Eka Ventures: Back this fund that invests in consumer technology start-ups in the UK. They focus on companies that contribute to an inclusive, healthy and sustainable society
- Baillie Gifford Worldwide Healthcare Innovation Fund: Invested capital in the Baillie Gifford Worldwide Healthcare Innovation Fund. This Fund invests globally in healthcare companies taking an innovative approach to diagnostics, treatment and prevention of diseases

#### **Grant Types**

- Investment fund: Manage a £1BN endowment and look to invest £25M per year in, e.g., medical devices, healthcare delivery – typically via investment in funds
- Special purpose fund: Funds are used to support a range of activities over and above that which is generally available on NHS budgets, this could include investment in education, patient care, equipment, research and staff wellbeing. £4.9M invested in 2020/21
- Evelina Children's Fund: Using donations for hospital and children's services, help provide best possible care for young patients & families
- Cancer fund: Support pioneering new treatments and innovative ideas (Currently paused due to Covid 19)
- Charitable Fund: Support hospital teams implement new ideas and improve healthcare (Currently paused due to Covid 19)

#### **Eligibility and Application Process**

- Eligibility: Special purpose funds and Evelina Children's fund open to NHS staff. Investment funding is open to industry via the MedTech investment funds that the foundation supports
- Application Process: Foundation
   has invested in a number of health
   innovation funds which would need
   to be contacted individually to pitch
   to for funding

#### **Contact Details**

Contact details: <a href="https://gsttfoundation.org.uk/contact-us/gsttfoundation.org.uk/contact-us/">https://gsttfoundation.org.uk/contact-us/</a>

#### Footnote:

#### Link to case study:

1. <a href="https://gsttfoundation.org.uk/our-work/investment/investment-portfolio-impact-investments/">https://gsttfoundation.org.uk/our-work/investment/investment-portfolio-impact-investments/</a>

Organisation website: https://gsttfoundation.org.uk/



### 4.6 Leeds Hospitals Charity

#### **Overview of Charitable Trust**

- Provide support for eight areas which include Leeds General Infirmary, Leeds Children's Hospital, Leeds Cancer Centre, St James's University Hospital, Chapel Allerton Hospital, Seacroft Hospital, Wharfedale Hospital and Leeds Dental Institute
- Support NHS staff to deliver the best care for over a million patients and their families each year
- Work with local communities, schools and businesses and each year provide £5M in additional funding for Leeds Teaching Hospitals Trust

#### **Research and Grant Areas**

- Research & Innovation: Prioritises funding into research and innovation projects focused on accelerating the transition of research discoveries into clinical practice. Areas of medical interest are: Paediatric care & research, cancer care & research, mental health and care of older people (e.g., Dementia, Alzheimer's)
- Education: Initiatives which enable healthcare staff to access training to further skills, perspective & knowledge
- Specialist staff: Help support and co-ordinate the care, service and treatment provided to patients and families
- Health & Wellbeing: Initiatives which promote healthy lifestyles and prevent ill-health
- Equipment: Provision of specialist equipment which enhances the care and service provided to patients
- Environment: Projects and improvements which will enhance the healthcare environment

#### **Case Studies**

- Clinical trial to improve outcomes for kidney transplant patients in Leeds¹: Contributed over £58,000 to fund a pioneering clinical trial, for kidney transplant patients
- Leeds Artificial Eye Service<sup>2</sup>: Funded innovative 3D technology to help manufacture more lifelike artificial eyes for children and young people who have lost an eye due to cancer, glaucoma or trauma
- Specialist Nurse funded to support clinical trials: Nurse's work involves assessing patients' eligibility and recruiting and following up patients to the multiple sclerosis (MS) trial as well as maintaining oversight of their engagement throughout the trial

#### **Grant Types**

- Seed funding up to £10,000:
   Small scale activity that fosters
   Research & Innovation capacity
   i.e., consumables, publications,
   data analysis
- Pump priming of projects £10,000

   £49,999: Funding that supports development of new research and or innovation that has the potential to lead to more, be that a larger grant, alternative sources of funding
- Project grants/Research & Innovation Funding over £50,000: Funding that supports the advancement of a particular health issue. 4 application opportunities per year for projects seeking over £10,000 seed funding up to £200,000
- Chief Nurse Fund: Funding for nurses or midwives to improve skills

#### **Eligibility and Application Process**

- Eligibility: Funding is largely open to NHS staff but strategy mentions keen to hear from applicants who can make a positive impact for healthcare in Leeds. For Research & Innovation Fund, staff are able to involve input from a commercial partner in their application
- Application Process: 8 step online application process involving submitting online form and various stages of review, monitoring and evaluation

#### **Contact Details**

Contact details: hello@ leedshospitalscharity.org.uk

#### Footnotes

#### Link to more details on case studies:

- 1. <a href="https://www.leedshospitalscharity.org.uk/news/clinical-trial-hopes-to-improve-outcomes-for-kidney-transplant-patients-in-leeds">https://www.leedshospitalscharity.org.uk/news/clinical-trial-hopes-to-improve-outcomes-for-kidney-transplant-patients-in-leeds</a>
- 2. <a href="https://www.leedshospitalscharity.org.uk/news/new-charity-funded-technology-helps-create-more-life-like-artificial-eyes-for-children-and-young people-who-have-lost-an-eye">https://www.leedshospitalscharity.org.uk/news/new-charity-funded-technology-helps-create-more-life-like-artificial-eyes-for-children-and-young people-who-have-lost-an-eye</a>

Organisation website: https://www.leedshospitalscharity.org.uk/

### 4.7 The Maudsley Charity

#### **Overview of Charitable Trust**

- Works in partnership with South London and Maudsley NHS Foundation Trust and the Institute of Psychiatry, Psychology and Neuroscience, King's College London to promote positive change in the world of mental health
- Support innovation, research and service improvement, working with patients and families, clinical care teams, researchers and community organisations with a common goal of improving mental health

#### **Research and Grant Areas**

- Living Well with Psychosis: Trying to better understand existing work, focused on care and support (in any form) for people affected by psychosis, including those living with diagnoses like bipolar disorder, schizophrenia and schizoaffective disorder
- Young People Most at Risk of Mental Illness: More details to be released but will focus on mental health treatment for young people
- Mental health in community: Look into ways in which to support and help people with mental health in the local community

#### **Case Studies**

- Healthlocker¹: Secure platform powered by South London and Maudsley NHS Foundation Trust that promotes supported selfmanagement and opportunities to improve communication between service users, carers and clinicians
- CogStack<sup>2</sup>: information retrieval and extraction platform developed by researchers at the NIHR Maudsley Biomedical Research Centre.
  Part-funded by Maudsley Charity, CogStack assists clinical decision-making. Implements enterprise search, natural language processing, analytics and visualisation tech. to unlock health records and assist in clinical decision making & research
- 3T imaging system<sup>3</sup>: Awarded over £1M by Maudsley Charity towards a new 3T imaging system that collects and uses psychiatric neuroimaging data to improve the diagnosis and prognosis of mental illness
- Molehill Mountain<sup>4</sup>: further development funding for an app to help people with autism manage anxiety

#### **Grant Types**

- Anchor grants: More for community projects and collaborations between the charity and people suffering from mental illness, e.g., recording their lives and experiences and celebrating art, achievements etc. – not open to application
- Transformation grants: Large scale, long term impact projects that aim to maximise the power of collaboration and expertise in mental health. Committed to funding £10M over next 5 years but not open to funding applications
- Living well with pyschosis and young people most at risk of mental illness programme: Not open for application yet and details still to be released

#### **Eligibility and Application Process**

- grants programme for 'living well with psychosis' and 'young people most at risk off mental illness' does not open yet. But indications are that willing to hear from anyone involved in projects that that aim to improve way mental health is diagnosed and treated.

  Anchor and transformation grants not open to application
- Application Process: New grant funding scheme does not open yet

### **Contact Details**

Contact details: <a href="https://">https://</a>
maudsleycharity.org/grants/

#### Footnotes.

#### Link to more details on case studies:

- 1. https://maudsleycharity.org/case-studies/1178/
- 2. https://maudsleycharity.org/case-studies/cogstack/
- https://maudsleycharity.org/case-studies/3t-imaging-system/
- 4. https://maudsleycharity.org/case-studies/a-mobile-app-for-people-with-autism%e2%80%afand-anxiety/

Organisation website: https://maudsleycharity.org/



### 4.8 The Royal Marsden Cancer Charity

#### **Overview of Charitable Trust**

- Exists solely to support the work of The Royal Marsden, the largest and most comprehensive cancer centre in Europe
  - Objectives focus on providing:
  - The relief of sickness related to cancer at the hospital
  - The promotion of clinical and other useful research at or in connection with the hospital
  - The advancement of education at or in connection with the hospital
  - The provision of accommodation, amenities and recreational facilities for the benefit of patients, carers, staff and students at the hospital, and the provision of comforts for such patients

#### **Research and Grant Areas**

- Research: Support lifesaving research, including leading on the development of new treatments and funding clinical trials that give patients at the hospital, across the UK and around the world access to the latest breakthrough drugs for cancer
- Equipment: Invest in stateoftheart equipment, from advanced robotic surgery machines, to scanners and diagnostic technology to
- Patient environments: Fund modern patient environments, allowing the hospital to build new facilities and refurbish existing ones
- Treatment and care: Enable The Royal Marsden to offer patients worldleading treatment and care, delivering tailored and personalised treatment

#### **Case Studies**

- Al to improve the lives of cancer patients¹: In collaboration with Imperial College London, the MALIMAR (Machine Learning in Myeloma Response) study is using machine learning, a type of Al in which computers are taught how to do things independently, to read wholebody MRI scans in myeloma patients to find evidence of cancer
- Oak Cancer Centre<sup>2</sup>: Raising £70M to create new facility that will house a new Rapid Diagnostic Centre that uses the very latest technology to provide faster diagnosis for more people
- Early detection with liquid biopsies<sup>3</sup>: Funded new study that found a personalised 'liquid biopsy' blood test could detect the return and spread of breast cancer on average 11 months before tumours became visible on scans or patients developed symptoms

#### **Grant Types**

- Research funding: Providing £15M over 5 years to research early cancer diagnosis and running clinical trials
- Equipment funding: Provide funding to buy robotic equipment and research into robotics, e.g., funded a robotic surgery fellowship, a Da Vinci Xi robot and new CT scanner

#### **Eligibility and Application Process**

- Eligibility: Grants only made to the Royal Marsden NHS Foundation Trust and employees there and not to any other organisation or individual
- Application Process: Funding opportunities not available to businesses

#### **Contact Details**

Contact details: https://www.royalmarsden.org/contact

#### Footnotes.

#### Link to more details on case studies:

- 1. <a href="https://www.royalmarsden.org/difference-you-make/using-ai-improve-lives-cancer-patients">https://www.royalmarsden.org/difference-you-make/using-ai-improve-lives-cancer-patients</a>
- 2. https://www.royalmarsden.org/difference-you-make/royal-marsden-new-treatment-and-research-facility
- 3. https://www.royalmarsden.org/difference-you-make/returning-breast-cancer-new-blood-test

Organisation website: https://www.royalmarsden.org/

### 4.9 Royal Papworth Charity

#### Overview of Charitable Trust

- Works with Royal Papworth Hospital, a hospital renowned for its heart and lung care, to help offer superior facilities, better patient care and improved patient experiences
- Has awarded a number of grants in support of a wide variety of projects designed to enhance the features, facilities, environment, research and the services of Royal Papworth Hospital

#### **Research and Grant Areas**

- Research: Support Royal Papworth
  Hospital to develop and expand its
  research capability to help ensure
  that the medicines of tomorrow are
  delivered today, primarily focusing on
  heart and lung research
- Medicines of tomorrow: Help provide the financial support to develop new ways of treating cardiothoracic diseases
- Medical equipment: Continued investment in medical equipment to match clinical expertise
- Hospital environment & patient welfare: Support amenities that have a positive bearing on patient care
- Recruiting excellence & staff welfare: Ensure that the Hospital can recruit, retain and develop the highest quality workforce

#### **Case Studies**

- UV Sterilisation Equipment¹:
   Introducing ultraviolet sterilization
   technology into cleaning processes
- Project Breathe<sup>2</sup>: Enabling patients to take control by monitoring from home and tracking the changes in their health with all data being reviewed at the hospital

#### **Grant Types**

#### Fund a number of projects at the hospital, examples are:

- DCD Heart Transplant:
   programme enabled 85 patients
   to receive hearts from donors
   which would otherwise not
   have been used, resulting in
   an increase in the number of
   transplants per year by a third at
   Royal Papworth
- The Heart and Lung Research Institute: Contributing over £5M to support building of new Heart and Lung Research Institute to ensure patients have access to world's best treatment
- Community sanctuary project: create a community space around a new pond, encouraging wildlife and showcasing artwork to tie in with arts strategy

#### **Eligibility and Application Process**

- Eligibility: Funding for projects is for Royal Papworth Hospital
- Application Process: No funding available to businesses

#### **Contact Details**

Contact details: <a href="https://">https://</a>
 royalpapworthcharity.com/contact

#### Footnotes.

#### Link to more details on case studies:

- 1. https://royalpapworthcharity.com/Our-Strategy
- 2. <a href="https://royalpapworthcharity.com/latest-appeals-and-campaigns?appeal=cystic-fibrosis">https://royalpapworthcharity.com/latest-appeals-and-campaigns?appeal=cystic-fibrosis</a>

Organisation website: https://royalpapworthcharity.com/

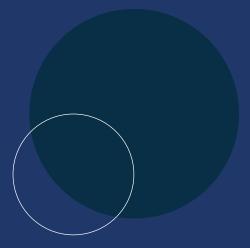


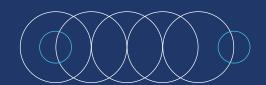
# 5 Conclusions

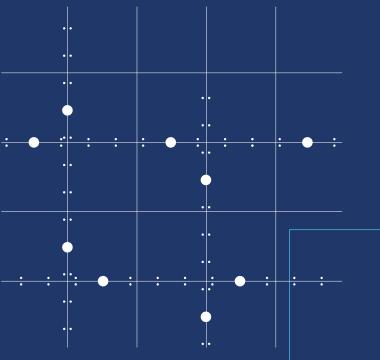
The guide will date over time as new institutions and programmes are developed. However, the core programmes are likely to remain consistent over the next three to five years. The institutions all have rich web sites which are updated frequently.

Regular monitoring of the AAC website and monitoring of their board minutes give an insight into the direction of health care innovation support.

Strategia Group are happy to help you navigate this environment so please feel free to contact us if you think we could help you in understanding potential support.







# Contact

**Marie-Claire Henry** 

Senior Market Advisor - Healthcare & Lifesciences

Mob: +44 7765 223 626

Email: Marie-claire.henry@enterprise-irelnd.com

Linkedin: Marie-Claire Henry | LinkedIn

Adrian King
Strategia Group
adrian.king@strategiagroup.net

www.enterprise-ireland.com www.globalambition.ie/markets-opportunities/uk

