

Research and Innovation Strategy 2011-2015

Vision

To improve patient health through our excellence in world-class translational and applied health services research and our culture of innovation.

Mission

To establish a Bristol Academic Health Science Centre (AHSC) in which world-class translational and applied health services research and innovation are undertaken, supported by appropriate resources and infrastructure from the Trust and Bristol Research and Innovation Group for Health (BRIG-H) partners.

National Context

The way applied health services and translational research is funded in NHS trusts and universities in the UK have radically changed over the last five years. The previous Government's research strategy, *Best Research for Best Health* (BRfBH), was launched in January 2006 with the goal of securing and encouraging the pursuit of clinical (defined as near-patient and near-service) research. The strategy explicitly identified health services research and clinical trials as priorities, since they offer the prospect of a more immediate impact on clinical care, and culminated in the establishment of The National Institute for Health Research (NIHR). In essence, *BRfBH* changed Department of Health funded research from being a supportive funding stream (which covered mainly the NHS costs of hosting externally funded non-commercial activity and provided for some 'own account' research), to a directed and commissioned research programme with an explicit emphasis on research excellence. These commissioned and response-mode research funding streams are co-ordinated and managed by the [NIHR Central Commissioning Facility \(CCF\)](#) and the [NIHR Evaluation, Trials and Studies Coordinating Centre \(NETSCC\)](#). As part of the changes to the way research funds are distributed by the NIHR, the previous Culyer block grant has ceased and trusts are now funded on the basis of the quality and volume of the research they actually undertake. One of the aims of these new funding streams is to make research activities far more transparent and to stop research funds being used to subsidise direct clinical service provision in a trust.

The NIHR has also managed a series of initiatives including awarding a number of trust and university partnerships with additional funding for biomedical research centre and units status; and the establishment of comprehensive and disease-specific local research networks as part of the UK Clinical Research Network programme. More recently, five major academic/NHS collaborations in England have been designated by the NIHR as Academic Health Science Centres (AHSCs). The aims of the AHSCs are to integrate some or all of the activities of their

associated health care and higher education institutions, thereby strongly enhancing their ability to achieve their strategic goals (individual and collective). By integrating their clinical service, research and teaching strategically and operationally, AHSCs deliver a “whole which is greater than the sum of the parts”.

In parallel with the above changes in the way applied health services research is funded in NHS trusts, funding for basic-science and translational research (see glossary for definitions of translational and applied health services research) also changed, driven by the 2006 Cooksey Review. The Review endorsed *BRfBH* and strongly recommended an increase in inward investment in R&D and supported a research driven healthcare system. The UK Government accepted these recommendations and most significantly greatly expanded the DH R&D and Medical Research Council (MRC) budgets, and established a new Office for Strategic Coordination of Health Research (OSCHR) to take a strategic overview of the budgetary division and research strategy of both the MRC and NIHR. In parallel the Wellcome Trust has also focused its very considerable funding on translational research and more recently has decided to allocate the majority of its funds for investigator awards rather than on specific projects. The need for the NHS to work better with industry and business has also been recognised widely by all UK funding bodies.

All of the changes in funding have encouraged and facilitated academics and NHS researchers to work closely together in larger multi-disciplinary teams. This integration and the focus on translational and applied health services research has attracted additional infrastructural and programme grant funding and has also highlighted the need to promote the clinical research skill base in professions other than medicine. A number of recent initiatives reflect efforts by funding bodies to ensure opportunities are provided to prepare both medical and non-medical professionals to undertake and lead research, often in previously under researched and neglected areas of significant NHS activity.

Local Context

The response by the Bristol healthcare research community over the last two years to the above changes in the national applied health services and biomedical research agenda has been transformational. University Hospitals Bristol (UH Bristol) has worked with its partner universities and NHS trusts in the region to form a novel collaboration called the Bristol Research and Innovation Group for Health (BRIG-H). The six BRIG-H partner organisations are currently working to maximise their joint research potential by developing a shared research strategy, joint enabling infrastructure and common goals and aspirations for translational and applied health services research. To facilitate the BRIG-H agenda a Joint Director of Research has recently been appointed across the two acute NHS trusts, and the official launch of BRIG-H was held at the end of March 2010. The event showcased the many existing fruitful collaborations between the six partner members of BRIG-H, highlighting the new infrastructure (e.g. the new Clinical Research and Imaging Centre [CRIC] and the Specialist Methodological and Analytic Research and Training Unit, [SMART]) and joint processes which are being developed to facilitate further collaborative working.

The formation of BRIG-H has emphasised the clear need for a more strategic approach in the way research and innovation at UH Bristol is undertaken, supported and monitored. Further, the

new government's recent White Paper on Health and the current economic uncertainties will inevitably lead to a constriction in the funds available for basic and clinical biomedical research funding. A re-examination of, and update to, the UH Bristol research and innovation strategy is therefore timely and emphasises the importance of focusing on and fostering our priority areas of translational and applied health services research and innovation where we are, or have the potential to be world-leading (Aim 1). In parallel, we must train, mentor and support research-active staff to deliver high quality translational and applied health services research of direct patient benefit in our priority areas of research (Aim 2). These activities will develop a culture across UH Bristol in which research and innovation are embedded in routine clinical services leading to improvements in patient care (Aim 3). Lastly, we will work with our BRIG-H and regional partners to align our research and clinical service strengths leading to the establishment of a Bristol AHSC (Aim 4).

Of note, once this strategy has been approved by the Trust Board then a detailed implementation plan which will include actions against individuals/teams and time-lines for delivery, will be developed by Research and Innovation and approved by Trust Research Committee.

Aims and Objectives:

Aim 1 **Focus on and foster our priority areas of high quality translational and applied health services research and innovation where we are, or have the potential to be, world-leading.**

Objective 1.1 Identify strengths and build critical mass in world-class translational and applied health services research.

Objective 1.2 Provide protected time for research.

Objective 1.3 Provide skilled support for grant applications; navigation of regulatory and approval processes and delivery of studies.

Aim 2 **Train, mentor and support research-active staff to deliver high quality translational and applied health services research of direct patient benefit in our priority areas of research.**

Objective 2.1 Increase the participation in NIHR portfolio clinical studies.

Objective 2.2 Identify emerging talent and provide academic mentorship.

Objective 2.3 Promote and develop patient/public involvement for all clinical studies

Aim 3 **Develop a culture in which research and innovation are embedded in routine clinical services leading to improvements in patient care.**

- Objective 3.1 Provide Divisions with appropriate financial resources to deliver research.
- Objective 3.2 Increase Divisional understanding of the role of research and innovation in high quality clinical care.
- Aim 4 Work with our BRIG-H and regional partners to align our research and clinical service strengths leading to the establishment of a Bristol AHSC**
- Objective 4.1 Establish a Bristol AHSC.
- Objective 4.2 Maximise external funding for research and innovation.
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Glossary

AHSC – Academic Health Science Centre/Cluster aim to integrate some or all of the activities of their associated health care and higher education institutions, thereby strongly enhancing their ability to achieve their strategic goals (individual and collective). By integrating their clinical service, research and teaching strategically and operationally AHSCs deliver a “whole which is greater than the sum of the parts”. AHSC collaborations now apply to many of the most successful hospitals and medical schools nationally and internationally.

BRIG-H – Bristol Research and Innovation Group for Health is a vibrant and ambitious Bristol-wide strategic research and innovation partnership. It is dedicated to fostering excellence in people and infrastructure to realise the full potential of research and innovation to benefit patient health.

BRIG-H partners – UH Bristol, North Bristol NHS Trust, Avon and Wiltshire Mental Health Partnership NHS Trust, NHS Bristol, University of Bristol and University of West of England

Innovation relates to “The adoption of new-to-the-organisation or new-to-the-NHS technology products and/or service delivery processes, comprising step- or incremental-change, and resulting in a significant improvement in patient outcomes, experiences, safety and potentially cost-effectiveness”. An implication of this definition is that the benefits of the introduction of the technology/service delivery processes are proven. (National Innovation Centre 2008)

Translational and Applied Health Services Research leads to benefits in the care provided for patients and encompasses a range of activities that include research going: (a) from bench to bedside, where theories emerging from pre-clinical experimentation are tested on patients, and (b) from paper into practice, whereby a better understanding and then evaluation of health services results in an improvement in outcomes.

Trust Research Staff or “Researchers” are used throughout this document to encompass all clinical researchers and includes the following professional groups: Medical, Nursing, Midwifery, AHPs, Clinical Scientists and Pharmacists.

Aim 1: Focus on and foster our priority areas of high quality translational and applied health services research and innovation where we are, or have the potential to be, world-leading.

Objective 1.1	Identify strengths and build critical mass in world class translational and applied health services research.	
	Actions	Key Performance Indicators
1.	<p>Annual audit of all research and researchers at UH Bristol to comprehensively identify levels and areas of current research activity and infrastructure.</p> <p>Measure compliance annually with the objective.</p> <p>Identify impacts of translational and applied health services research at UH Bristol on patient care.</p>	<p>Number of CI/PI grant holders and total grant funds including fellowship applications awarded to Trust researchers.</p> <p>Number researchers identified with higher degrees (PhD, MD, MSc), and the number of awarded training fellowships from external bodies.</p> <p>Number of studies approved and registered.</p> <p>Documented changes to local practice</p> <p>Trust staff who sit on or contribute to national or international committees that influence healthcare delivery.</p> <p>Work cited in national guidelines</p> <p>Apply the new HEFCE impact metrics that will be used in next REF/RAE to research at UH Bristol.</p>
2.	<p>Identify the priority areas of research at UH Bristol (also see objective 4.1.3).</p> <p>Ensure all research funds and resources allocated by the Trust are in priority research areas.</p> <p>De-prioritise and stop allocating funds and resources to research areas where we are not, or do not have the potential to be, world-leading.</p> <p>Ensure all research-active appointments and new research infrastructure within the Trust are in priority research areas.</p>	<p>Agreed list of current and potential priority research areas.</p> <p>Numbers of new joint strategic appointments and underpinning research infrastructure in priority research areas.ⁱ</p>

ⁱ As the Bristol AHSC is established the numbers of strategic cross-cutting research appointments will increase

Objective 1.2		
Provide protected time for research.		
	Actions	Key Performance Indicators
1.	Implement internal funding calls available to all Trust staff, for small grants and dedicated research time using flexibility and sustainability funding and local funds (e.g. Above and Beyond). Use available funds to release time for Trust staff to work on translational and applied health services grant applications. Provide appropriate facilitation and performance management of individuals who receive funds (see objective 1.3).	Number of NIHR and other grants submitted Number of NIHR and other grants shortlisted Number of NIHR and other grants awarded Value of NIHR and other grants Income to UH Bristol from NIHR and other grants FSF Income to UH Bristol
2.	Increase the numbers of new Trust appointments with dedicated research time.	Number of new staff with explicitly identified research time in their job plan/description.
3.	Support Divisions to allocate dedicated research time to individuals who are consistently performing research at a high level. ⁱⁱ	Number of staff with explicitly identified research time in their job plan/description.

Objective 1.3		
Provide support for grant applications, navigation of regulatory and approval processes and subsequent study delivery.		
	Actions	Key Performance Indicators
1.	Appoint staff to facilitate and performance manage staff who receive funding to ensure timely submission of high-quality grant applications. Ensure a culture of sharing information and intelligence (e.g. master-classes, workshops, one-to-one mentoring and grant reviews) between applicants and previously successful researchers.	Number of grant applications submitted Number of successful grant applications

ⁱⁱ This creates a reward and incentive to generate more income from patient recruitment into non-commercial portfolio studies and/or fully funded commercial studies.

Objective 1.3	Provide support for grant applications, navigation of regulatory and approval processes and subsequent study delivery.	
	Actions	Key Performance Indicators
2.	Provide access to complex methodological support for writing grant applications and research protocols e.g. Research Design Service, Specialist Methodological and Analytic Research and Training unit, Bristol Randomised Trials Collaboration	Number of funded grant applications.
3.	Provide skilled support to assist researchers to:- Identify all resources required to deliver research. For example: all direct research costs, support costs, excess treatment costs, appropriate access to support departments, staff, and sites. Help secure all necessary research approvals and ensure compliance with relevant statutory instruments.	Number of successful fully-costed grant applications Average time to approval. Number of applications approved first time. Average time to set-up and first patient first visit. Number of studies delivered to time and to budget.
4.	Ensure robust governance of research: audit compliance with all patient safety aspects of research; monitor trial conduct and ensure compliance with all statutory requirements.	Number of research related complaints Number and nature of findings in monitoring reports Scale and nature of external inspection findings

Aim 2 Train, mentor and support research-active staff to deliver high quality translational and applied health services research of direct patient benefit in our priority research areas.

Objective 2.1	Increase participation in NIHR portfolio clinical studies.	
	Actions	Key Performance Indicators
1.	Identify relevant staff to participate in NIHR portfolio studies.	Number of active studies at UH Bristol. Number of patients recruited into NIHR portfolio studies.
2.	Regularly flag new appropriate portfolio studies to all relevant staff.	Number of active studies at UH Bristol. Number of patients recruited into NIHR portfolio studies.

Objective 2.1	Increase participation in NIHR portfolio clinical studies.	
	Actions	Key Performance Indicators
3.	All research active staff will, as part of their core job descriptions, recruit patients into appropriate NIHR portfolio studies.	Amount of WCLRN infrastructure funding. Increase in numbers of staff recruiting to studies. Number of staff with explicitly identified research time in their job plan/description.
4.	Provide research training appropriate to the level of research activity.	Generate a written and ratified research training strategy, appropriate to all research-active staff.
5.	Develop trust-wide structures for the optimal delivery of clinical studies. This will include: divisional research units, and trained and appropriately managed research workforce.	Number of research support staff linked to a clinical or Divisional research facility, with appropriate line management and working on appropriate job descriptions. Written and agreed workforce strategy for research support staff. Adoption of national research competencies, as available.
6.	Divisions to provide protected research time and/or funding for research nurses, clinical trial coordinators and administrators where appropriate, to maximise patient recruitment.	All research studies staffed by appropriate levels of trained research nurses, clinical trial coordinators and administrators.
7.	Ensure commercial partnerships are proactively identified, encouraged and flagged to appropriate research active staff. Market UH Bristol staff and facilities to commercial partners. Ensure commercial studies that are undertaken fit the research priorities and strengths within UH Bristol and that contribute funds to increase capacity for further research.	Percentage of commercial studies following national costing template. Time taken to first patient first visit. Percentage of studies meeting recruitment targets. Increased income from commercially sponsored studies.

Objective 2.2	Identify, nurture and support emerging research talent.	
	Actions	Key Performance Indicators
1.	Regular meetings and workshops to attract and identify potentially research-active staff ⁱⁱⁱ and trainees. Flag research as a priority in all new staff induction programmes.	Numbers of potentially research-active staff and trainees are identified.
2.	Mentor potentially research-active staff via local and/or national support systems.	Percentage of staff in this category with an academic mentor.
3.	Ensure funds to encourage and support research training. Ensure funds for pump-priming funds to allocate dedicated research time and generate preliminary data.	Number of new applications for training and junior NIHR and partner funding schemes. Increase in the number of the Trust staff awarded higher degrees. Increase in academic fellowships awarded to Trust staff. Percentage of new Trust staff generating a successful grant application within three years of appointment. Number of new Trust staff involved in recruiting patients into NIHR portfolio studies at UH Bristol.

Objective 2.3	Promote and develop patient/public involvement (PPI) for all clinical studies	
	Actions	Key Performance Indicators
1.	Promote available resources to support research PPI through existing Trust and RDS information systems	Update on PPI in clinical and research activity on at least bi-monthly basis reaching all potential and existing UH Bristol research staff
2.	Coordinate access to existing support for researchers and monitor use and usefulness of these	Research website showing links and resources PPI strategy and resources used for UH Bristol hosted/sponsored studies recorded

ⁱⁱⁱ This needs to happen shortly after appointment to ensure protected time for research as well as clinical service delivery are appropriately weighted in the job plan.

Objective 2.3	Promote and develop patient/public involvement (PPI) for all clinical studies	
	Actions	Key Performance Indicators
3.	Work with existing PPI leads (Trust, external, CR Networks) to develop sustainable support infrastructure for PPI – cost reimbursement, training, access	Clear strategy for support easily accessed and promoted
4.	Ensure researchers engage PPI at earliest stages of research study development through education and monitoring	Statement of need to engage given at earliest contact with Research and Innovation or RDS – visible on website and key documents. Programme of education (formal and informal) established.

Aim 3: Develop a culture in which research and innovation are embedded in routine clinical services leading to improvements in clinical care.

Objective 3.1	Provide Divisions with appropriate financial resources to deliver research.	
	Actions	Key Performance Indicators
1.	Make explicit and transparent the allocation of research funding to each Division, based on activity and strategic priorities. R&I to work with Divisions to ensure appropriate spend of research monies. ^{iv}	All WCLRN delivery funding directly allocated on the basis of research activity and Divisional spend. Auditable accounts for research funding in each Division
2.	Ensure transparent revenue allocation of income from commercial studies and IP exploitation.	Transparency of income Appropriate IP policy. Auditable accounts for innovation income in each Division
3.	Develop best practice in costing all elements of research, including treatment costs.	Robust costing tools in place.
4.	Work with Divisions to recoup appropriate treatment costs from commissioners for research studies.	Treatment costs for research studies recouped.

^{iv} For example, on protected research time; research support staff; infrastructure support such as clinical trial units and facilities.

Objective 3.2	Increase Divisional involvement and accountability in research and innovation leading to improvements in clinical care.	
	Actions	Key Performance Indicators
1.	Divisional research leads to sit on Divisional boards and Trust research committee and act as conduits to ensure regular two-way information flow.	Job descriptions agreed Leads appointed
2.	Ensure regular and accurate reporting of all research activity to Divisions. Develop KPIs with each Division to allow for appropriate performance management of research Identify reporting structures for research appropriate to their area.	Accurate reports of all research related activity for all disciplines KPIs written for each Division. Reporting structure in place, agreed and in use.
3.	Research units to be established and funded within each Division to provide a physical base for research staff and clinical space to conduct studies. Best practice to be shared between divisional research support units	Number of units in place Number of units with administrative and clinical space Standard operating procedures agreed and implemented
4.	Increase patient recruitment to appropriate NIHR portfolio studies.	Number of staff with explicitly identified research time in their job plan/description. Number of active studies in each Division. Number of patients recruited into NIHR portfolio studies in each Division.
5.	Identify and protect intellectual property (IP) within the Divisions. Written policy on revenue sharing to ensure any commercial income appropriately accrues to the researcher and the Trust.	Numbers of confidentiality and material transfer agreements signed Numbers of patents filed Number of licence deals signed Annual income/royalty to trust from above

Aim 4: Work with our BRIG-H and regional partners to align our research and clinical service strengths leading to the establishment of a Bristol AHSC.

Objective 4.1	Establish a Bristol Academic Health Science Centre.	
	Actions	Key Performance Indicators
1.	Provide Trust executive officers with knowledge and information about AHSC models and rationale and advantages of a Bristol AHSC.	Agreement to proceed in place
2.	Work with BRIG-H to identify best model for Bristol AHSC.	Model identified.
3.	Align the priority research areas at UH Bristol with those of our BRIG-H partners.	Agreed list of current and potential priority research areas. Where appropriate, use the agreed list to allocate resources.
4.	Align research prioritisation with the clinical service rationalisation and ensure these activities complement and inform each other.	Research input to clinical strategy discussions. Agreed key strategic priority areas for service and research. Research input to key appointments within services of strategic importance.
5.	Establish methods of working with BRIG-H partners to streamline systems for most efficient and seamless working to maximise research productivity and income across Bristol AHSC.	Time taken to agree grant applications. Time taken to approve projects to start in all BRIG-H partner sites. Increase in number and size of awarded grants.
6.	Agree principles on financial management and employment, leading to an agreed legal framework to establish an AHSC	
7.	Establishment of Bristol AHSC.	

Objective 4.2	Maximise AHSC external funding for research and innovation.	
	Actions	Key Performance Indicators
1.	Joint horizon scanning for funding opportunities and disseminate resulting information across AHSC. Full engagement within AHSC for larger strategic applications.	Increased numbers of successful high quality integrated funding applications by AHSC

Objective 4.2	Maximise AHSC external funding for research and innovation.	
	Actions	Key Performance Indicators
2.	Ensure each AHSC grant application is assessed and modelled for impact on Trust FSF and HEI QR funding.	Amount of FSF funding to the Trust and QR to HEI partners.
3.	Increase the revenue from commercialisation and innovation by better and more effective collaborative working within the AHSC.	Increased commercial and innovation income.

