

Developing people for health and healthcare



Developing a flexible workforce that
embraces research and innovation

Research and Innovation Strategy

Contents

Executive Summary	p3
Introduction	p4
Aims of the Strategy	p6
Objectives of the Strategy	p6
Objective One	p7
Objective Two	p10
Objective Three	p12
Objective Four	p13
Taking it Forward	p14

List of Abbreviations

AHSN	Academic Health Science Network
CAC	Clinical Academic Careers
CLAHRC	NIHR Collaboration for Leadership in Applied Health Research and Care
CPD	Continuous Professional Development
DH R&D Committee	Department of Health Research & Development Committee
HEE	Health Education England
HEIs	Higher Education Institutions
LETB	Local Education and Training Board
NIHR	National Institute for Health Research
R&I	Research and Innovation

Executive Summary

Each year, HEE is responsible for investing nearly £5 billion of public funding in training and education to ensure that the healthcare workforce is available in the right numbers, with the right values, skills and behaviours to meet current and future patient needs. Research and innovation are key enablers for us to ensure that we continuously improve quality, enhance our processes for investing public funds and provide the evidence base for the decisions we make in planning our current and future workforce.

HEE has a statutory responsibility to promote research (Health & Social Care Act 2012, HEE Directions 2013) and the Mandate from the Government to HEE (April 2014 to March 2015) requires HEE to *'develop a more flexible workforce that is able to respond to the changing patterns of service and embraces research and innovation to enable it to adapt to the changing demands of public health, healthcare and care services'*.

As a result, HEE has developed this Research and Innovation (R&I) Strategy which sets out our vision and framework for the delivery of our statutory responsibilities and Mandate duties.

This strategy sets out how we will:

- create an education and training system that is evidence based and underpinned by research and innovation; and
- build the capacity and capability of our current and future workforce to embrace and actively engage with research and innovation.

As the organisation responsible for the education and training of the healthcare workforce, the contribution of HEE to embedding research and innovation within the NHS is crucial. Our ambition is to work with the system to deliver a workforce fit for the future. Information technology and technological advancements are vital enablers to ensure transformation, but we want to move on from innovation being viewed only as technical or scientific discoveries to embrace behavioural, organisational and cultural dimensions within the influence of HEE. Where evidence based good practice exists, we aim to adopt and spread this through promoting and developing innovative organisations, innovative teams, innovative leaders and innovative workers – this is the organisational and cultural transformation to which HEE aspires.

To achieve our ambition, we recognise that engagement and partnership working with stakeholders will be essential. In May 2014, we launched a stakeholder engagement exercise, inviting feedback on draft proposals for this strategy. Over 70 organisations responded and the comments provided have been instrumental in shaping the strategy and informing our implementation plan. We would like to thank all who responded and look forward to continued engagement as we begin this transformation.



Introduction

Health Education England (HEE) exists to improve the quality of care delivered to patients by ensuring that the healthcare workforce is available in the right numbers with the right skills, values and behaviours to meet patients' needs today and tomorrow.

HEE has a statutory responsibility to promote research ([Health & Social Care Act 2012](#), [HEE Directions 2013](#)) and the [Mandate from the Government to HEE](#) (April 2014 to March 2015) requires HEE to '*develop a more flexible workforce that is able to respond to the changing patterns of service and embraces research and innovation to enable it to adapt to the changing demands of public health, healthcare and services*'.

This strategy also supports the [NHS Constitution](#) in recognising, for example, that '*the NHS... works at the limits of science – bringing the highest levels of human knowledge and skill to*

save lives and improve health', and also helps to ensure '*commitment to innovation and the promotion, conduct and use of research to improve the current and future health and care of the population*'. HEE has a statutory responsibility to promote the NHS Constitution and we aim to drive quality improvements through engaging the whole workforce and learners in delivering safe, compassionate care.

Whilst HEE's contribution to the NHS system will be focussed on research and innovation within education and training, it is important to view this strategy in the wider research and innovation context. We aim to align with and complement the work of NHS England and Public Health England whilst working with Higher Education Institutions (HEIs), the National Institute for Health Research (NIHR) and other key partners to facilitate a system wide culture which actively embraces research and innovation.



This strategy links closely to [HEE's 15 year Strategic Framework](#) (Framework 15) which is based on the following three pillars:

- the **key drivers of change** in health and healthcare;
- the impact these drivers are likely to have **on people and patients of the future**; and
- the characteristics of **the future workforce** that will be needed in order to meet the anticipated needs of people and patients.

This strategy will support the delivery of Framework 15 by ensuring that the healthcare workforce has the research and innovation capability required to meet both the current and future needs of patients. For example, we know that in the future, knowledge and understanding of the personal DNA code (genome) will lead to better and earlier diagnosis and personalised care. We also know that the population is becoming more active in its own care processes, meaning that HEE will need to develop an evidence base to inform how we educate and train patients and carers for this changing role.

We recognise that research and innovation must be evidence based before it is disseminated in order to ensure demonstrable outcomes for patients. Where evidence based research or good practice is identified, it will be shared in order to facilitate widespread adoption. HEE's Local Education and Training Boards (LETBs) will deliver and implement these opportunities with local partners, for example Academic Health Science Networks (AHSNs) and NIHR Collaborations for Leadership in Applied Health Research and Care (CLAHRCs).

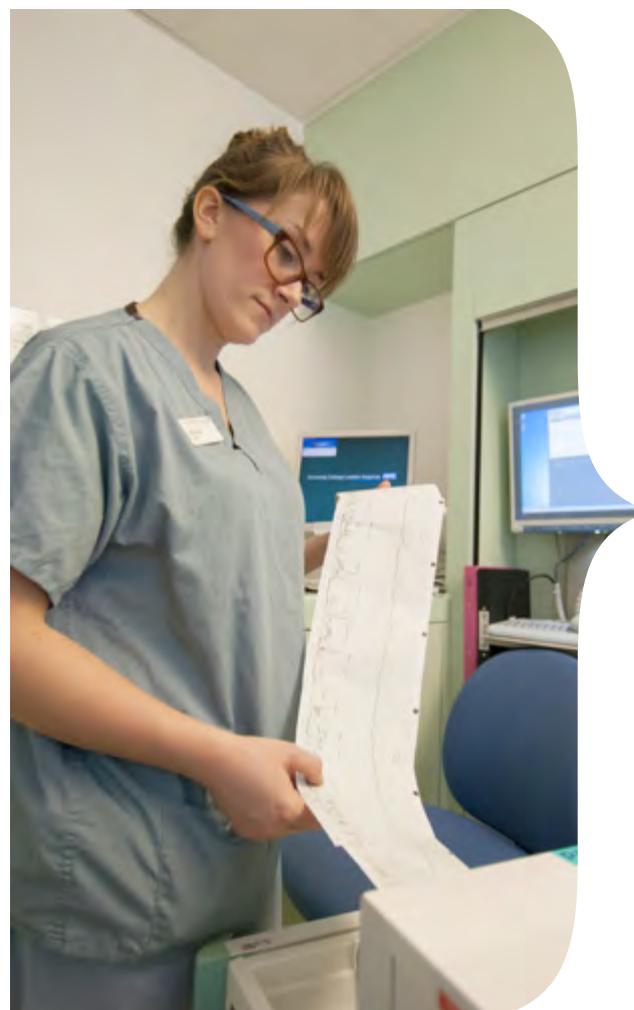
For the purposes of this strategy, the term 'research' is used to describe both research and related application of knowledge and scientific enquiry to development. It encompasses the full range of research activity, from basic research to post-doctoral and peer reviewed work.

Innovation is defined as '*an idea, product or service, new to the NHS or applied in a novel*

or consistent way that has the potential to significantly improve the quality of health and care wherever it is applied' ([Innovation, Health and Wealth, 2011](#)).

The scope of this strategy includes activities from initial training, research or evidence, to widespread implementation across the NHS. It encompasses students on NHS funded training courses to employees working in NHS funded healthcare in England. We also aspire to forge relationships with world leading academic departments and work with our counterparts across the UK in order to identify and build upon global best practice.

References to the 'healthcare workforce' include the public health and healthcare workforce. References to the 'healthcare system' encompass the public health and healthcare system.



Aims

Our ambition is to promote research and *'develop a more flexible workforce that is able to respond to the changing patterns of service and embraces research and innovation to enable it to adapt to the changing demands of public health, healthcare and services'* (Government Mandate to HEE, April 2014 to March 2015).

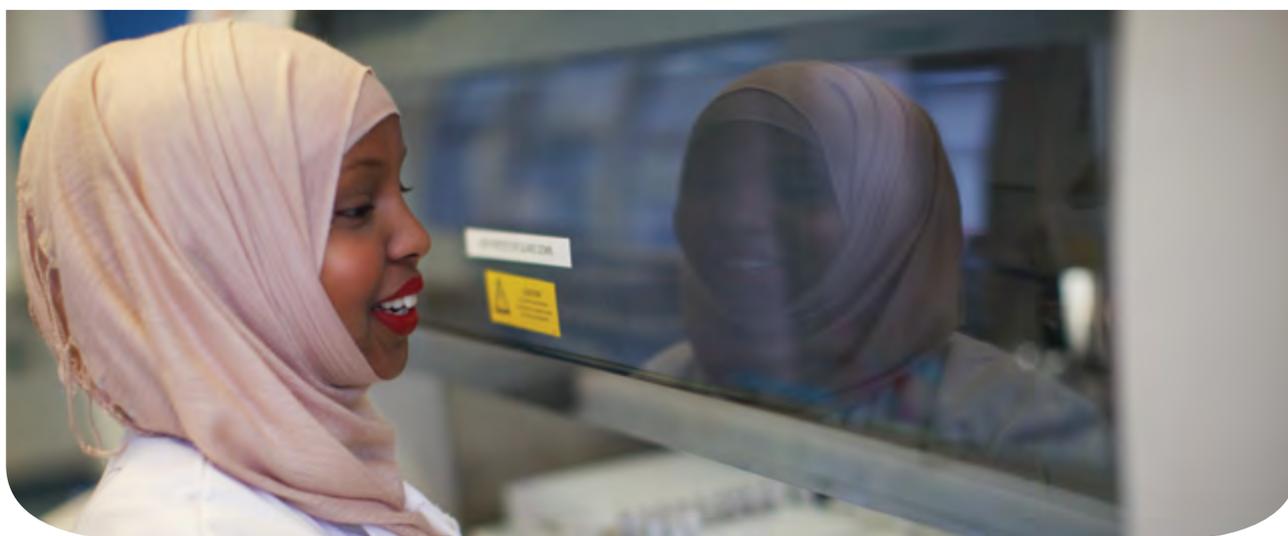
This strategy has two key aims in supporting the achievement of this ambition:

1. to create an education and training system that is evidence based and underpinned by research and innovation; and
2. to build the capacity and capability of our current and future workforce to embrace and actively engage with research and innovation.

Objectives

In order to deliver our ambition and aims, HEE will meet the following four objectives:

- Objective One** Establish a system wide coherence to education and training which will facilitate and sustain the organisational and cultural changes required to embed research and innovation.
- Objective Two** Ensure that the evidence on best practice for training in research and innovation informs and influences the delivery of effective education and training within the healthcare system.
- Objective Three** Develop a multi-professional Clinical Academic Careers Framework for patient benefit.
- Objective Four** Establish a HEE Research and Innovation Evidence Hub to ensure investment in future education and training is evidence informed.



Making it Happen

This strategy sets out a new multi-professional agenda designed to deliver short, medium and long-term benefits to patients. Each of our objectives and key deliverables are outlined below.

Objective

1

Establish a system wide coherence to education and training which will facilitate and sustain the organisational and cultural changes required to embed research and innovation.

This objective seeks to ensure integration of research and innovation across the whole of the healthcare workforce as enablers for quality improvement, service transformation and patient benefit. We are being bold and linking research and innovation within this strategy, to ensure a constant flow and alignment between evidence, the development of new ideas, implementation of good practice and termination of poor or duplicate practice. HEE will promote a whole system approach to training, sharing the best available evidence in order to facilitate a culture that values active engagement with research and innovation.

HEE will aim to ensure that the current and future healthcare workforce has a sufficient understanding of research and innovation, as well as the necessary technology, tools and skills to translate and embed it into daily work.

HEE has an important role in educating future research leaders. In order to develop a sustainable workforce for the NHS, we need to be inclusive of the current workforce and those currently in training. In addition, training in research should be delivered with a multi-professional focus to ensure that the entire workforce is working from a shared knowledge and practice base founded on evidence. HEE will work in partnership with key stakeholders including HEIs and the NHS Leadership Academy to ensure that leaders have the best skills to facilitate this approach. We will also engage with HEIs and healthcare providers to align incentives and create solutions that enable staff, trainees and students to access high quality learning.



Figure 1 sets out our proposed pathway for attaining these outcomes and ensuring maximum impact. At the **creating** and **developing** phases, we will work with partners to generate evidence and innovative ideas. These will then inform future developments which will be **adopted** and systematically **diffused** as best practice in healthcare education and training.

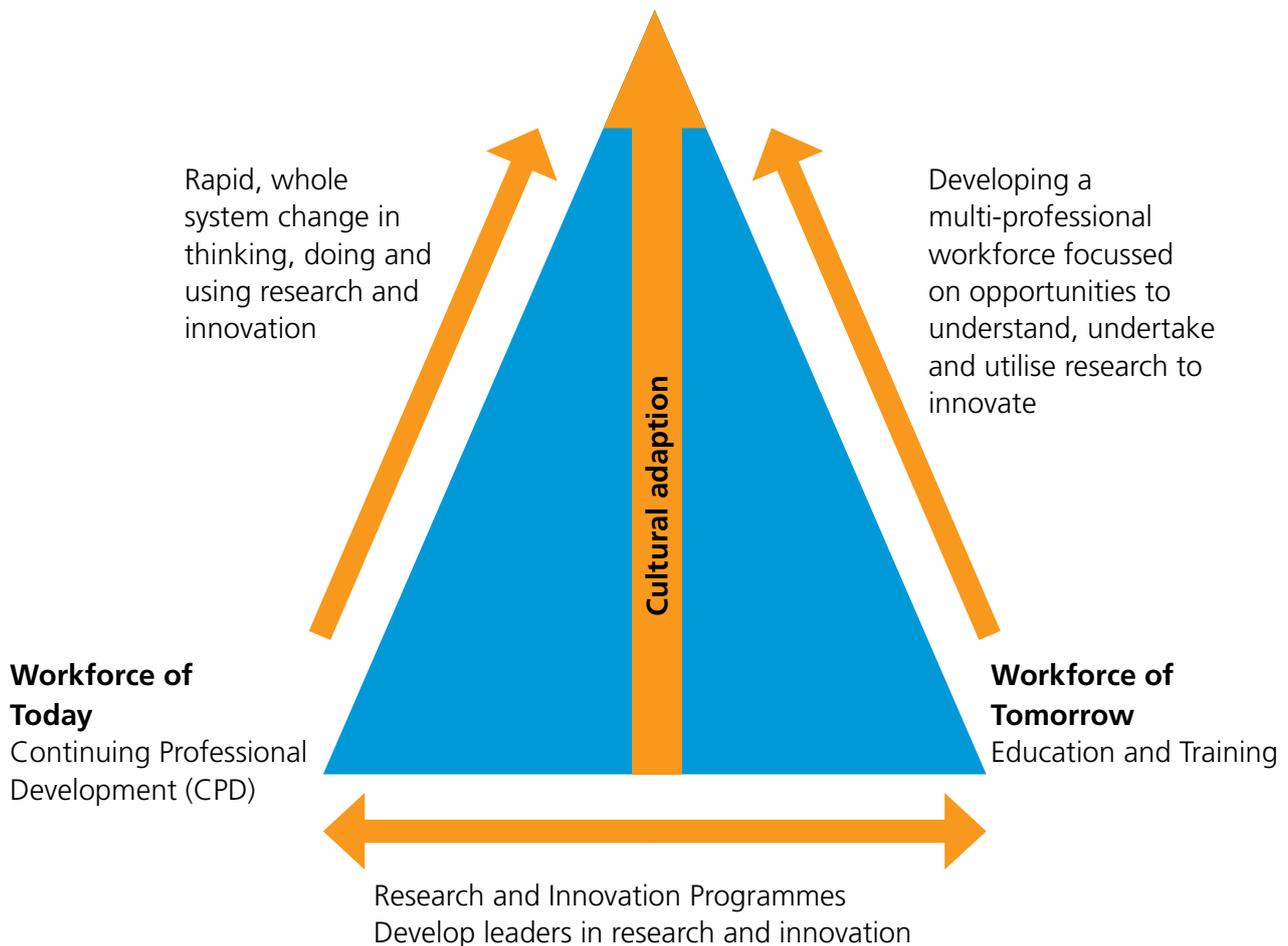
Figure 1: HEE Educational Research and Innovation Pathway



We recognise that in order to embed research and innovation across the healthcare system, culture change will be crucial. Identifying and mapping the relevant partners and stakeholders will be an early priority to ensure that we align with broader system wide policies, initiatives and opportunities for establishing strategic partnerships and facilitating culture change. Maximising the potential of incentives within the system will support the cultural change required for organisations to demonstrate their commitment to research and innovation for patient benefit. HEE’s vision for a system wide culture that embraces research and innovation is illustrated by figure 2 on the following page.



Figure 2: Flexible Workforce that embraces Research and Innovation



Key Deliverables

- 1.1 Scope and baseline educational research projects, and innovative educational activities currently in place across HEE.
- 1.2 Introduce an annual process for identifying, prioritising and sharing innovative and evidence based good practice across HEE, whilst stopping poor and duplicate practice.
- 1.3 Liaise and collaborate with key stakeholders and partners through the Department of Health Research & Development Committee to identify and prioritise research topics relating to key priority areas in education and training.
- 1.4 Assess the extent to which existing education, training and on-going development equips staff across professional groups with the right quality systems management skills to enable them to drive improvement, reporting on the current position and any changes needed.
- 1.5 Review inherited research advisory and stakeholder groups within HEE and determine future governance and advisory arrangements to drive implementation of this strategy.

Objective

2

Ensure that the evidence on best practice for training in research and innovation informs and influences the delivery of effective education and training within the healthcare system.

This objective aims to develop capacity amongst the current and future healthcare workforce to achieve widespread engagement and active participation in research and innovation. It also aims to ensure that the outcomes are utilised to enhance quality improvement and service transformation.

To achieve this objective, we will work with HEIs, Regulatory Councils and other stakeholders to evaluate the extent to which current curricula address research and innovation. Following this evaluation, we will work with partners to build upon relevant curricula and ensure that research and innovation is a standard part of undergraduate and postgraduate development.

Through our LETBs, we will work with key local partners including HEIs, AHSNs and CLAHRCs to identify and commission the education and training required to enable the current workforce to

actively engage with the principles of research and innovation for patient benefit. LETBs will play a key role in monitoring the delivery of this training, to ensure that the healthcare workforce is receiving the required opportunities to enhance its understanding and skills. LETBs will also play a strategic role in developing networks for adoption and spread locally and ensure linkages, which can then be built into a national approach of maximum impact.

We will continue to demonstrate commitment to the UK Life Sciences growth agenda, for example by continued education and training developments for the scientific workforce and more broadly in areas including genomics, bioinformatics, epigenetics and proton beam therapy. We will also seek to raise the profile of research and innovation amongst the potential future workforce as an integral part of all healthcare roles.



Key Deliverables

- 2.1 Develop education strategies to ensure future professional staff are technologically literate and able to promote the adoption and spread of research and innovation, particularly in respect of long term conditions and their prevention.
- 2.2 Develop a training strategy for genomics, including an analysis of workforce implications.
- 2.3 In partnership with stakeholders including HEIs and professional bodies, develop and introduce metrics to monitor the success of implementation of training in research and innovation capability.
- 2.4 Work with partners to explore the scope for creating (or enhancing a current NHS product) an online repository to fast track sharing of good practice and knowledge amongst clinicians, trainees and students.
- 2.5 Work with the NHS Careers Service to embed research and innovation into career information for all healthcare groups and proactively promote Clinical Academic Career opportunities.
- 2.6 Work with schools, including the Science, Technology, Engineering and Mathematics Network [STEMNet] project, the Science Industry Partnership, the voluntary sector, academic partners, local and national initiatives to ensure that recruitment and awareness raising activities aimed at attracting the next generation include research and innovation.



Objective

3

Develop a multi-professional Clinical Academic Careers Framework for patient benefit.

To meet this objective, HEE will develop an inclusive, over-arching framework for Clinical Academic Careers. Building on the current academic training programmes administered by NIHR, the framework will streamline existing schemes, co-ordinate their development and enable all partners to be clear about the strategic approach to developing the clinical academic workforce for patient benefit. Whilst introducing a planned and co-ordinated approach, the framework will offer the flexibility required to ensure that the needs of different professional groups and individuals can be met.

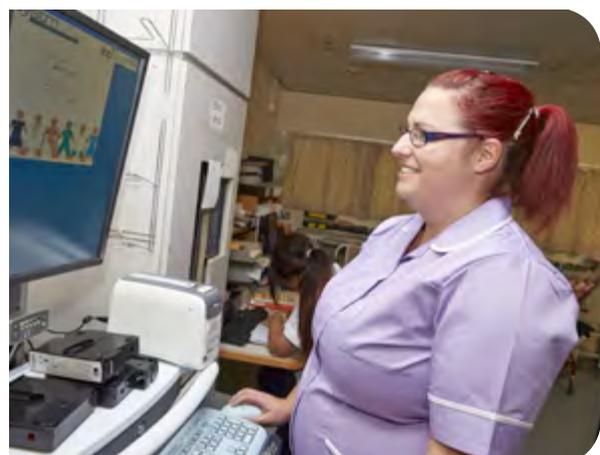
The framework will:

- build upon existing partnerships with NIHR, the Department of Health, HEIs and other key stakeholders;
- build capacity and capability into academic career pathways for all professional groups by bringing together, learning from, and where appropriate, enhancing existing initiatives, for example, the Integrated Academic Training Programme, Healthcare Science Research Fellowship Programme and the Clinical Academic Training Programme (CAT) for nurses, midwives and allied health professionals;
- seek to increase the numbers of staff across all clinical and public health professions with a good understanding of research and its role in improving health outcomes;
- seek to optimise flexible clinical academic training pathways to address the different needs of professional groups and individuals;
- seek to achieve greater parity of access to opportunities across professional groups;

- facilitate the development of joint academic appointments between healthcare providers and HEIs to support clinical academic career developments; and
- ensure support to enhance the influence of research and innovation leaders within the clinical environment so that they serve as role models and agents of change.

Key Deliverables

- 3.1 Develop a clinical academic career pathway; encompassing consultation with key stakeholders including HEIs, Chief Professional Officers and regulators on principles, proposals and implementation.
- 3.2 Forge strong partnerships across the wider system by mapping out existing activity and collaborating with stakeholders to ensure a planned and coordinated approach.
- 3.3 Launch and implement a new HEE Integrated Clinical Academic Programme (ICAP) to succeed the CAT Programme.
- 3.4 Extend the Integrated Clinical Academic Programme to a wider range of professional groups.



Objective

4

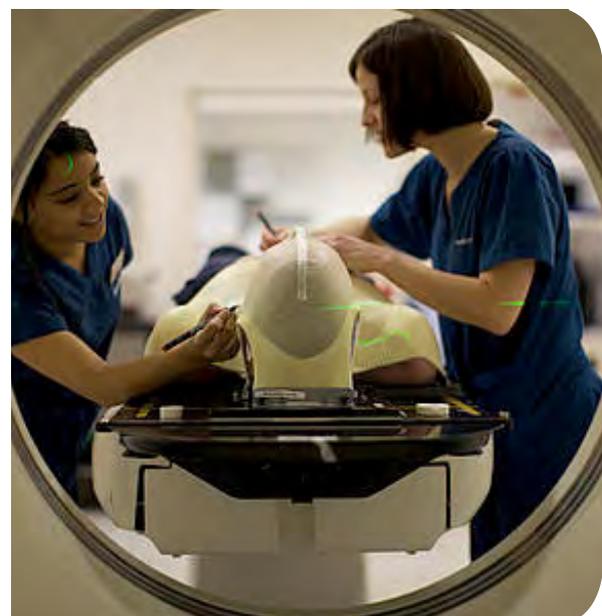
Establish a HEE Research and Innovation Evidence Hub to ensure investment in future education and training is evidence informed.

By establishing a hub of evidence based research and innovation, we aim to enable:

- the emerging evidence for enhancing the training and education of the healthcare workforce to be continually scanned, by developing reviews of best practice in healthcare to enable systematic solutions to current and future challenges;
- the dissemination of evidence on best educational approaches for training the healthcare workforce in order to achieve adoption and spread of research and innovation as an integral function;
- commissioning research in agreed priority areas to further understand the most effective approaches to training and education;
- the creation and development of an evidence base for the effectiveness of innovative learning, for example technology enhanced learning, distance learning, simulation, human factors learning and mobile learning;
- the development of an improved evidence base for multi and inter-professional learning and education, in order to identify when and in what circumstances it is most effective;
- work with academic partners, AHSNs and CLAHRCs in the development of the evidence base within behavioural science for influencing the adoption of evidence and good practice by the workforce; and
- ensure systematic evaluation of research and innovation projects commissioned by HEE.

Key Deliverables

- 4.1 Work in conjunction with stakeholders to establish, promote and integrate a Research and Innovation Evidence Hub which has a horizon scanning function, taking into account the role of other organisations to ensure avoidance of duplication.
- 4.2 Set up a multi-professional research and innovation working group which will make recommendations for aspects of evidence based practice that need to be disseminated rapidly and widely, taking into account other formal mechanisms and partners.
- 4.3 Establish national Education Research Programmes and Multi-Professional Education Research Fellowships which will provide an evidence base for best practice in training and education in HEE priority areas.
- 4.4 Work with partners to support patients and staff throughout the NHS in bringing forward ideas on how to improve services either in their organisation or in the wider system.



Taking it Forward

In this strategy we have set out our ambition to develop a more flexible workforce that is able to respond to the changing patterns of service and embraces research and innovation to enable it to adapt to the changing demands of public health, healthcare and care services.

We have made a clear association between research and innovation within the context of education and training in order to improve the quality of care delivered to patients. Our ambition is to work with the system to deliver a workforce fit for the future.

For our future vision to be realised, we need to work with our stakeholders to engage and capitalise on the system wide opportunities to enable individual, organisational and cultural change. To begin this collaboration, we have developed a shared set of research and innovation goals with NHS England and Public Health England.

Many challenges to the delivery of this strategy have been highlighted by our stakeholders and we are clear that we must build together on what is already evidence based and successful

at both pace and scale. Working together with key stakeholders and partners, we will make the best use of our collective resources with a view to moving from a focus on short term outcomes to long term gain. We aspire to keep our work real and meaningful, with a binding link to quality improvement and value. However, we do not underestimate the scale of the cultural challenge ahead and recognise that valuing and modelling active engagement with research, innovation and quality improvement will be of fundamental importance.

We aim to firmly establish HEE as a learning organisation, whilst promoting a systematic approach to collating, promoting, spreading and adopting good practice, making evidence informed workforce commissioning decisions to respond to the needs of current and future patients.

Progress against delivery of the intent set out in this strategy will be regularly assured through the HEE integrated performance reporting framework and a robust programme of evaluation will help us to understand the impact of our activities and to review and refine them for the future.



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