



DEPARTMENT OF HEALTH DESIGNATED ACADEMIC HEALTH SCIENCE CENTRE (AHSC) 2014/15 ANNUAL REPORT

1. ACADEMIC HEALTH SCIENCE CENTRE DETAILS

Name of the Department of Health Academic Health Science Centre:

Cambridge University Health Partners

Contact details of the DH AHSC lead to whom any queries and feedback on this Annual Report will be referred:

Name: Professor Patrick Maxwell

Job Title: CUHP Executive Director

Address: University of Cambridge, Box 111, Cambridge Biomedical Campus, Cambridge CB2 0SP

E-mail: Regius@medschl.cam.ac.uk

Tel: +44 (0) 1223 336738

2. OVERVIEW OF ACTIVITIES (no more than 4 pages)

Please provide a brief overview of activities for your AHSC for 2014/15 financial year, addressing the following points:

SECTION ONE - progress with further aligning the strategic objectives of the NHS provider(s) and university(ies) in order to harness and integrate world-class research, excellence in health education and excellence in patient care;

Through CUHP, our four partners are achieving progressively closer alignment focused on our ambition to be global leaders across our tripartite mission of patient care, education and research. In terms of top-level strategy, we increasingly work as a single organisation.

CUHP coordinates work across the partnership under the six themes specified in our application:

- supporting translational research
- educating and training tomorrow's workforce
- development of the Cambridge Biomedical Campus
- service innovation and improvement
- medical informatics
- philanthropy

Each of these reports to the Board on progress against planned deliverables. Progress under three themes with specific short term objectives - campus development, medical informatics and philanthropy – is summarised in Section Two of this report. In Annex A we summarise important progress related to education and training, supporting translational research, and service innovation.

CUHP is particularly committed to shaping its future through effective Patient and Public Involvement (PPI) and we are ensuring that PPI is considered in all our activities. Recent initiatives include forming a Research Oversight Group, which includes two patient governors from each of our three NHS Foundation Trusts, and bringing the annual Cambridge Science Festival to the Cambridge Biomedical Campus for a series of engagement events.

SECTION TWO - a summary of the progress against the specific short, medium and long-term objectives as detailed in your full stage application, and a brief summary of progress made in each of the approved themes / work programmes for the AHSC as detailed in the full application;

Short term

1-2 years – we will have developed a new master plan to develop the campus over the next 20 years as an integrated hub for healthcare, research, education and wealth creation. We will have made major progress toward full electronic patient records, increased our capability to interface complex datasets and developed an e-learning platform.

i) The new Campus master plan and the Campus development workstream

CUHP is on track to formulate a comprehensive master plan by the end of our next reporting year that will ensure state-of-the-art infrastructure and shared services across the Cambridge Biomedical Campus. This is overseen by a Campus Strategy Board that is led by CUHP and brings together all major stakeholders on site (including AstraZeneca, MRC Laboratory for Molecular Biology, Cambridge Medipark Ltd).

Our vision is that the CBC will be an innovation hub for the region, and strong partnership with local government is important in achieving this. As reported in the Economist in January 2015

(<http://www.economist.com/news/britain/21639495-how-and-why-fortunes-englands-two-ancient-university-towns-diverged-trailing-its-wake>) the city, county and district councils in Cambridge have worked extremely effectively with the University and other stakeholders to develop the local region as a world-leading location for high-tech industries. Last year, Cambridge secured a City Deal that will provide an initial £100m of additional investment in important infrastructure including transport, with a further £400m if specific criteria are met.

In parallel with working on the new master plan, we are addressing optimisation of a range of aspects of the campus through dedicated working groups with clear responsibilities. These include Travel, Transport and Sustainability; Amenities and Communication. The working groups are providing a very effective collaborative approach to creating the best infrastructure and are accountable for delivery of objectives against agreed timelines.

Development of the campus is proceeding at pace. Construction is well underway on AstraZeneca's £330m new buildings and has commenced on the £160m new Papworth hospital. Detailed plans are being developed for a £60m new Heart and Lung Research Institute (HLRI) and the Forum, a complex housing a hotel, a six-theatre private hospital and educational facilities.

ii) Implementation of an Electronic Patient Record

Cambridge University Hospitals' eHospital programme, the country's largest hospital-based electronic patient record system, was successfully activated in October 2014. More than 250,000 hours of staff training were delivered to support staff in the implementation and we are now providing expert advice to other trusts around the country on electronic health records. At £200m over ten years, this is CUH's largest ever investment in quality improvement. The next phase will see deployment at Papworth. Important next steps will include incorporating access to eHospital for primary and mental health care providers and developing the research benefits, including the potential value to industrial partners. Section Four provides further information concerning informatics.

iii) E-learning Platform

An e-learning platform has been established. The first live module on Oral Hygiene is currently being piloted.

Medium Term

In 2-3 years we will have developed detailed plans and embarked on new fundraising campaigns probably including a 'Brain Village' which will span Neurosciences and Mental Health, a state-of-the-art comprehensive clinical cancer centre, and a new hub catalysing our strengths across public health and population science.

We are making appropriate progress against these objectives. The University's next fundraising campaign will be publicly launched in October 2015, and will include each of these as strategic priorities. A Director of Development has been appointed by the University of Cambridge and CUHP who will be responsible for delivery of our philanthropic agenda, supported by the University's Development Office (CUDAR) which has been very substantially expanded in scale and capability.

CUH has commissioned a formal Outline Business Case to redevelop its clinical cancer facilities. Substantial developments in cancer over the last year include designation by Cancer Research UK as one of three Major Cancer Centres, which will bring substantial new funding for research infrastructure, and the formation of Cancer Core Europe, a consortium of six leading cancer centres aimed at accelerating development of new cancer treatments and precision medicine.

Long term

In 4-5 years AstraZeneca and Papworth Hospital will be fully integrated into the Cambridge Biomedical Campus. There will have been a step-change in research collaborations with industry, and the Campus will be a thriving hub for biomedical innovation with a well-developed enterprise culture. The individual organisations will be porous, with extensive sharing of data, ideas and educational resources.

Only one year into re-designation we are making excellent progress against these objectives. We have secured all the agreements necessary to build the new Papworth Hospital on the CBC. The full financial case was formally approved by DoH and Treasury in March 2015 and construction commenced a month later. It is anticipated that the new hospital will open in 2017.

Planning permission for the new Astra Zeneca headquarters and research laboratories was granted in February 2015, and Skanska has already begun construction. The design by Swiss architect Herzog de Meuron is aimed at maximizing interaction and collaboration between AstraZeneca and the scientists, clinicians, patients and public on the campus.

Through CUHP, all stakeholders are engaged with making the CBC the best environment possible for patient care, education and training, research and economic growth. As a specific example, we are thoroughly overhauling our entire approach to biobanking to make samples from our patients as available and useful for research as possible.

SECTION 3 - summary of the AHSC's contribution to economic growth and the economy, including through partnerships with industry;

i) CUHP Contribution to Economic Growth

The Cambridge cluster includes 1,580 technology companies employing more than 57,000 people with a combined turnover of £13bn. Biomedicine is a crucial and vibrant aspect of the cluster's success. CUHP is to therefore very well placed to capitalise on existing industrial partnerships, to stimulate new approaches to collaboration, and help generate new high value enterprises.

The excellence across the CUHP partnership was a key factor in AstraZeneca's (AZ) decision to relocate to Cambridge. This has secured AZ's base in the UK and 2,000 staff will be moving here over the next three years, which will be a significant boost to the local economy and is of national strategic importance in maintaining and enhancing the country's capability in drug discovery.

The construction value of the new AZ building, Papworth Hospital and other major developments including the Forum on CUHP's Cambridge Biomedical Campus is around £1.3bn, and the overall value of the projects is ~£2bn.

Continued economic growth will be to a significant extent dependent on investment in housing, education and transport infrastructure. To address this, we strongly supported the successful application for the City Deal which will deliver £100m for investment in infrastructure, transport and skills over the next 5 years.

To better understand our role in economic growth, a major study of the impact of Cambridge bioscience on the regional and national economy is being undertaken by the Cambridge Institute of Public Health. This report, due this summer, will provide valuable insight into how CUHP can further support economic growth, and will cover:

- the contribution of Cambridge biomedical science to the local economy
- the costs and benefits of the recent growth in biomedical sciences on the wider economy within Cambridgeshire
- the actions required by industry, academia and government to maximise the local and national economic contribution that biomedical sciences can make.

Partnerships with Industry

CUHP's Office for Translational Research has been very successful in fostering effective partnerships with industry. It provides an effective portal for potential partners, has an extensive portfolio of projects which we consider to be of potential interest, and provides a service coordinating negotiations, contracting etc. Our industry partners include UCB, Pfizer, Lilly, Novo, Siemens and Genzyme. We would particularly highlight major strategic partnerships with AstraZeneca/Medimmune and GSK. In each case the collaboration is overseen by a Joint Steering Committee (JSC) which meets regularly and has proved very effective in identifying projects and ensuring that they are successful. Currently the Cambridge-GSK JSC is overseeing seven high value projects with a particular emphasis on inflammation. With AstraZeneca/Medimmune we have initiated a PhD programme, and have a portfolio of cancer research projects.

With major input from several industrial partners in July 2014 we secured £25m from the Research Partnership Infrastructure Fund for the Cambridge Institute for Immunotherapeutics and Infectious Disease.

To stimulate new partnerships and collaborations, CUHP recently co-founded the Cambridge New Therapeutics Forum, which started this year, holds regular scientific meetings and is open to all scientists from industry and academia who are interested in research and development of new therapeutics in Cambridge and the local region.

To highlight Cambridge's position as a prime location for scientific leadership and collaboration, CUHP and AstraZeneca held a joint event at the House of Commons in December 2014. Politicians and key stakeholders heard how the close collaboration here between industry, the NHS, academia and research improves patient outcomes and were also updated

on key developments on the Cambridge Biomedical Campus, including the imminent moves of AstraZeneca and Papworth.

In addition we are successfully stimulating research partnerships between pharma and other areas of the University. In April 2015 MedImmune signed an agreement with the University's Department of Chemical Engineering to fund £3.5m of research into biopharmaceutical production over 5 years.

SECTION 4 - progress on the development and delivery of an appropriate e-Health informatics platform;

eHospital went live on October 26th 2014 following three years of planning. This is the country's largest ever deployment of an electronic patient record system, replacing paper-based records. It allows all members of a patient's care team to access records in real time, wherever and whenever they need to.

Following implementation of eHospital, a major focus has been on developing research functionality, including flagging data to a particular study, smart forms for study specific data collection, reports and condition-triggered alerts to inform clinicians of eligible patients. An integration team is developing a 'research gateway' to access and interrogate the existing databases starting with eHospital, the Joint Clinical Information System, the transplant system, and the NIHR BioResource.

In parallel, CUHP is supporting capacity building in computational biology and bioinformatics. A key development has been the establishment of a strategic partnership with the European Molecular Biology Laboratory - European Bioinformatics Institute which is located on the Genome Campus at Hinxton a few miles to the south of the CBC. Over the last year we have established and funded a series of joint projects and post-doctoral fellowships. Additional important developments have been the construction of the £20m West Cambridge data centre, where we will locate our high performance computing hub for clinical research for which we secured funding from the MRC.

At a national level, Cambridge is providing leadership for the cancer theme of the NIHR Health Informatics Collaboration, and has defined and tested a minimum cancer dataset and pathway for women with ovarian cancer. The data acquisition and sharing strategy is being adopted by Genomics England to support data collection from patients with ovarian cancer in parallel with whole genome sequencing of samples. In addition, Cambridge is a founding partner in the Alan Turing Institute, to which it will be contributing £5m over the initial five years.

SECTION 5 - an overview of any significant developments or issues associated with the leadership, strategy and governance arrangements which might impact on the delivery of the aims and objectives of your AHSC.

Crossbench peer Baroness Helene Hayman was appointed as Chair of the Board of Cambridge University Health Partners (CUHP) in September 2014. The Baroness has many years of political experience in Westminster and Whitehall, and extensive expertise in medical regulation, research and the NHS.

Dr John Bradley, NIHR Senior Investigator and Director of Cambridge BRC, was appointed as CUHP's Director of Research in September 2014. This has ensured full alignment of research strategy across the partnership, and has accelerated our programmes to provide optimal support for translational research.

Professor Tim Eisen, Head of Clinical Discovery at AstraZeneca, has recently been appointed to the CUHP Board. This has brought additional industrial expertise to the Board.

CUHP is increasing the number of associates in a strategic manner to increase our capability. Current associates include:

- Major organisations located on or near to the CBC (including the MRC's Laboratory of Molecular Biology, AstraZeneca, GSK, the Wellcome Trust Sanger Institute and the Babraham Institute)
- The Public Health Genomics Foundation (a health policy think tank promoting genetics and other health technologies to improve individual and public health)
- NNEdPro (who put research into practice through education and service innovation)
- PA Consulting, who provide a catalytic link with a wide range of industrial and other partners.

We are inviting NHS Trusts across the Cambridgeshire and Peterborough Health System, the Cambridgeshire and Peterborough CCG and General Practices to join CUHP as Associates. This reflects their important involvement in our educational mission, our shared ambition to provide the best and most appropriate care for the population and our commitment to a population-based approach to major research questions.

In the light of its successes to date, and the scope of our ambitions for CUHP we have recently increased our staffing, following agreement by the four partners to increase their financial contributions.

This form must be submitted, by e-mail, no later than 1pm Thursday 7 May 2015 to Sonja Tesanovic (sonja.tesanovic@nihr-ccf.org.uk). Please feel free to provide any other information you wish (in a separate annex) that demonstrates the progress made with your AHSC in 2014/15.

A signed copy of this report should be sent no later than 14 May 2015, to:

Dr Sonja Tesanovic
NIHR Central Commissioning Facility
Grange House
15, Church Street
Twickenham TW1 3NL