

The total length of responses to this part of the application form should not exceed twelve pages.

1. VISION AND BENEFITS

Please describe the vision for the proposed Academic Health Science Centre and the strategy for achieving that vision. In your response, please discuss what benefits the Academic Health Science Centre will bring to patients in your local population and your strategy for disseminating these benefits regionally, nationally and internationally over a five and ten year period. In summary, a clear articulation of what value you expect to deliver through an AHSC that could not be achieved through another type of partnership.

Our mission at King's Health Partners is to advance health and well-being by integrating world class research, care and education and training through:

Translating research more rapidly into clinical practice and effectively disseminating these advances through education and training.

Harnessing the power of discovery science to transform the nature of healthcare by moving from treatment towards population screening and disease prevention.

Recognising the special needs and inequalities in health among the local population, and addressing these through earlier intervention and personalised medicine, as well as helping local people to maintain, improve and enhance their health.

Comprising one of the world's leading research-led universities and three of London's most successful NHS Foundation Trusts, we believe we are in a unique position to deliver groundbreaking advances in physical *and* mental health care. Our patient population is one of the most economically and ethnically diverse in the world, which means that our work has global relevance and application.

Becoming an AHSC will enable us to create a stronger and more formal collaboration in basic and translational research, and health and knowledge investment. By integrating our clinical strategies we will focus on patient need in a way that moves beyond historical divisions and traditional institutional barriers. The structure, strategy and focus of King's Health Partners AHSC will ensure that we realise our potential.

This document sets out the benefits we plan to bring to patients in our local population and our strategy for disseminating these benefits regionally, nationally and internationally over a five and ten year period in the context of robust governance arrangements, and sound financial and operational sustainability. The document is structured as follows:

1. Context – who we are and the populations we serve
2. How we plan to deliver our vision
 - 2.1 Integrated leadership – linking resources and management to a common vision and performance.
 - 2.2 Clinical Academic Groups (CAGs) – delivering clinical excellence and driving change
 - 2.3 Basic Science Institute – discovery at the heart of what we do
 - 2.4 Biomedical Research Centres – translating discovery into opportunities to improve care
 - 2.5 The individual at the centre of healthcare – moving beyond the physical-mental divide
 - 2.6 Education Academy – disseminating knowledge and training the next generation
 - 2.7 Moving beyond the walls of the hospital – a radical shift in healthcare
 - 2.8 Partnerships - working with others to make London a 'healthcare city'
 - 2.9 Evaluation Framework – learning how "translation works" and how we will deliver it better
3. King's Health Partners – what success will look like and how it will benefit patients

1. Context – who we are and the populations we serve

Three independent NHS Foundation Trusts and a University, with a combined income of over £2bn per year, have come together to form King's Health Partners. Each organisation brings complementary and critical contributions to this partnership. The three Foundation Trusts provide a comprehensive clinical portfolio that consists of the full range of general acute and mental health care and services that promote physical and psychological well-being. We serve the local population of South London, and provide a broad range of specialist tertiary services across London and the South East, the rest of the UK and internationally. These include: Children's services, Critical Care, Dermatology, Genetics and Twin Research, Lupus, Renal, Specialist Respiratory and Thoracic Surgery provided at Guy's and St. Thomas' NHS Foundation Trust (GSTT); Foetal Medicine, Haemato-oncology, Liver, Neurosciences, and Day Case surgery at King's

College Hospital NHS Foundation Trust (KCH); Cancer care, Cardiac services, Stroke, Trauma and Urology services provided jointly across GSTT and KCH; and Addictions, Behavioural disorders, Child and adolescent mental health, Eating disorders, Perinatal care and Psychosis provided at South London and Maudsley NHS Foundation Trust (SLaM). Collectively the three Trusts have nearly 2 million patient contacts a year, which take place in 7 hospitals and over 150 other community based services.

King's College London (KCL) is ranked 22nd in the top universities in the world (Source: Times Higher Education Supplement, October 2008) and is home to the second largest 'research power' in biomedical science in the UK. It hosts six Medical Research Council Centres (MRCs) and three National Institute for Health Research (NIHR) Biomedical Research Centres (BRCs) together with the Institute of Psychiatry (IoP), Europe's leading centre for psychiatric research and education. Whilst King's Health Partners will serve patients from across a wide catchment area, our local population - of over 2m people living in South London - is one of the most ethnically, socially and economically diverse in London with significant inequalities in their health. We are strongly committed to making an impact on the health of this population as well as to making an impact internationally.

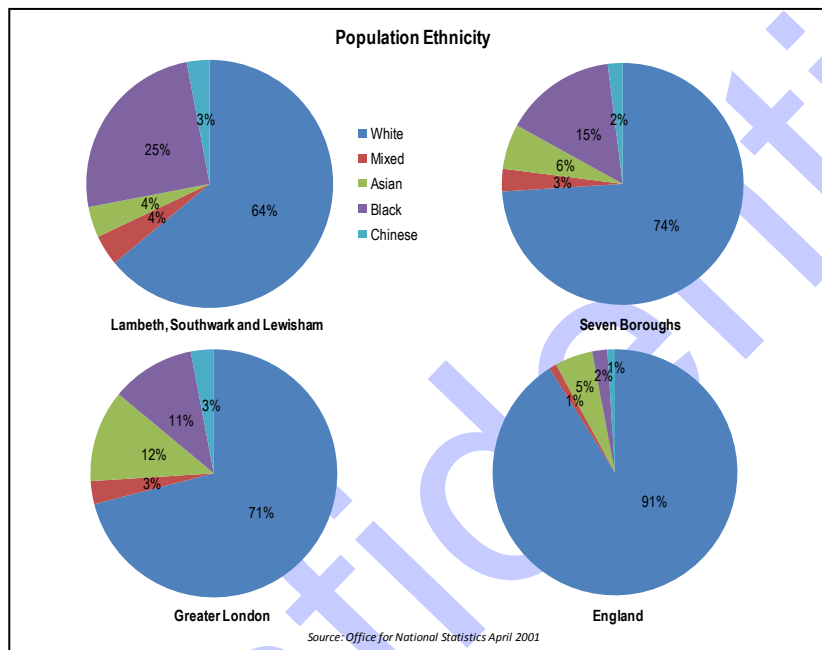


Figure 1: A large, ethnically diverse population characterised by significant health inequalities across seven London Boroughs

- Lambeth
- Southwark
- Lewisham
- Croydon
- Bromley
- Bexley
- Greenwich

2. How we plan to deliver our vision

2.1 Integrated leadership – linking resources and management to a common vision and performance

King's Health Partners has been created by the four founding partners delegating key responsibilities to this new entity, embodied in a legally binding partnership agreement. The key powers exercised by King's Health Partners are the setting and implementation of strategy for a tripartite mission of: clinical services, research and education. King's Health Partners will be governed by a Partnership Board with an independent Chair, and managed by an Executive team led by a Director. The King's Health Partners' strategy will be realised through an integrated investment plan, pooled resources and common performance management. We will deliver our ambitions by reshaping our mainstream activities, as well as generating significant sums for investment through efficiency savings and increased revenue, particularly from non-NHS sources. Delivery of the agreed strategy will be achieved through the key building blocks of King's Health Partners, the Clinical Academic Groups (CAGs), as outlined below.

2.2 Clinical Academic Groups (CAGs) – delivering clinical excellence and driving change

CAGs will bring together, within a single management structure, academics, clinicians and managers whose work is focused on a single specialty or group of related specialties. Each CAG will be responsible for developing a strategy which addresses the tripartite mission of clinical care, research and education and the CAG leaders will be accountable to King's Health Partners for delivery of this tripartite agenda. The CAG model allows the partners to maintain their independent external accountabilities (for clinical delivery by the NHS FTs and for academic performance by KCL) which the partners are not permitted to delegate. The CAG leaders will be the principal change agents required to achieve the necessary cultural transformation through supporting changes in structures, policies and incentives. Figure 2 below exemplifies how CAGs will link to the AHSC Executive and the matrix of relationships between individual CAGs, Basic Sciences, the Biomedical Research Centres, Research and Innovation Services and Education.



Figure. 2: King's Health Partners – Integration and Governance

CAG leaders will be appointed using a transparent and competitive process. We have developed criteria for selection to these key roles and will establish a leadership training programme to support them. We expect every member of a CAG to be involved in at least two of the three domains of the tripartite mission, and will set performance criteria for everyone linking individual job plans and performance to the targets and objectives of the entire CAG. Since CAGs are a step change in functioning, they will be phased in. The 'early adopters' below are areas of excellence which will provide us with a learning opportunity within our Evaluation Framework to inform the further evolution of King's Health Partners.

The **Cardiovascular CAG** hosts the largest British Heart Foundation Centre of Excellence in the UK (£9m award). This group of more than 40 PIs spanning internationally-leading basic scientists (M Gautel, Q Xu, C Shanahan) through to clinical scientists (M Marber, A Shah FMedSci) was ranked third in the recent RAE power analysis. The specialist clinical cardiac units at GSTT and KCH collectively form the largest service in the UK and provide a comprehensive range of local and tertiary services. These include: more than 2,500 cardiac operations a year; the nationally leading angioplasty programme for myocardial infarction (more than 450 cases a year, led by G Laarman, P MacCarthy and S Redwood); a pioneering surgical/cardiological transcatheter aortic valve programme (M Thomas and O Wendler) the largest in Europe; internationally leading echocardiography and imaging (M Monaghan, E Nagel, D Chambers); nationally leading sports cardiology (S Sharma); and one of the largest electrophysiology services in the country. While both the academic and clinical components have excelled individually, the CAG structure offers the potential to better align and integrate research and education and training with clinical services. We will seize this opportunity to catalyse translational research that will deliver new therapies for the prevention and treatment of heart failure, develop new diagnostic modalities for the early detection of cardiovascular disease in the community, provide a better understanding of the mechanisms underlying the high burden of cardiovascular disease in some of our local ethnic minority groups, and establish a service framework that facilitates leading-edge health services research into models of care for cardiac patients.

The **Dementia and Older People's Mental Health CAG** comprises internationally-leading groups in research and clinical development and practice in dementia and older people's mental health. Seven senior clinical academics, each with well funded research groups, and over 20 specialist consultants, embedded within multidisciplinary teams, deliver a clinical service to 130,000 older people across four London boroughs and research programmes across four academic departments from basic science to service evaluation. This CAG will integrate closely with the MRC Centre for Neurodegeneration and the NIHR Biomedical Research Centre for Mental Health. Clinician scientists S Lovestone FMedSci and C Ballard are driving biomarker discovery and qualification and target identification for disease modification therapeutics. We already lead Europe's largest biomarker study as part of a world-wide collaboration with industry, and will use this CAG to build our clinical trials portfolio capitalising on expertise developed by R Howard, S Banerjee and C Ballard - thereby establishing the evidence base for best practice in dementia care and older people's mental health. The recently launched National Dementia Strategy (co-authored by S Banerjee) was informed by the pioneering 'memory clinic' established by the group. These clinics will now be scaled up to be provided nationwide, and we will use the larger education and training capability afforded by the CAG to share our experience with these clinics as the wider NHS moves to meet the requirements of this strategy. Within three years of forming King's Health Partners we aim to be the largest clinical trial site in Western Europe in dementia and older people's mental health.

The **Diabetes and Obesity Clinical Academic Group** was selected as an area of emerging strength in our research strategy. It addresses long-term conditions prevalent in our local community and the Nutrition and Dietetics group is already assessed as the strongest in the country in RAE 2008. The CAG brings together 10 clinician-scientists, 25 non-clinical academics and 25 NHS consultants with expertise in structured education (S Amiel, A Forbes, see section 2.8); mental health in diabetes (K Ismail); service re-configuration in London (S Thomas); diabetes complications (Edmonds; Viberti, Gnudi); Type 1 diabetes prevention (M Peakman); intensified insulin therapy and islet transplantation (S Amiel, J Pickup) and islet cell biology (P Jones and S Persaud). The CAG will require structural re-organisation to achieve our aims because, unlike the previous examples, these clinical and academic activities currently sit within a variety of structures in our organisations. It provides us with an opportunity to move beyond the walls of the hospital and strengthen networks with community-based healthcare providers and to develop our thinking about disease prevention and well-being – as Amiel, Forbes and Peakman are considered leaders in this area.

We expect to remodel all the current activity across King's Health Partners into around 20 CAGs in the long term. As we cannot be internationally competitive in all these areas in the short-term, we will enhance our recognised excellence in: mental health and neurosciences, cardiovascular disorders, asthma allergy and environmental health, oral diseases and dentistry, transplantation and regenerative medicine, and dermatology. In addition, we have identified areas for growth where there is scientific opportunity, an evolving internal expertise and critical need for local service enhancement: cancer, diabetes obesity and metabolic diseases, women's health, and musculoskeletal and connective tissue disease and exciting developments in Pharmacy as a key clinical infrastructure service.

2.3 Basic Science Institute – discovery at the heart of what we do

Basic science, by definition, cuts across single disease entities, and focuses on processes and mechanisms common to many diseases. We have strong basic science groups in Medical Biophysics, Medical Genetics, Immunology, Basic Neurosciences and Psychology. We include Psychology as a 'basic' science because the newly discovered science of combining the brain and mind through Genetics, Neuroimaging and Cognitive Neuroscience will be critical to driving improvements in healthcare. These different areas of strength will be brought together into a 'Basic Science Institute' that will carry out its own research, support research conducted within CAGs and provide world class discipline leadership across the whole of King's Health Partners, for example by M Irving FRS in the area of cell and molecular biophysics; E Solomon FMedSci and R Trembath FMedSci in the areas of organism genetics and the genetics of multigenic disorders; A Hayday F MedSci and M Malim FRS in aspects of immunity; P McGuffin FMedSci in genetics of psychiatric disease and D Clark FMedSci in psychology.

Given our focus on mental health and neurosciences, Basic and Applied Neuroscience will be a major component of our Basic Science Institute. This will be anchored in the two MRC funded Centres: the MRC Centre for Developmental Neurobiology working on processes of neuronal birth migration and connectivity led by A Lumsden FRS and the MRC Centre for Neurodegeneration working on Alzheimer's disease particularly TAU and ALS causative genes like TDP43 led by C Shaw. G Bates FRS complements this work by her investigations on Huntington's Disease and the Wolfson Centre for Age Related Diseases with P Doherty and S McMahon FMedSci (both of whom are pre-eminent in the field of Neuroregeneration, particularly spinal injury and pain research). Bringing together the different disciplines into a Basic Science Institute will increase dialogue across the disciplines, coordinate major investments and orient the basic scientists towards greater collaboration with the CAGs. At present, we have an action plan to invest in Chemical Biology, Systems Biology and Structural Biology. This new organisational structure will mean that our CAGs will have access to a unified base of outstanding basic sciences and also platform technologies that are better organised as a shared activity. In addition to our internal resources, we will have access to Medicinal Chemistry and Peptide and Biopharmaceutical expertise via a faculty of advisors drawn from senior executives from the pharmaceutical industry. This will be facilitated by the recruitment of F Walsh FMedSci FRSE who recently joined King's Health Partners as interim Director of Research from his previous position of global Executive Vice President for Research at Wyeth.

2.4 Biomedical Research Centres – translating discovery into opportunities to improve care

While each CAG will spearhead innovation and translation in their own discipline, we fully realise that modern day experimental medicine requires some core facilities: biobanks, tissue-typing facilities, IT infrastructure, clinical research and translational units and regulatory support. These facilities are most efficient when shared across CAGs. We are fortunate to have competitively obtained 3 NIHR Research Centres - the only AHSC partnership to achieve this - which now form a core platform of our strategy in Translational Medicine.

The *comprehensive* BRC, situated at Guy's and St Thomas' NHS Trust / King's College London provides resource (about £10.5m pa) and facilities (BRC Resource and Training Centre and Clinical Research Facilities) for proof-of-concept studies in the diagnostic and therapeutic arena across seven themes: Cancer, Transplantation, Asthma and Allergy, Cutaneous Medicine, Atherosclerosis, Infection and Immunity and Dental. To facilitate cross-fertilisation across

disciplines, the BRC faculty includes 150 senior NHS clinicians, University academics, dentists, allied healthcare professionals, NHS managers and patients. Facilities for patient based experimental studies have been created adjacent to biomedical laboratories – providing the daily cross-talk between students and staff from different disciplines. This cross-fertilisation is strengthened by the monthly Biomedical Forum (BMF) which highlights the challenges and success of translational medicine across the disciplines and is overseen by an International Advisory Board. Close industrial links will be a feature of the BRCs, particularly with drug related studies. To develop the next generation of translational medicine professionals, the BRC expertise is integrated into the core medical school curriculum as selected study modules (SSMs) offered to Y3 and Y4 (clinical years) medical students. The BRC has established a novel BSc in Translational Medicine to include basic, clinical and pharmaceutical research, legal and ethical dimensions of translational research, and entails placement with our commercial partners; it is home to a number of translational 4 year PhDs that receive joint basic-clinical supervision and it sponsors clinical-academic and post-doctoral fellowships for allied health professionals. The BRC has forged strategic alliances and partnerships with other stakeholders, including Barts and The London Medical School and the pharmaceutical sector e.g. Wyeth Pharma Early Clinical Development Centre.

The *specialist* BRC in mental health plugs the translational gap in mental and neurological disorders in children through to diseases of later life including neurodegenerative diseases. Based at SLaM / IoP the BRC provides core funding, infrastructure and training positions. It has become home to 50 new posts (including over 20 students and fellows) who are all dedicated to translational research and, complementing these non-clinical training posts, through the BRC we now host the largest single group of trainees in academic psychiatry in the UK. We have been able to use the BRC funding to leverage additional charitable support (£3.5m) to establish a BRC Bioinformatics Nucleus, bringing together bioinformatics with possibly the first successful research database generated from secondary care electronic medical records in psychiatry. These investments are showing results: we have filed two patents on biomarkers in Alzheimer's disease and will commercially exploit these data; we are also the only BRC to have been granted both an MRC Developmental Pathway Funding Scheme award for computer based psychological therapies and a major award from the MRC Biomarkers programme for Alzheimer's Disease. Our BRCs will act together and with industry to further develop an internationally competitive Translational Medicine Programme, as well as new diagnostics and endpoints that will allow more rapid dissemination of advances to patients.

One new opportunity in biomedicine lies at the interface of large cohorts, medical records, their genetic and clinical information and tools of bioinformatics. We will co-operate with the national e-health programme to accelerate benefits and research applications. Working with a global management and technology consulting company (BearingPoint) and using Fast Search and Transfer technology, we have developed the Case Register Interactive Research (CRIS) application. This enables researchers to securely search the 118,000 entries on SLaM's electronic patient records system at the touch of a button. Up until now, only 20% of the information held on the SLaM system was available for research purposes, and analysing case notes to extract the specific information for research purposes could take months. The introduction of CRIS means that automated searches are possible on unstructured information like case notes, vastly accelerating and expanding the scope for research. Having developed the application for use within our mental health BRC, a pilot project is now underway to develop a similar system within the comprehensive BRC.

Translating research involves ensuring and enhancing the safety and quality of services. To spearhead this we host the NIHR King's *Patient Safety and Service Quality (PSSQ) Research Centre*, one of only two such centres in the UK. Led by N Fulop, the Centre (£4.5m over 5 years) comprises 8 full-time research staff, 6 full-time PhD students, 6 seconded-staff and conducts research and provides research leadership to help King's Health Partners and the related PCTs. For example, the workforce research programme, led by D Guest (Dept. of Management, KCL), is studying the issue of bullying and harassment amongst the workforce and the organisational governance programme is looking at how organisations can use mortality data to improve the safety and quality of care for patients.

In addition to our BRCs, our translational initiatives are supported by three newly commissioned experimental Clinical Research Facilities and a collaboration with Quintiles which brings 25 years experience of first-in-man studies. We have established a Joint Clinical Trials Office (JCTO) to enhance interaction with industry and to ensure quality and regulatory compliance for all our clinical research activity which has reduced trial start up delay from 168 to 60 days and increased trials from 327 to 535 within two years. King's Business, our intellectual property and tech-transfer arm, provides us leading support in protecting and exploiting our discoveries (80 disclosures, 21 patents filed, 12 active spin-out companies, collaborative research worth £14m and consultancy income of over £5m in 2007-2008).

2.5 The individual at the centre of healthcare – moving beyond the physical-mental divide

Secondary and tertiary physical and mental health services are provided by different Trusts in the UK. Inadvertently, this splits the individual patient into their 'physical' and 'mental' diseases even though these are often co-occurring conditions. With SLaM as one of the four founding partners, we are well placed to use its related clinical expertise to enable us to

develop pioneering services that go beyond the traditional physical-mental divide in the rest of UK medicine. The SLaM-KCL partnership has pioneered some of the leading programmes in consultation liaison, chronic fatigue, post-traumatic stress and depression in physical illness. King's Health Partners provides a unique opportunity for bringing this 'psychological medicine' expertise into implementation in every acute medicine CAG. Furthermore, we will use the SLaM experience of focusing on well being and recovery rather than ill health, in delivering services in the community, and in involving patients in the development of care pathways, as well as in the design and conduct of research, as we build patient pathways for our acute services.

We recognise that to build individual patient care pathways of the highest quality we also need the full engagement of a range of healthcare partners. We will provide leadership for this work, both from a theoretical and a practical point of view, working with general practitioners, primary care and community service providers and local hospitals, involving both our clinical and health policy specialists. We have a track record of successful collaboration as individual institutions, which will be more powerful once we have common goals and service realignment such as those currently under development for Cancer services and Diabetes.

2.6 Education Academy – disseminating knowledge and training the next generation

The Education Academy will oversee the education and training activities of King's Health Partners to ensure consistent standards of excellence. It will include all our students and staff, with an emphasis placed on professionalism, communication and leadership. The Academy will hold the CAGs accountable for their performance in education and training. It will oversee accreditation and quality assurance and be responsible for dissemination of innovative learning methods and technologies. It will work with the CAGs to map our workforce needs and deliver courses and programmes to ensure both our own and national training needs are met (for example, recently identified and implemented needs include: increasing the pool of cognitive behavioural therapists, research nurses and PET radiochemists).

All education and training will be research-led and all professional programmes underpinned by the values of research-driven clinical excellence. We have a Biomedical Forum, where leading research translators discuss their work with an audience of undergraduate and postgraduate students, researchers, and clinicians. This will be expanded to involve staff at all campuses. We will enliven our curricula by further involving research leaders in their disciplines and by broadening the scientific base with an emphasis on critical evaluation of data and interpretation. We deliver over 140 clinically orientated postgraduate taught courses with a strong research focus which draw upon the full range of KCL strengths (e.g. Pain, Science and Society, Psychiatry and War, Medical Ethics and Law, Gerontology); in addition short courses will be provided to focus training for continuing professional development (CPD). Learning packages, underpinned by our translational research, in new and emerging subject areas such as Analytical Sciences, Safety in Medicines and Analytical Toxicology will be produced.

Through our education and training provision, we will develop a workforce innovative in approach and capable of rising to the challenge of taking scientific and research-driven activities from bench to bedside. We will foster a culture in which learning is valued, and staff will have the opportunities for CPD and life-long learning. A single AHSC-wide e-portfolio will be developed through which learners can easily access their clinical training and educational needs. A virtual learning environment to support healthcare education will be developed by seamlessly integrating all systems across the partnership. Blended learning and training packages will be created in Anatomy using computerised medical imaging to generate digital libraries of 3D human anatomy, utilising the resources of the Gordon Museum and Dissecting Rooms in collaboration with publishers and industry. The latest in computer simulation and serious gaming technology will be used to develop virtual patients to further enhance the training provided in the three new clinical simulation centres currently being built, and the clinical skills laboratory with haptics for dental students.

Our education and training portfolio will also focus on healthcare and promotion of well-being. The MRC/HPA Centre will foster research and training into the environment and health. We will raise our local population's awareness of health and science, to shift the emphasis from curing disease to preventing it. We will involve local general practitioners, practice nurses and other community based staff. Our programmes will support access for learners from a diverse range of social, cultural and academic backgrounds and increase educational opportunities at all levels for our local population. We will build on our Access programmes and links with local schools so that pupils are able to sample a range of career options within the healthcare disciplines. We will widen our portfolio of Access Programmes to include Physiotherapy, Nursing, Midwifery and Pharmacy, building on our highly successful Access to Medicine Programme and targeting applicants from the fifteen educationally worst performing London boroughs and Kent and Medway.

2.7 Moving beyond the walls of the hospital – a radical shift in healthcare

While the marvels of science backed by efficient dissemination promise radical change, we are only too aware that

without the active participation of those whom we serve - individual recipients of healthcare and citizens in communities - sustainable improvement in health cannot be maximised. Currently, modern medicine is largely focused on diagnosing and treating disease when patients present to their doctor. This is becoming increasingly expensive and has led to inequalities of access and outcomes. For the first time, the opportunity exists to identify at-risk groups, based on their genotype and lifestyle, and to intervene proactively before they need to come to hospital. We will seize this opportunity during the next decade by establishing closer links with our local communities and their primary care practitioners, enabling us to measure and develop risk-stratification of the local population for cardiovascular and metabolic disease, and mental health problems. This will be accompanied by evidence-based early interventions, targeted at the highest risk groups, to prevent, rather than just treat, disease. Given our strengths in genetics, our strong links with our local communities, and our evolving relationships with primary care practitioners, we believe we are uniquely placed to embark on this innovative and ambitious agenda.

While this is not an easy task, we have considerable experience. SLaM is a world leader in the development of community-based intervention services and has pioneered the use of these methods in one of the most complex of illnesses – schizophrenia. Through the use of ‘early intervention clinics’ and ‘prodromal services’ linked to a network of general practitioners (GPs), school counsellors and home-intervention teams (developed first as a research grant to P McGuire and R Murray, and now a routine service) – we have developed a system that identifies people before their first psychotic breakdown and intervenes to reduce significantly the conversion to psychosis and the duration of untreated psychosis (from >6 months, to < 6 weeks). Similarly, academic leaders in our Diabetes CAG (S Amiel) tested a new structured education programme for people with Type 1 diabetes (DAFNE, Dose Adjustment for Normal Eating) in a 3-centre RCT with Sheffield and North Tyneside – and the programme has now over 70 DAFNE centres across the UK and a national audit has shown improved mental health as well as better diabetes control. We continue to train new DAFNE teams from the UK and abroad, and DAFNE style programmes have started in places as far afield as Australia, S Africa and Kuwait. This experience has taught us that we need not only medical expertise, but a mixture of expertise in population screening, social sciences, behavioural psychology, healthcare policy, law and ethics to succeed in community based programmes. At King’s Health Partners we have all these essential disciplines: we host the MRC Centre for Social, Genetic and Developmental Psychiatry which has pioneered the study of gene: environment interaction for behavioural traits, and we have leaders in areas of Risk Communication and Behaviour (T Marteau and colleagues who study health screening; physical activity; smoking; diet and treatment compliance in long term conditions), and experts in the study of Mental Capital and Wellbeing (R Jenkins, who served on the Foresight Project on Mental Capital and Wellbeing). The NIHR-BRC for Mental Health (IoP and SLaM) is conducting ongoing population based research to assess how mental disorders and other types of “stress” relate to risk factors for various physical illnesses, including obesity, hypertension, smoking and alcohol consumption and we have recently applied for the KingSAGE Network (a Kings Health Partners bid currently under consideration with the MRC) which will develop a multidisciplinary approach, focussing on physical and mental exercise, to inform the identification and modification of lifestyle factors associated with healthy ageing and wellbeing in later life.

Good Corporate Citizenship. The Good Corporate Citizenship Collaboration (GCCC) was launched in June 08 and has a database of 460 people who we will use to mobilise our infrastructure to impact on the wider determinants of health. The GCCC is focused on helping King’s Health Partners bring principles of corporate social responsibility and ‘carbon management’ into our daily work of procurement, transport, facilities management and new buildings, employment and skills, community engagement, equalities, well-being and social inclusion. We will also launch flagship projects to tackle the factors that affect health and well-being in our local communities. Through sustainable procurement, we will increase local sourcing to increase the flow of wealth to the community, stimulate enterprise and improve livelihoods – across King’s Health Partners a ‘Sustainability Action Plan’ has been agreed to deliver on this. In an adjoining local park, we will develop and deliver a programme of physical activity-based initiatives and food growing to promote the park as a free health resource. Two of the four partners have already established Carbon Management Plans and the others are embarking on similar plans to ensure that carbon reduction is at the heart of King’s Health Partners. The local Primary Care Trusts (PCTs) and Local Authorities are considering joining with us in these ventures. Across all of these initiatives we will draw on our expertise to explore the relationship between health and well-being and their impact on the way public sector services are delivered to maximise community benefit.

Leading globally and learning from others. As King’s Health Partners we have the ‘world on our doorstep’, so that any advances that are made in understanding disease pathogenesis or therapy within particular ethnic groups have immediate global application. We plan strategically to focus on the kinds of partnerships where we can have an impact globally by disseminating our knowledge and skills and where our research can better deliver results via collaborations. By way of illustration, we summarise here three recent international programmes which are already in place amongst the partners: *The Global Child Dental Health Taskforce* aims to significantly improve the dental health of children by

developing Public Private Partnerships to coordinate services, by developing national educational programmes and by promoting evidence based oral health messages. It is based at King's and is run jointly with Harvard University and partner countries which already represent 50% of the world's children; *The 10/66 Dementia Research Group* is a network of researchers carrying out population-based research into dementia, non-communicable diseases and ageing in low and middle income countries. Two-thirds of people with dementia live in these countries, but less than ten per cent of population-based research includes them. It is a part of Alzheimer's Disease International and is coordinated by M Prince at IoP. Its landmark 'Three Continents Study' aims to develop and evaluate home-based support to caregivers of people with dementias in the Dominican Republic, China and India. *The Cicely Saunders Institute* is the world's first purpose built Institute to house and foster links between palliative care education and onsite clinical services across our partner Trusts and a large portfolio of palliative care translational research, including the WHO Collaborative Centre in Palliative Care. Higginson, Harding and colleagues work with WHO on using local research evidence and needs assessment, and provide guidance to help governments and clinicians develop palliative care services. We have two other WHO Collaborating Centres: in Research and Training in Mental Health (R Jenkins), and in Oral Cancer and Precancer (S Warnakulasuriya).

Programmes such as these will be the starting point for our International Office, which will develop and expand exchange schemes for NHS and University staff as advocated by the Crisp Report, and also develop relationships with a range of partners which share our policy agenda. Thus we will expand our current collaborative agreement with London School of Economics (LSE) Health to exploit their expertise in Health Economics, Health Policy and Demography. We will also collaborate increasingly with the London School of Hygiene and Tropical Medicine, on both joint research and teaching programmes. We also work closely with WHO and DFID (Department of International Development) and the many charities whose objectives include global health.

2.8 Partnerships – working with others to make London a 'healthcare city'

London is one of the most ethnically, culturally and economically diverse cities in the world. We will seek close working relationships with other AHSCs, nationally and internationally, to ensure that we optimise the resources available to us and that we collaborate to achieve maximum value. We have a history of collaboration; Barts and The London Medical School is a strategic partner in our comprehensive Biomedical Research Centre; we have two MRC Centres which are joint initiatives with Imperial College; we have just been awarded a Cancer Research UK imaging centre with University College London; and are developing a pan-London neuroimaging strategy with University College London and Imperial College. We will actively seek to expand and enrich these relationships so that London can increase its global impact on healthcare.

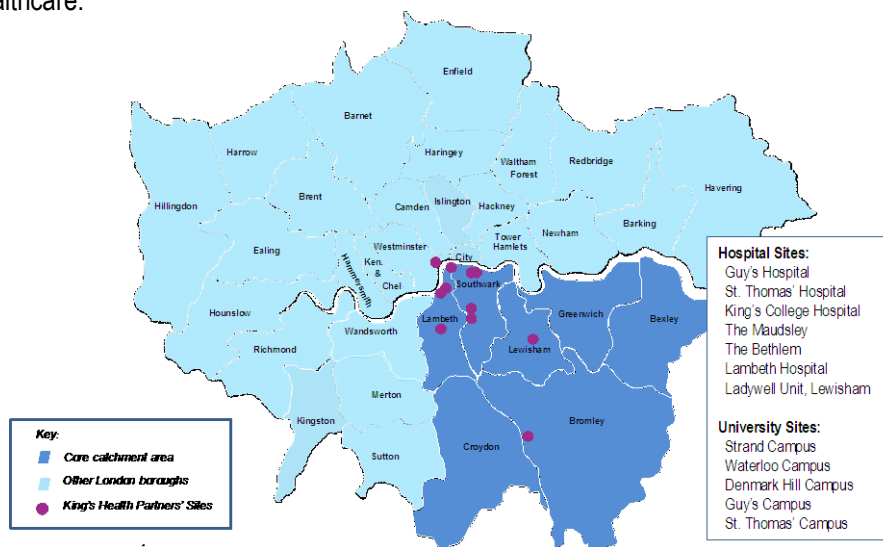


Figure 3:
A significant presence across London, delivering services from 7 hospital sites, 5 university campuses and over 150 community bases

We are currently in preliminary discussions about the establishment of Health Innovation and Education Clusters (HIECs) in South London. Over time we envisage King's Health Partners being the AHSC 'partner' for a series of HIECs (or equivalent bodies) across southern England to facilitate health improvements across this wider constituency.

We will work in close collaboration with NHS London, our Strategic Health Authority, in achieving its goals for innovation, improving health care and health outcomes across the capital. These include developing comprehensive care outside hospitals, securing the viability of local hospital services, rationalising duplication and fragmentation of services to improve quality, and tackling inequality with the aim of ensuring equal health outcomes across our diverse population base. Even closer partnerships with our local PCTs will be required, as we see significant change amongst hospitals

provided in South East London, and we have already begun to forge closer working relationships with University Hospital Lewisham, a key partner, to ensure best use of all our facilities and services closer to where patients live.

King's Health Partners operates in one of the most challenging socio-economic catchment areas in the UK. The inner city population we serve is young, mobile and ethnically diverse with low levels of academic achievement, high levels of deprivation and high numbers of children living in poverty when compared to the UK average. We also see lower life expectancy and higher infant mortality rates, higher early death rates from cancer, heart disease and stroke as well as higher levels of mental illness, substance misuse and obesity. We will achieve real change for the people in our local area through the delivery of our tripartite mission as an AHSC, including our strengths in terms of corporate social responsibility and partnership working.

We will contribute to the UK economy through the intellectual property that we generate and the alliances we make with industry. We were a founder member of the Global Medical Excellence Cluster which was established two years ago to promote collaboration in biomedical science in London and the South East. We will play a major role in its development and in the development of the UK Centre for Medical Research and Innovation (sponsored by the MRC, led by P Nurse).

2.9. Evaluation Framework – learning how “translation works” and how we will deliver it better

Accelerating Translation. A recent study commissioned by the Wellcome Trust and MRC (co authored by S Kapur, KCL) examined the returns of medical research through improvements in health and demonstrated that the long lead time from academic discoveries to clinical impact (the ‘knowledge cycle time’) was on average 17 years in cardiovascular diseases. This exposes the huge challenge of lag-time between academic discovery and clinical change – and a substantial proportion of this relates to the challenges of the dissemination, adoption, implementation and sustainability of evidence-based advances in clinical practice (the so-called T2 translation). We believe that AHSCs have a unique role in understanding local T2 realities and removing bottlenecks. Drawing upon our expertise at KCL in health psychology, health service research, social sciences, and organisational development and in partnership with LSE Health, we will establish an ‘Implementation Science’ initiative to identify the factors which act as facilitators and barriers to closing the gap between the best evidence based practice and routine clinical care. Our goal in this is not only to identify these factors but to intervene. We shall go on to test targeted interventions identified from these studies and to establish how we can make a difference. And we have experience in doing so. In partnership with London School of Economics (Lord Layard) we first understood the difficulties of access to psychological treatments, built an economic case for a new model and this led to the award of £170m by the Treasury to the Improving Access to Psychological Therapies programme, creating 3500 new psychological therapist posts nationwide – the largest such programme anywhere in the world. King's College London is already one of the largest university providers of policy advice to Government on national security, defence and health issues and we are currently supporting the development of national policies on Personal Healthcare Budgets (M Knapp) and the National Service Framework for Mental Health (GThornicroft FMedSci).

As we develop King's Health Partners, we have identified key themes within the areas of social science and public policy which will have a direct impact on our strategy. These are: improving service delivery through training programmes such as our Master's programmes in health service management and in public policy; the development of metrics, measurements and evaluations to assess the effectiveness of our services; exploring the bioethical context of medicine and health in our society, for example, the acceptability of an ‘opt-out’ as opposed to an ‘opt-in’ policy on organ donation. Through the strengths of KCL in social sciences, and our relationship with the LSE, we will be particularly well positioned to undertake initiatives to decrease the ‘knowledge cycle time’ so that the benefits of research impact upon health and policy development more rapidly.

3. King's Health Partners – what success will look like and how it will benefit patients

Metrics We will establish a series of outcome measures that will assist us in assessing our impact locally, regionally, nationally and internationally. These will include shortening the translation cycle; emphasising quality as we move to payment by outcomes for our clinical services; and the development of quality accounts. We will also measure the number of patients included in clinical trials; diversification of funding sources and levels of commissioning; and will continue to improve performance on national metrics such as the Research Excellence Framework, National Student Survey and Healthcare Commission/Care Quality Commission ratings. Over the longer term (i.e ten years) we will evaluate the success of King's Health Partners; measuring how the governance structures we have adopted have enabled us to achieve our vision and the impact we have made.

Spreading innovation. Our Education Academy will have a central role in the dissemination of our research and clinical innovation with expansion of the existing provision of world class, innovative education and training for a wide range of professionals. We will build on our excellence in learning systems and content to develop the first UK flexible learning platforms for an AHSC to support student teaching and workforce training and development, we will also offer inspiring

study opportunities to the local population including interactive patient information and support. Further distance learning packages will be created. Optimum packages will be created for all levels of staff, trainees and postgraduate students, including partners in our networks and pathways. By pooling our online training and teaching material, delivered via a common virtual learning platform, we will achieve these aims in the first five years of operation.

Benefits to the local population. Our vision is to deliver the best treatment by the best staff to local people at the earliest opportunity. Our patients will be the first to benefit from the service innovations that will arise from our research, but we need their help. Participation rates in clinical research in the UK are extremely low – less than 10% of patients who could participate do so. We will design a communications strategy aimed at explaining to patients how important their participation in research is to their own health and to the health of future generations. We will seek their involvement in study design to make what we do more meaningful to them. We will communicate the results of our work not just through the conventional routes of scientific publications and meetings, but also by means that are easier to understand and more accessible to patients and carers. In this way we will build a partnership with our patients and their carers for mutual benefit. Our patients will be treated by highly qualified and highly motivated staff, because the outstanding work we do will be a magnet attracting some of the best health care practitioners, academics, managers and students in the world. Patients will also have access, on their doorsteps, to an even wider range of specialist and sub-specialist services than is currently the case, and they will benefit from the application of mental health expertise alongside leading edge treatment of acute illness. In the longer term, effecting the shift from treating disease to preventing/delaying disease onset will have a profound impact on the health of our local population. This will be reflected in a down-sizing of hospital inpatient facilities, and a parallel expansion of community based screening and health promotion. This will be achieved by deploying a new cadre of public health clinicians including geneticists, epidemiologists, social scientists, ethicists and behavioural psychologists to identify high risk groups, and to target early interventions to maximum effect.

King's Health Partners consists of four high performing institutions; has a clear vision of how together we will improve the well-being of our target population, and will contribute to the furtherance of medical science and education globally through access to our most valuable asset – the 'world on our doorstep'.

King's Health Partners will:

- Always put our patients first: deliver health improvements and reduce inequalities for our local population by ensuring the patient is at the heart of everything we do.
- Focus on pioneering research: rapidly and efficiently translating new discoveries into practical actions and benefits for patients locally, nationally and internationally.
- Work in partnership: build on and extend clinical, academic and industry collaborations and links locally and globally to deliver a radical shift in healthcare, moving the focus from treating illness to preventing disease.
- Deliver excellence: setting new standards of excellence in patient care, research and education and training.
- Disseminate knowledge: ensure benefits from our innovations are widely adopted through delivering excellent education and training across a broad range of disciplines to develop the best healthcare professionals and scientists of tomorrow.
- Deliver a radical shift in healthcare: identifying at risk groups, based on genotype and lifestyle, then intervening proactively before they need to come to hospital.
- Create a stimulating and thriving workplace: enabling us to attract, develop and retain the best staff and students and drive social and economic development in our communities.

2. PROPOSED GOVERNANCE ARRANGEMENTS

Please describe the existing or proposed governance arrangements for the AHSC*. This should include the arrangements for joint working between the NHS and University partner(s), and financial/risk management.

A partnership for change

The creation of King's Health Partners represents a major commitment by each of the four partners to transform the way healthcare is designed and delivered. Introducing the CAG model is an ambitious undertaking which will align our clinical services, research and education much more closely for the benefit of patient care. It will give our experts the means and the encouragement to innovate at the fastest possible pace.

Partnership Agreement

We have a Partnership Agreement, a schedule of delegated authorities and a gain-sharing mechanism to ensure that critical decisions will be made quickly and fairly. The scheme of delegation in the Partnership Agreement clearly distinguishes between the retention of ultimate powers and accountability by each of the individual partners, the authority delegated by them to the Partnership Board, the tasks expected of the Executive, and the roles of CAGs. The partners' individual aims are enhanced by this collaboration; however the net effects of common decisions may not always balance out financially. Our Partnership Agreement therefore includes three mechanisms which are designed to ensure that the partners can be effective in making decisions in furtherance of the objectives of King's Health Partners, even on matters which could otherwise be difficult decisions for individual partners. First, there is a set of core principles identifying the objectives of King's Health Partners, and a contractual commitment on the part of the partners to ensure that all decisions are made with a view to adhering to them. Second, there is a financial gain-sharing protocol, to ensure that any proposals that are for the furtherance of the objectives of King's Health Partners, but lead to a particular partner's financial detriment, will be speedily identified and resolved. Third, we have a binding dispute resolution procedure.

Partnership Board

The Partnership Board will have an independent Chair, and the membership consists of the Chairs and Chief Executives of the three NHS Foundation Trusts and the Principal and Vice Principal of King's College London. The Board represents and promotes the interests of King's Health Partners. The Partnership Board will be responsible for agreeing overall strategy and business planning, the nature and number of organisations within King's Health Partners and any other matters with potential or actual substantial impact on individual partners or the partnership. It will seek to prevent disputes and, if any occur, will resolve them in accordance with the binding dispute resolution procedure.

The Executive

The Executive will be chaired by a Director who will provide leadership for the AHSC. The Executive will be tasked with the development and implementation of strategy and business planning for King's Health Partners, monitoring its achievements, growth and development. It will also be responsible for the development, co-ordination and performance of CAGs, which will progressively be brought within the formal governance framework through an internal approval process that will ensure they are 'fit for purpose'. This process, which will be managed by the Executive on behalf of the Partnership Board, will require each CAG to demonstrate that it has strong leadership, a coherent strategy and a credible business plan to deliver that strategy.

3. FINANCIAL AND OPERATIONAL SUSTAINABILITY

Please describe the financial and operational sustainability of the NHS and University partner(s) enabling them to undertake the proposed collaboration.

The combined income and expenditure accounts, balance sheets and cashflow summaries for King's Health Partners for 2006/7 and 2007/8 and planned figures for 2008/9 to 2010/11 are shown in annexes 1-3. These high level preliminary projections form the basis of the financial business case for the AHSC. They show that the Partners anticipate that despite the challenging economic climate internationally, surpluses will be generated for ongoing AHSC developments, through synergies in areas ranging from efficiency improvements to income generation. This financial business case for King's Health Partners is in addition to broader benefits expected to be delivered for the health economy, through improved outcomes and the wellness agenda.

Financial Strategy: Our overarching medium term strategy is to diversify our research and education income base in order to leverage the intellectual property generated within the organisation and drive healthcare benefits from discovery to delivery. We are committed to working with other global educational institutions and private sector companies to add value to healthcare research and to an integrated approach to further stimulate translational research. Commercial activity is led by King's Business which, working with partners, generated new business of £23 million in 2007/08 and is supplemented by other commercial activities such as a Pathology Joint Venture with Serco, a FTSE 100 company, healthcare provision for British Forces Overseas and healthcare related IT through Agnentis Limited.

Financial Sustainability: We have a combined turnover in excess of £2 billion in 2007/08 and a combined net surplus across the AHSC of £97.8m. All surpluses generated by the NHS Foundation Trusts (£94.4m in 2007/08) are fully retained by the partners and are available for investment in accordance with our strategic priorities. We have already invested significant cash and senior management time in establishing our partnership, as well as £4.3 million to enable 150 NHS consultants to have three research programmed activities funded (i.e, 30% of their time). This strong performance has been sustained during the 2008/09 financial year. All organisations have a history of financial stability

with all three Trusts achieving Foundation Trust status and are rated as 'performing strongly' in accordance with the Monitor financial risk framework. King's College London received the top rating in the 2006/07 HEFC financial risk ratings and has a Standard and Poor's investment grade credit risk rating of AA-. This strong historical and ongoing financial performance is reflected in the liquidity position of King's Health Partners. The partners had a combined cash balance of over £350 million at the end of September 2008 available to fund working capital and strategic investment. In addition, the NHS Foundation Trusts have a total unused borrowing authorisation of in excess of £400 million, of which £330 million is available for strategic capital investment.

Charitable support. We are fortunate to be the beneficiary of three charities with combined assets of £600m, whose aims are to support the partnership. There is a long history of these charities investing in projects to support the translational research agenda, in addition to investments directly related to improvements in patient care. For example, a modernisation initiative in sexual health, renal medicine and stroke, funded by the GSTT Charity, was recently successfully completed, and a further £10 million has been set aside by them for new developments to support our strategic vision. KCH Charity and SLAM Charity have between them invested £18 million in capital and land towards the cost of a new institute for clinical neuroscience research at Denmark Hill.

Ensuring Continuing High Quality Performance. All three NHS Trusts have been high performing Foundation Trusts for several years. They consistently meet national targets and in many dimensions are in the top decile of all Trusts in England. The three Trusts provide a wide range of services in a variety of settings, including within people's own homes, and work closely with colleagues across the healthcare system to continue to meet the increasingly challenging national priorities, including access to waiting times, accident and emergency services, diagnostics, treatment for cancer and heart conditions, mental health crisis services and hospital-associated infection. We have a history of partnership working with stakeholders to deliver effective services across traditional organisational boundaries in areas such as the early integrated stroke network, the sexual health centre and early intervention in psychosis.

Our sophisticated operational performance frameworks ensure close monitoring of service delivery targets and this is validated by the Healthcare Commission Annual Health Check performance ratings, which demonstrate that the Trusts are consistently providing high quality services and using their resources efficiently. The Annual Health Check also focuses on patient experience through the National Patient Survey, and the Trusts have developed internal mechanisms to supplement this; for example, the 'How are we doing?' survey at King's College Hospital, and the 'Your Feedback' patient experience tracker at South London and Maudsley Trust. The 'Fridays with a difference' initiative at Guy's and St Thomas' involves all senior nurses and management teams in clinical practice once a week, monitoring standards of care and responding pro-actively where needed. These initiatives give us detailed information about the opinions of service users, and this can be considered with the performance data collected from a wide number of sources so that we can be pro-active about service development and improvement.

KCL received a rating of 'broad confidence', the highest possible rating, in its last Institutional Audit conducted by the Quality Assurance Agency for Higher Education. It has in place a range of operational management systems to optimise the partnership, with particular reference to research, teaching and training, and student management. Our operational management systems are led by a College Operations Executive (COE) charged with leading the implementation of support services and strategies.

King's Health Partners consists of four high performing institutions. Our Boards clearly understand the implications associated with the development of this AHSC and are certain that the proposal is in the best interests of each of our independent organisations, presenting no significant risk to the financial or operational sustainability of any of the partners. We are developing a robust business case and financial plan, and our governance model ensures quality decision making at speed. We will make a difference to the health of London and have a global impact because we will bring new models of treatment to bear on our very diverse patient population – reaching out into the community to prevent ill health, and treating both physical and mental illness. Our research and education capabilities and plans are aligned with our clinical service priorities, thus guaranteeing maximum impact on health.