

There are two core challenges for the academic health science partnership. How do we facilitate the provision of better value health (outcomes that matter to patients per pound spent) and how do we support economic regeneration for the population through science into practice, at a local, national and global level?

Looking back at 2011 we have made real inroads into the first challenge through the 56 on-going [UCLP projects](#) and co-creating a platform for delivery of international scale and relevance with the expanded partnership across NEL and NCL. This work, which is on-going in most cases, spans prevention, organisation of care around individual patients, reconfiguration of services to enable proven interventions, education and new diagnostics, and bringing devices and treatments into practice.

Significant achievements in facilitating better value health have included:

1. Prevention

- *Reducing cardiovascular mortality*
 - Creation of the national centre for cardiovascular prevention and research.
 - Aligning national databases on cardiovascular outcomes.
 - Building teams to enable better local delivery on hypertension and thromboprophylaxis of atrial fibrillation in the community.
- *Earlier diagnosis of cancer to improve outcomes*
 - Creation of a single cancer integrated system inclusive of all major providers across NCL, NEL and SW Essex. Primary care engagement events have seen active involvement from over 120 GPs.
 - Agreement by partner Trusts to treat all first presentations of cancer to A&E departments as a serious untoward incidents to establish and address the root causes for any system failures (>3,000/14,000 new cancer cases p.a. across partnership population).
 - Changes to referral processes for GI cancer in response to GP feedback, now offering direct communication to hospital specialists upon referral, for advice and guidance.
 - Established academic programmes to identify NHS determinants of delayed diagnosis and to evaluate cancer integrated care system
- *Reducing in-patient mortality*
 - Earlier intervention to identify and treat deteriorating patients on hospital wards.

- Creation of a collaborative network already of six major Trusts who have each committed to halve avoidable cardiac arrests by the end 2012. Agreement to expand interventions across the wider partnership in 2012.
- Continuous learning through systematic quality measurement and improvement. Demonstrable improvements are already evident.

2. Organising clinical care around individual patients to improve outcomes, patient experience and reduce cost

•New models of integrated care for populations

- Support for the development of Whittington Health as it moves towards a population based model of care, focusing on patients with multiple co-morbidities and with community services organised and delivered in partnership with primary care, around the needs and preferences of individuals.
- Establishment of an academic programme to evaluate required changes to the national tariff (reflecting a potential shift from PbR to "year in the life care").

•Chronic obstructive pulmonary disease

- A focus on priority interventions to keep patients well and out of hospital across 200 GP practices and 30,000 patients.
- Enhancement of diagnostic accuracy (currently 1:3 patients with COPD are undiagnosed in the community, only 50% of practices have the spirometry equipment to diagnose so properly, and 20% of patients with a diagnosis of COPD do not have that condition).
- Co-creation with practices & patients of educational interventions and data-feeds to enable consistent excellent care.

• Empowering patients through new e health tools

- Delivery of new IT portal and management system for children and teenagers with diabetes to achieve better control.
- Delivery with the HIEC of new iPhone applications for children and teenagers with asthma to better understand and manage their own conditions.
- Working with the London Health Improvement Board to provide more information to patients to enable informed choices, and integrating primary, secondary health and social care data to enhance value.

3. Reconfiguring services to better implement proven interventions

- Collaborative consolidation of specialist services across institutions to create the volumes required to deliver better outcomes for patients (trauma, liver and pancreas surgery, vascular surgery, neurosurgery and ENT in NCL).

- Delivery and formal evaluation of a new stroke system, resulting in:
 - An increase in thrombolysis rates to the highest levels in any city globally (from 3.5% to 17%);
 - A reduction in whole system costs by 90 days through reduced morbidity and length of inpatient stays;
 - A reduction in mortality across UCLP to below half the national average.
 - provided formal population evidence evaluation to underpin major Trust reconfigurations

4. New educational programmes for system change

- The establishment of a Staff College for leadership development with more than 200 delegates from primary and secondary care, including allied health professionals and managers, and with more than 95% strongly recommending the course to others.
- The delivery of combined Medical and Dental Education across NCL and NEL with modular Masters Provision, across all partner Universities for future entrants, including leadership, management and cross boundary working.
- Agreement from all partners to create a structured career pathway for nurses, midwives and AHPs from graduation to senior clinical, managerial and specialist roles, with shared master's modules linked to the MDECs programme and based on delivery of whole pathways of care across traditional boundaries.
- Securing agreement to develop a new national training programme in women's health built around predictable life-course events.
- Delivery in 2011 jointly with Monitor and Harvard Business School of two oversubscribed, highly successful national workshops on better value in healthcare, with excellent delegate feedback from both events. A third seminar is planned for 29 February 2012.
- Agreement to help create a single pathfinder local education and training board for NCL and NEL together with an associated skills provider network.

5. Developing new treatments into practice

There are many opportunities and examples across the partnership, including for example:

- Significant increase in partnerships with British industry e.g. new sharing partnership deal between GSK and Institute of Ophthalmology (£5M) with three candidates moving through to clinical trials
- A new MRI based programme for better prostate cancer diagnosis and treatment which will be open to recruitment for patients across UCLPartners from Jan 2012;
- A doubling of new treatments under evaluation for brain cancer, with 10 new studies now open to recruitment for patients across UCLP;

- Major NIHR award to establish a UK trials infrastructure for ENT which will support the development of a new cadre of research leaders – to transform the pipeline from ENT discovery to practices which benefit patients and populations
- New national proposals for proton beam therapy developed jointly with The Christie and MAHSC, including a national training and R&D programme. Funding has been announced, with confirmation of the number of sites awaited from the DH.
- Design & experimental evaluation of interventions to increase uptake of (& reduce inequalities in uptake of) the National Bowel Cancer Screening Programme

Delivery of new treatments in to widespread practice requires the development of new funding and business models. TSB grant awarded to Janssen UK (lead partner), UCL and UCLP to develop business tools to bring disease management diagnostics to market, with chronic Hepatitis C as an exemplar.

Supporting economic regeneration: the contribution from academic health science partnerships

The Prime Minister set out the imperative and some of the opportunities for biomedicine to make a greater contribution to our nation's GDP in his speech of 5 December 2011. The capacity to generate wealth will be a significant determinant contributor to future population well-being and health.

The three London AHSCs have committed to work together, and with GLA and NHS London, to maximise the economic value, inward investment and health gain of biomedical research and education for Londoners and nationally.

This builds on the existing work of the NHS providers, NIHR and Universities to maximise the potential gains for our patients and population. There is already a cadre of major developments underway for the individual programmes and these will be taken further through synergies with Barts and The London and Queen Mary.

In Immunology, for example, this is one of the fastest growing therapeutic fields:

- There has been a doubling of translational research activity in the last year (RFH Institute; QMUL).
- Together our partners have created one of the top five centres worldwide in delivering first in man vaccination, cell and gene therapy trials.

Specifically for immunology in 2011:

- In vaccination: we have demonstrated efficacy of CMV vaccine in solid organ transplant patients;
- In cell therapy, our partners have:
 - Demonstrated efficacy of T cell therapy in lymphoma, with the subsequent adoption of this protocol for the clinical management of patients;

- Jointly with a commercial partner, performed the world's first phase III randomised T cell therapy
- Started Europe's first embryonic stem cell trial for inherited retinal dystrophy
- In gene therapy, our partners have:
 - Shown the long-term clinical benefit of gene therapy in children with primary immunodeficiency;
 - Demonstrated clinical benefit of gene therapy in patients with haemophilia;
 - Discovered novel genes causing primary immunodeficiency and inflammatory bowel disease and implemented new diagnostic tests.
 - Continued world's first gene therapy for eye disease with further treatments of patients with retinal dystrophies and developing programmes for other gene defects

UCLPartners contribution to the future growth agenda will also include:

- Enhancing and integrating informatics across London, developing a common understanding of information governance and sharing clinical information securely to support patient care, choice, facilitate change and improve value.
- Better defining the care and outcomes for large cohorts of patients (e.g. stroke) to understand disease processes and make available to such patients across the whole partnership new therapies under evaluation if they wish to enter clinical studies.
- Linking resources and professional strengths across our sites, and across London, to maximise London's global academic competitiveness.
- Linking together with Industry more effectively to co-develop and evaluate new diagnostics, devices and treatments.
- Identifying and implementing those specific areas where a pan London focus will be more effective for our global competitiveness.
- Ensuring delivery of new treatments into practice at pace and scale.

UCLP will track our contribution separately and also collectively with the other London AHSSs to this agenda for the wider benefit of London and nationally.

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