

AUKUH answers to additional questions posed by the Cooksey Team

1. The UK has demonstrated its ability to fund and carry out excellent basic research. There have been successful examples of this basic research being translated for patient and economic benefit. The paramount requirement of this Review is to improve our success in translation and application of research discoveries. How do we achieve this?

The first priority should be a recognition of the imperative to formulate policies which recognise the unique nature of the tripartite mission of university hospitals and to support them and their partners in creating an environment of excellence in service delivery, research and education.

Some of the best examples of translated biomedical research in the UK e.g. vaccines, antibiotics, imaging, come from individuals and institutions where basic science and clinical practice are closely integrated. Basing centres for basic research in population centres could be an excellent way to foster collaboration as such a concentration of 'patients' would by proxy attract clinicians, and so clinical researchers. Research of excellent quality occurs across the UK and needs to be supported and nurtured as a matter of policy.

Funding must be more programme based with a clear clinical component. The majority of the most successful programmes of this nature are run by clinician-scientists with an integrated basic science component.

At present the culture of biomedical research places basic science above translation and the application of research in many hard and soft ways. In order to achieve change the disincentives to change must loosen. Researchers, especially in the clinical field, have found clinical research becoming more and more bureaucratic and regulated. This is acting as a disincentive and a better balance must be achieved.

A culture of development must be embedded across organisations. The efforts of a Trust in encouraging translation and collaboration must contribute to performance ratings and be measured by the Healthcare Commission. Institutions must receive funding to do this type of work, particularly but not exclusively infrastructure costs that are difficult to quantify. Additionally the PbR tariff for this activity needs to be adjusted for institutions making real differences in these fields.

Funds for translation and research application must be seen as prestigious and influence will need to be brought to bear on funding bodies such as the MRC, the Wellcome Trust and CRUK, amongst others.

It is vital that the cumulative effects of policy initiatives that consider service, research and education in isolation do not weaken university hospitals. If this happens, then the national goals set out in *Best Research for Best Health* and the *Science and Innovation Framework* will not be achieved. In particular, financial change must be carefully paced and managed to ensure that change does not result in a counter-productive cut in research activity due to financial crisis. This is especially relevant to the six Trusts short-listed to become Academic Medical Centres and to those London Trusts with a strong research output.

2. What career, cultural and financial incentives do we need to have in place to ensure that the basic and applied research communities work together as a continuum?

The 2005 CHMS Clinical Academic Staffing Survey showed that the number of medical clinical academics in the UK has fallen below 3000, affecting the sustainability of certain specialties. Individuals contemplating a career as a clinician scientist need to perceive that they will have sufficient rewards both personally and professionally, providing an incentive for them to remain on the career ladder. Specifically, there should be no distinction in salary and opportunities for pay progression between NHS practice and NHS research posts. Scientists require much more security and career structuring than is presently seen in some academic centres. There should be a transparent approach to allocation of funding for research through competition and an appropriate peer reviewed system. This needs to be programme-based to avoid continual grant writing. Such programmes should be periodically peer reviewed while in progress. The research teams need to incorporate basic scientists on a clear career path. These posts should be competitive and at least 5-10 years in duration, renewable pending peer review of programme and individual. This mix of incentive, security and stability would be a significant improvement on the present situation.

The function and demands placed upon the clinical academic needs to be reviewed. As it currently exists, clinical academia is marginally achievable in medical specialties, but completely unachievable in craft based specialties due to the current demands on research output. Application output needs to have a currency as measurable as research output. Patient outcomes should be given weighting equal to research output in any assessment of the research productivity of a Trust, to reduce pressure on both organisations and individuals.

Programmed Activities and the Clinical Excellence Award system should encourage service-based NHS staff to work outside the boundaries of their institution and reward interfacing. Grants should be available to allow staff to operationalise the translation process. Organisations should be similarly rewarded for encouraging staff to engage in translation, with interfacing activities contributing to institutional funding and performance assessment. It is hoped that the support provided to Faculty members of the new NIHR will be beneficial here,

3. What incentives do we need for the institutions concerned, universities, hospitals and industry to work seamlessly together to realise the broadest possible benefit to society?

There needs to be some flexibility in funding streams. Tying every activity down to the last pound is specifically a problem if organisations are to be allowed to be innovative and create opportunities. At present financial risk in these areas is short term, and organisations are driven to be risk averse, so partnering opportunities are difficult for hospitals. The rules around intellectual capital and its pursuit need to be more flexible, with some way of measuring non-financial gain being considered alongside finances as a way of bringing all parties to the table.

The best incentive is for joint appointments between industry, academia and hospitals. There are already some examples of this model in the UK with GSK and GE. Such posts offer a unique opportunity to provide a 'seamless' link between these three areas and ensure that opportunities for translation are identified and accelerated. Furthermore, there is a benefit to

clinician-scientists to gain experience in industry, which would help break some of the barriers that impede translation. Additional incentives could be based upon jointly funded programmes awarded competitively in specific areas of joint interest e.g. drug development and clinical trial. The emerging field of biomarkers is an additional example for such a joint funding opportunity.

It is vital to the feasibility of joint working between universities and Trusts that Follett guidelines are properly adhered to.

As discussed above, high-prestige grants should be available to those Trusts which can demonstrate a collaborative approach to research and healthcare. These should be made available to all Trusts which participate in such partnerships; to concentrate these in a minority of organisations would not create the volume of work which would translate into significant benefit.

4. This is a fast moving field where other national governments are competing for the success of their own systems, e.g. NIH, CIHR, etc. Yet all the investment is long term. Metrics must be developed to measure past success, position our current activity and demonstrate what needs to be done to succeed in the future.

If the flexibilities and constraints identified in questions one to three are real then these short-term metrics will need to be process measures rather than output measures. Such measures should be part of an assessment procedure that is less time consuming than the RAE. The Healthcare Commission's 'Annual Health Check' offers a way in which research activities could be assessed, and which could feed into a package of incentives for highly-performing Trusts.

There is also something to be learnt from previous experiences about partnering UK universities and hospitals with UK industry where there is a mismatch in market position or organisational standing. University hospitals need to be free to link with any industry in a global market, seeking to support the UK plc. position rather than a UK company to support the UK account position.

The emphasis on training the clinician-scientists of the future as emphasised by the Academy of Medical Sciences and through the CHMS Clinical Academic Staffing Survey needs to be pursued. Incentives need to be employed as discussed above. Metrics need to be developed but in such a way as to promote and not inhibit collaboration within and between groups. While there is advantage in condensing research activity to a 'critical mass' in a number of centres of excellence, this should not be at the expense of encouraging independent researchers in focused areas and research in emergent institutions. There is excellence in the UK across a broad base and this should be encouraged.

The key is to direct funding to project/programmes and not just 'institutions'. The Government must take the lead of the healthcare sector in setting the priorities for health research as part of a wider consideration of its economic strategy.