

## **Review of UK Health Research**

### **Response to the Cooksey Review**

#### **1994 Group Research and Enterprise Policy Group**

##### **General issues:**

##### **1. Support for the Haldane Principle**

In the context of any funding reform, the need for clear and explicit governance structures and accountability is of particular importance. Individual funding decisions need to be kept independent of Government and involve academics in high level strategy development with an appropriate balance between funding for a few world class centres of excellence in addition to real regional and local commitment to research.

##### **2. Recognition of the special context of support for 'basic research'**

It is essential to recognise the longer-term and different requirements of performing and exploiting basic research in comparison to the often shorter-term nature of translational and applied research. The link between basic research and patient care is absolutely fundamental. Research provides better health and stimulates innovation in diagnostics and new devices which in turn contributes to the international competitiveness of the UK.

##### **3. Support for interdisciplinarity and inclusiveness in the health research field**

For health research to prosper in the UK it is important to recognise the important alliances that exist between clinical, applied and basic scientists. Health research not only captures research which is of interest to and undertaken by health professionals but is also of importance to many other participants, in the broader health research process, whose expertise must be acknowledged. Hence we would have very significant reservations about the pooling of all funds for medical research from all of the Research Councils.

##### **Specific questions posed by the Cooksey Review Team**

*1. What are the strengths and weaknesses of the MRC and NHS R&D programmes at present? How do each of these support the research and training needs of the NHS, social care, industry and academia? Does more need to be done?*

The MRC funds excellent research based upon rigorous peer-review, possesses excellent managerial and processing competence with the ability to handle large funding programmes and response mode funding. Its reputation for funding basic biomedical research is not in question. It does, however, often employ a rather limited definition of the type of medical research it is prepared to fund, though this has improved under the direction of the current Chief Executive

The NHS R&D programmes on the other hand excel in accommodating patient concerns and the interests of non-medical researchers. However, there is a tendency to prefer smaller scale commissioned and applied research over larger scale basic or translational research programmes. Their track record in selecting and managing scientifically ambitious and larger scale funding proposals over a number of years is less convincing. It is imperative that the allocation of NHS R&D funds follows processes that mirror the transparency and rigour that characterises the MRC process.

*2. What do you believe are the key scientific and organisational challenges facing health research, and underpinning training, in the UK over the next decade? How might the UK Government best help address those challenges? What do you believe should be the Government's objectives for health research, and why?*

Health research depends on an effective tripartite partnership between research, education and service delivery. Ensuring that these partnerships are maintained, supported and developed will be a key organisational challenge for the future, particularly given the service target culture with which the NHS is now imbued. The research culture needs to be re-invigorated and prioritised in all Trusts across the UK. There is a real need for the development of 'Centres of Excellence' as well as for a regional perspective. Cementing strong links between all Medical Schools, their local Trusts and Regional Development Agencies would drive local health and economic development and must be encouraged. It is essential that every Medical School in the country remains research active, whilst recognising that it will be more appropriate for some to restrict their areas of interest to certain focused fields.

The central cross-cutting challenge is balancing shorter-term NHS service requirements with longer term translational research and changing clinical requirements. This is expressed in many areas, and the government should be cautious in intervening at a micro level. One recommendation would be for the development of a form of fast track career development for health researchers similar to the NHS management training programme. This would supplement the "Walport" developments which are restricted to those who are medically qualified. In such a training programme there would be a focus on clinical and basic research activities as opposed to service delivery.

Central to any changes would be the reform of the VAT rules to re-define education and collaborative research as key to the delivery of service – rather than add-on business activities. This could have a dramatic impact at zero cost to the public purse.

*3. What should be the Government's priorities for health research? Is there anything it should stop doing or funding? What is it not doing or funding that it should do, and, in the absence of further sources of support, what can it lower in order to release the necessary funds?*

Above all one of the key Government priorities for health research is to ensure that research is not only valued and promoted within the NHS but is actively maintained within universities. This underlying aim more than any specific research priority will allow UK health research to fulfil its potential. The current focus on service targets is damaging the research culture which used to exist in the NHS and so time should be made within Trust job plans to release time for research. Priorities should be set following informed, academic debate between all interested parties, which considers the existing knowledge base and assesses those areas where investment is likely to produce an outcome which will be acceptable to patients.

*4. How should decisions be taken on the balance between the long-term economic and social benefits of a high quality biomedical research base; and the needs for research to improve healthcare and other public services? What is the appropriate balance between public funding for investigator-led and priorities led research? How do we balance funding for basic science, translational science and applied science? Is this something that should vary over time? What mechanisms should be used to make judgements about this balance?*

This is indeed a difficult question as research is a continuum from bench to bedside, into the community and back again. There are good examples of basic research resulting in the development of new treatments and the education of medical staff to provide them.

It is not straightforward to assign weightings to the different elements of such research projects and indeed would be damaging to apply any central control on this balance. It is important to stress that the timeframe necessary to resolve different problems varies and is dependent both upon the current knowledge base and the availability of talented people with creative ideas, working in an environment that fosters innovation.

Whatever mechanisms are identified to make judgements about this balance it is important to engage the clinical academic sector in identifying and validating proposed targets for research funding.

*5. In your experience, how have the results of publicly-funded health research in the UK been used, both in the development of new treatments and to influence / change wider policy and healthcare practices? What lessons can usefully be learned to improve the uptake of advances in science and medicine?*

There have clearly been some fundamental breakthroughs in drug development and service delivery practice in the lifetime of the MRC. The key lesson is to recognise and accommodate the reality of relatively long lead times and serendipity in any monitoring or audit regime, and balance opportunistic/innovative research against service priorities and needs. This inevitably means taking considered risks.

One possible solution to influence / change healthcare practice is to increase academic input into Trust audits in order to raise the quality of the studies. Medical Schools have an important role in stressing the centrality of such evidence-based practice and the requirement for life-long learning. Improved access to electronic information is helpful but more could be done to ensure wider dissemination of information – for example, grant proposals should include an element for the resources to communicate the results of the project subject to the appropriate resourcing for such activity. Through such mechanisms and others there is an opportunity for the new institution to take a lead in embedding evaluation principles and ensuring research outputs are translated into healthcare benefits across the country.

*6. How might better links be forged between ‘basic’, translational and applied researchers, working across the whole field of health research, from the laboratory bench to the front line of the NHS? How might better links be forged across disciplines, e.g. with engineers, physicists, and social scientists?*

There are number of problems that limit translation from laboratory bench to frontline NHS.

Current VAT arrangements financially penalize universities when undergraduate teaching and clinical trials are carried out in research buildings funded by charities and on which VAT exemptions have been claimed. This limits the cross-fertilisation of ideas and contradicts the aims of this review.

The current RAE also acts as a disincentive for NHS-funded clinical academics to pursue research for patient benefit. As the RAE is reformed, it will be important to give weight to outcomes, in terms of the quality of patient care, alongside the output of researchers.

Links across the translational spectrum from bench to population will be facilitated by research training for some that develop a portfolio of skills. It is likely that future health research will draw more heavily on the physical sciences and social sciences and clinicians skilled in these domains will become increasingly important. The new system should have mechanisms for incentivising and evaluating interdisciplinary initiatives that are required to secure translation. Whilst the RAE had a positive impact upon research quality it tended to play only lip-service to interdisciplinary research and its replacement and funding mechanisms needs to better value research that is multi-disciplinary and cross-institutional. Given the importance to health research of high quality basic research in other areas, e.g. the physical and social sciences, it is crucial that connectivity with the other Research Councils is maintained and that the new body/fund remains part of RCUK. Hence Research Councils and the NHS need to work closer together to ensure that interdisciplinary research initiatives are fully encouraged and supported.

*7. How can the Government encourage translation, entrepreneurship and innovation in health research to improve public services in the UK?*

The government should avoid micro-management and focus on providing a regulatory and funding environment which reflects a realistic assessment of the risks involved, which are different across the research spectrum. As with the establishment and failure of small businesses in a vibrant economy, there will be many scientific projects which “fail” – in not producing usable products – but this must be allowed to occur and indeed we learn much from such failures as is the case in the commercial world.

NHS Innovation hubs should be accessible to all new ideas/innovations and not restricted to the health service. Funding formulas should be developed to encourage collaborative research within hubs that results in an innovative product or treatment in exchange for access to patients or facilities. The status of educators and researchers should be raised and incentives, including improved environments and security of funding, created for those pursuing research careers. As indicated above Institutions should develop strategies which includes funding for high risk unlikely projects and actively encourage and support entrepreneurship at all levels of teaching and research as is the case in the USA. Mechanisms to provide financial support for worldwide patent applications and renewals from spin-out companies and SMEs should also be developed.

*8. How can UK health research funding be most effectively used to provide the appropriate infrastructure for basic, translational and applied research, whether funded by the UK public sector or other sectors? How can UK health research funding be most effectively used to support the work of NICE, facilitate innovation and collaboration with industry, and address market failures in the application of healthcare?*

There has undoubtedly been progress in the provision of infrastructure across all areas of research, but it is not clear how appropriate this has been in the sense that the pattern and magnitude of this investment is not clearly mapped out. An assessment of the mechanisms by which funding allocations and outcomes are made may be the most appropriate first step, with a view also to identifying and sharing best practice as appropriate. Overall, the maintenance of the balance in outcomes between basic and applied research should be a primary consideration.

It is essential that the full economic cost of supporting research both in the NHS and in Universities is recognised and fully funded across the country. The importance of regional initiatives to drive inward investment and local economic gain must not be under-estimated. Clinical academics are central to this collaboration as they already hold honorary contracts with the NHS in addition to their substantive contracts with universities and ever stronger links between Trusts and Universities must be forged.

We would like to stress that it is extremely unhelpful that the National Institute does not recognise clinical academics based in universities as NHS staff, when these individuals conduct 80% of NHS R&D.

*9. What lessons should the UK learn from other countries in making the proposed changes to the institutional arrangements for the funding of health research?*

It is important to bear in mind the distinct and unique feature of the UK healthcare system when comparing it with other countries. In citing the US system, it is important to recognise the difference in both the research base and the contrasting systems of patient care. The National Institutes of Health are widely admired, however, the recent controversy surrounding the NIH Roadmap indicates how strategic prioritisation of translational research can be perceived as diverting funds away from basic biomedical research and open up charges of government interference. This highlights the need for ring-fencing within the proposed single fund as well as the clear application of the Haldane principle. The basic science base in the UK needs protecting, but the key lies in improving the interface between it and applied research without losing the strengths of the two areas.

*10. In implementing the single fund for health research, to what extent should the MRC and DH / NHS R&D be merged or brought together? And to whom should the single, ring-fenced fund be accountable? Please provide reasons and any supporting evidence for your response.*

This is a very challenging issue to address and requires careful consideration. It should be recognised the MRC and DH/NHS R&D are not co-terminus in that the MRC is UK based whereas NHS R&D is devolved to the four countries of the UK. We do not consider the most important factor to be the consolidation of monies into a single fund, but the management and coordination of this fund. Indeed, in line with the rest of our response, some ring-fencing of funding within a larger pot may be a useful mechanism for supporting the special circumstances of basic and translational research.

We would suggest, building on the strategic decision to make two Secretaries of State accountable for the merged fund, that a management group consisting of the Chief Executive of the MRC and the four NHS R&D Directors (or equivalents) should be established. This group would be responsible for managing the merged fund and funding priorities. A legal duty of cooperation could be placed upon these individuals to collaborate in this endeavour. The joint fund must be administered according to the Haldane principle with independence from political pressures. The retention of links with DTI and membership of RCUK will also facilitate inter-research council initiatives. It will be vital to retain the appropriate balance between funding for basic and more applied studies and so some ring-fencing will be necessary.

*11. To what extent does the success of recent innovations in health research (e.g. Clinical Research Networks) and the proposed structures rely on the new Connecting for Health NHS IT system, and to what extent should it do so?*

Research networks have indeed proved very valuable but it should be remembered they are not the only route forward. They may not necessarily be the most appropriate mechanism to solve different issues and researchers need to be fully aware and engage with whatever appears to be the best mechanism to fit the issue in question. While the theoretical benefits of the Connecting for Health IT programme are great, they have not been realised to date in the context of health research. Confidence is currently low that any national 'top down' system can be successfully delivered. It is recommended that any review of this include the option to develop a more bottom up approach to design and implementation. Furthermore a major priority must be to resolve the current lack of interface between NHS and university systems

**12. Given that NHS R&D is currently devolved, but that the work of Research Councils is not, how can these functions work best together to maximise the health and economic benefits to the UK?**

In line with our response to questions 1 and 10, good coordination and programme management competence are the crucial factors in successful delivery of health and economic benefits. This of course needs to be married with the need to avoid inefficient layers of bureaucracy. We would re-emphasise our belief that a CEO/R&D Director group should be convened, covering the whole of the UK, managing the merged fund. The group would have a rotating Chair and an obligation placed upon it to collaborate.

Above all it is essential that funding is provided to cover the full economic costs of research in a clinical environment in all of the UK and it would be entirely unsatisfactory if research funding were entirely devolved.