

**SCHOOL OF MEDICINE, SWANSEA UNIVERSITY  
RESPONSE TO  
COOKSEY REVIEW OF UK HEALTH RESEARCH FUNDING**

- 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?**

a] MRC supports fundamental and clinical research of high quality – with the potential for some early, and also long term practical medical advance.

However it has not grasped the potential for the clearest linkage between medical research and the knowledge economy.

In one respect, MRC's support is largely dedicated to the hypothesis-driven research mode, and in the "prestige" academic centres – which will unnecessarily limit an ambitious enterprise linking research directly to economic gain.

In another, MRC has far too little money to allocate – given the imperatives of improving health and medical care, and also of the knowledge economy. This lack of money, despite the best efforts of MRC's panels, is a key impediment to progress.

b] The NHS R&D programme was intended to develop a research capacity and culture within the NHS. The programme has been structural in approach, with a successful emphasis on the administrative and academic under-pinning of research across large and small NHS units. Much has been achieved. There has, very understandably but importantly, been relative neglect of a thoroughly interdisciplinary scientific and commercial approach, and of the possibilities of the knowledge economy.

Therefore, the proposal to draw together MRC and NHS R&D monies provides an outstanding opportunity to now re-focus objectives and funding according to the best interests of advancing both health and the knowledge economy.

- 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 ?**

- a. Getting best value from MRC and NHS R&D monies, drawn together - ensuring that the combined fund support research and medical development directly, and foster the training of particularly talented and committed individuals.
- b. To re-focus the objectives for medical research - the advance of health and the knowledge economy - through the process of drawing MRC and NHS R&D together.
- c. i) securing thorough cooperation between medical research (academia broadly and the NHS) and the commercial/industrial sector - in order to make interdisciplinary medical research deliver on medical advance: because if we do not and the process remains disjointed, progress will be too slow, and much will be lost to more effective competitors abroad;  
 ii) promoting a new style of public health research - which also needs to be truly interdisciplinary across public health, sociology and the commercial world - for the advance of effective prevention of common diseases: because again a limited approach that does not acknowledge practical problems and the vagaries of human nature and behaviour will struggle.

Including a strong practical agenda will not damage fundamental research of high prestige - see the USA for plain evidence of this.

**3. What should be the Government's priorities for health research? Is there anything it should stop doing or funding? What is 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?**

The response to question 2 applies here. The priorities for health research are to become properly interdisciplinary across academia/NHS and the business sectors, and to focus on delivering practical (and saleable) advance in medical diagnostics and treatments and in health prevention.

With the benefits of drawing in NHS R&D monies in alignment with MRC, the increased money pot should allow the very best of the fundamental and non-applied research to survive also.

**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? Is this something that should vary over time? What mechanisms should be used to make judgements about this balance?**

Ethics and economic interest converge here.

The UK population could reasonably expect the Medical Research Council and NHS R&D monies to support work that directly leads to improved prevention of disease, improved treatment of disease, and linkage to the knowledge economy. These bodies can together set these priorities - and then investigators can propose how they will take interdisciplinary approaches, that bridge the different academic sciences and the know-how of the commercial and business world, to advance solutions to specific diseases.

The best and most promising approaches should be funded after review by Boards, which include strong representation from the academic and industrial worlds.

This framework would not obstruct training opportunities. It would fund also, though natural instinct (see comment on USA in 2. above), what was evidently the very best of fundamental research.

The point here is that combining NHS R&D and MRC spend will permit a more strategic approach to developing and maintaining an appropriate balance between the short, medium, and long-term priorities, and between research-led and priority-led research.

- 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?**

The lessons: keep the focus on the principal objectives, and which need regular re-statement. Take every step possible to break down barriers between clinical medicine, interdisciplinary academia, and the business/industrial sector.

- 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?**

Better links - reinforce the priority for truly interdisciplinary working (spanning academia/NHS and out into the business/industrial sector) at the medical schools - and also at the medical research funding bodies, most notably the MRC and NHS R&D, drawn together.

A strategic approach to funding is required, and which encourages rather than discourages multi-disciplinary research.

Capitalise on the devolved governments and regions of UK – to help deliver a fresh approach, and contribute strongly to the whole. See 12 below.

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

Keep re-stating the principal objective. Do everything in their power to break down barriers that add difficulty in make interdisciplinary work.

Review the relative position of researchers and institutions with regards to intellectual property rights – in order to secure well understood arrangements which offer due reward to both, and which offer encouragement to both and to investors.

**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 ?**

Draw the MRC and NHS R&D together, as proposed. Then invest in ideas, the people, and the medical schools which are prepared to work towards practical advance through interdisciplinary effort. See 12 below.

**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?**

No comment.

**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.**

Bring the whole together in to a single notional UK fund. If the outcome-focused, interdisciplinary approach is not joined at the “top”, it will struggle unnecessarily at the “bottom”.

But for practical operation, the effective stimulation of an entrepreneurial dimension through largely untapped energies, and the proper distribution of economic and health gain across UK as a whole, this notional fund

should be settled, proportionate to population sizes, as single Health Research Funds within each of the devolved UK governments.

Each devolved fund should be accountable to a joint standing committee of the devolved governmental departments of Health, Education and Economic Development. See 12 below.

**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 ?**

Unknown, at the moment.

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

In keeping with political devolution within UK - and the placement of health, education, science and economic development under the devolved UK governments - there is now the proper opportunity to create medical research funding bodies (combining MRC and NHS R&D monies) under each devolved government.

The tranches of devolved MRC monies should be proportionate with population sizes. Likewise the current NHS R&D spends, already under devolved control, should be normalised to population sizes.

This arrangement would represent the essential "middle" tier in the response to Question 10.

Each of Scotland, Northern Ireland and Wales have important health and economic deficits. However, each is showing serious and progressive advance in interdisciplinary health research linked to practical progress, and linked to the knowledge economy (*details can be readily provided*). Each will therefore be a source of untapped energies for the new approach, and contribute strongly to the whole.

Each devolved government should put in place a single grant proposal review body - covering the devolved and unified MRC and NHS R&D monies. Such bodies should have review standards, and esteem, equivalent to MRC. This would be delivered through engagement of researcher panellists from UK as a whole, Europe and the USA. Moreover medical industrial panellists should be represented also, to sustain the mission of medical research, linked to practical clinical advance, and to the knowledge economy. The funds would be available to support research of alpha-A quality.

## Supplementary Questions:

- 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?**

Draw the MRC and NHS R&D monies and grant awarding processes together, and re-set the priorities according to full linkage between research, practical medical advance, and the knowledge economy.

The strongest support should be deployed for thorough-going interdisciplinary working across academia/NHS and the industrial/commercial sector, focused on practical advance in preventing and treating disease, and linking fully to the knowledge economy approach. See responses to main questionnaire.

Arrange the whole through the devolved UK governments. The new agenda needs a fresh approach and not a clinging to old models. The devolved approach will tap new energies, and will decisively encourage the research-knowledge economy mode. See 12 above.

- 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 objectives of interdisciplinary working need to be regularly re-stated by Government, the Treasury, the Department of Health, the MRC and the NHS.

These organizations need to work together in removing every barrier to interdisciplinary working, and minimize inadvertent administrative obstacles.

Review the arrangements for sharing of intellectual property rights between researchers and institutions. See 7 above.

- 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?**

The priorities for the advance of health, medical treatment and the knowledge economy are incentives enough when regularly re-stated – and when rewarded by grant support, and proper IP sharing arrangements.

All organizations need to participate, through actions, in promoting interdisciplinary working. All the inadvertent barriers to such working need dismantling by government and administrators, and quickly.

- 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.**

This seems to be an answer to a question.

The immediate priority for UK plc is action towards a thoroughly interdisciplinary medical research enterprise, with linkage to the knowledge economy. Metrics, especially in the early and mid term, will sadly but almost certainly be unreliable. Over-emphasis on them will hence be counter-productive. The enterprise may require, instead, a suspension of disbelief – a bold step to be sure.