

REVIEW OF UK HEALTH RESEARCH

Response from the University of Oxford to invitation to submit comments

1. A New Research Council for Health.

The decision to bring together various strands of government support for health research into a single ring-fenced budget and a co-ordinated funding programme that covers basic biomedical research as well as clinical and translational research is to be welcomed. The advantages of a more integrated approach to research that allows basic biomedical discoveries to be translated more effectively within an NHS setting would provide a huge opportunity for the UK, permitting it to compete more effectively in this field of research and also to attract commercial activity that would benefit from this research activity.

There are, however, significant risks that need to be considered before decisions are taken to change the existing MRC and NHS R&D programmes to accommodate this more unified Division. These risks are as follows:

- The basic biomedical science base is strong in the UK and must not be disrupted by attempts to bring NHS translational activity up to a higher standard.
- The MRC structure of response mode funding and governance has shown itself to be highly effective over a long period of time and should not be lost.
- The Department of Health has a very poor track record of overseeing research and has repeatedly moved research money into activity totally unrelated to research. It has not yet demonstrated any serious capacity for external peer review, nor has it a governance structure where clinical scientists have taken responsibility for establishing the strategic direction of the activity. Oversight by the Department of Health of the entire biomedical research venture in the UK would therefore be extremely dangerous.
- No significant improvement in translational research within the NHS will occur without a substantial cultural change in the attitude of NHS managers and employees to the importance of research. This cultural change is essential if this research vision is to be realised, but will be extremely difficult to achieve.
- The position of the UK in biomedical research has been largely supported by activities in the charitable sector. Government funding for research in this area at present is not adequate and it would be important to see real and genuine increases in funding for biomedical research, both basic and clinical, if the objectives defined for establishing a single research council for health are ultimately to be achieved.

The productivity of the UK translational research has, despite the limitations in infrastructure and financial support, been remarkably successful over a long period of time. Important research funded by the MRC that has emerged from Oxford alone includes well-established examples like the discovery of a method for purification and production of penicillin by Howard Florey, the discovery of cephalosporins by Edward Abraham and the discovery of the link between smoking and cancer by Richard Doll. There are many more recent examples, including the development of innovative therapeutic agents, which have been taken through to patients, which have emerged in the face of considerable difficulties in undertaking clinical translational studies in the NHS environment. One hope would be that a single new research council for health would ensure that

these sorts of translational achievements were more widespread and facilitated both in Oxford and around the country.

2. Research funding

The two current strands of research funding through the Medical Research Council and the NHS R&D stream have in the past provided different types of research support and different administrative structures to support them. The MRC has long relied on a strategy abiding by the 'Haldane' principle whereby decisions are clearly independent of Government. Strategic decisions are taken by some of the leading scientists in the country and deliberations on funding made through careful and effective peer review process. The MRC could rightly be criticised for not undertaking significant amounts of clinical translational research until five years ago. At that stage, the MRC began to fund increasing amounts of translational research activity and demonstrated the significant demand in the community for funding of work in these areas.

NHS R&D funding has had a much more chequered history. Since it was originally identified by Sir Michael Peckham, the first NHS Director of R&D, the money set aside to support research activity has not consistently been used to support this activity. Only in recent years has an attempt been made to establish a strategic framework for distributing money as a result of activity and to attempt to introduce much more effective peer review structures. It is not surprising therefore that NHS based research has not flourished in the UK.

There remains a significant and important requirement to ensure that undertaking research in the NHS environment is cost neutral to NHS Trusts. This requires funding of infrastructure within NHS Trusts, both in terms of personnel and physical plant and equipment including the associated costs which are not currently met. Without this stream of funding, it is unlikely that a significant cultural change in the NHS will occur, allowing research to be enthusiastically supported by organisations whose other primary goal is delivering service. The isolated support of infrastructure, however, in the absence of programmatic activity has clearly failed. The original distributions of NHS R&D, largely to postgraduate institutions in London, has failed to deliver a research agenda that addresses the important translational activities that now need to be accelerated. The funding of infrastructure, even in the form of clinical trials networks, in the absence of significant programmatic activity, may not provide the best use of research funds. We believe, however, that the mechanisms for providing NHS support would do much to ensure that the NHS and the Department of Health feel real ownership of the new unified council for health research.

Response mode funding has been successfully delivered by the MRC for many decades and its structure, including its Council, its scientific boards and its peer review structure, has demonstrated an ability to select high quality research and support it across a number of fields of biomedical research. Strengthening and expanding the remit of the MRC to provide significant response mode support for translational and clinical research would seem a sensible way to approach this important remit of this new research council. Areas that have not received adequate support in recent years include experimental medicine, clinical trials and technology or device development. Much more attention needs to be paid to emerging medical technology, particularly in the ICT field and in the developmental tools for medical imaging and diagnostics. It might also prove to be beneficial to put greater focus on both target discovery and other new opportunities for therapeutic development that have arisen out of genetic insights into the molecular basis of Mendelian diseases in man over the past two decades. These relatively orphan diseases might prove tractable now that disease pathways have been clarified.

3. Structure

There are really three possible structures for a new health research council.

One structure would leave the MRC and the NHS R&D largely as they are, receiving separate funds from the DTI and the Department of Health respectively and hope that they talk and engage effectively in the future. This model would essentially see little or no change from the current circumstances and is probably not what Treasury was thinking of in their statement. It also provides little opportunity to establish better interactions between basic and clinical or translational science as undertaken within the NHS.

A second model would be to merge NHS R&D and the MRC into a single, entirely unified structure. This is potentially an attractive model but is probably the most risky of the options at present. A unified model has the risk of damaging the commitment and buy in to this process by the Department of Health and NHS management if it is seen to be too MRC oriented. Similarly, such a model which acquired the NHS R&D culture would ultimately profoundly disable the basic science base currently managed within the MRC. Although the risks of this model are, in our view, too significant to ignore at this stage, this unified structure may be possible to deliver over time.

The third model is a semi-conservative model which provides a significant change in current structure but would be relatively low risk. This structure would have a single Main Board with oversight of the two separate funding functions. The Main Board needs to be free of ministerial involvement and should include representatives from industry, charities, the universities, the two Directors of the Health Service and MRC funding structures below it, as well as two or three prominent members of the research community. The Main Board would be chaired by a full-time senior figure, such as David Cooksey, and would receive the resources from DTI and DoH. It would act as the single, unifying structure to ensure that the interactions with OSI and the other research councils work well, in addition to ensuring that the DoH feels that it has significant ownership in this process. The Main Board would allocate budgets against annual strategic funding plans to be submitted by the subsidiary funding functions and would also review plans against out-turn on an annual basis. Below the Main Board would sit two separate councils, one responsible for health service related infrastructure funding and commissioned research while the other would be responsible for response mode funding across all areas of biomedicine. The response mode funding body could have essentially the same structure as the current MRC but with an extended remit, and the body responsible for providing support for the NHS would undertake commissioned funding as well as identifying priorities for the NHS. Both funding structures would use the scientific community to set strategy. If the structure operates successfully, it would be envisaged that there would be a move towards the second model of an integrated body within a period of five years or so.

Any chosen model would require that serious attention be paid to the details of governance if it is to be successful. In our view, the safest starting point for a process that will help to build the translational research base in the UK and also to further develop the basic sciences in biomedicine is the semi-conservative model (the third model suggested).

Conclusion

There are significant opportunities for the UK in developing a new structure to take forward the biomedical research health agenda. There are serious issues of governance that need to be considered as these will be ultimately crucial to the organisation. Cultural change in the NHS will be essential for this vision to succeed but, if this is built through a strong commitment from the DoH and a significant new resource, then it is clearly possible for the UK to achieve a dominant international position in research, both basic and clinical, in the biomedical area.