Response to the Cooksey Report

Thank you for the opportunity to comment on the Cooksey Review of UK Health Research. The following comments represent the University of Ulster's formal response to the Review. The University appreciates greatly the opportunity to contribute to the consultation on this important matter. In this respect, it is hoped that our response makes a useful contribution to the ongoing discussion regarding establishing a single fund for health research.

In the March 2006 Budget, the Chancellor of the Exchequer, Gordon Brown, announced a single, ring-fenced budget to support health research funded by the Medical Research Council and the NHS R&D Programme. It will amount to approximately £1 Billion. Sir David Cooksey has been asked by the Chancellor to undertake a review of how the fund could be established and managed. While the figure quoted was £1Billion, a simple calculation would show that combining the NHS R&D Funds and the MRC would lead to a fund of £1.3Billion. It is unclear as to where the £0.3B has gone.

It is also unclear as to whether other Research Councils that fund aspects of health research (e.g. BBSRC and ESRC) will also get that portion of their monies reallocated to this proposed single ring fenced fund. It is acknowledged that to do this would be extremely difficult and for the relatively small funds available it may not be worth the effort.

The terms of reference are laudable. It is crucial that the health researchers address issues of relevance to health nationally and internationally and that the UK's research funding priorities are in line with the Government's health objectives and the needs of the National Health Service. Nonetheless, it is also important that the day to day funding decisions are taken at 'arms length' from Government ministers.

It is a given that research funding should always be awarded on the basis of excellence and through rigorous and systematic peer review. Accepting this principle, funding should be accessible for all health research disciples. It should also be available for research across the full spectrum of health from basic to applied research and to a range of methodologies. The emphasis on translational health research and its relationship to economic benefits is welcome.

Sir David has sought comments on twelve questions:

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 major strength of the MRC is the focus on international research excellence. Nonetheless, as its title suggests it is mainly supportive of medical research rather than health research. Therefore, it is perceived by many health researchers as similar to an

exclusive club which is difficult to enter for many health care disciplines such as nurses, midwives, social workers, general practitioners and the allied health professions.

In contrast to the MRC, the NHS R&D Programmes, while also having quality as their watchword, have provided substantial funding for the full range of health and social care professionals. They have also encouraged capacity building in disciplines new to research by funding studentships, bursaries and fellowships. Furthermore, unlike the MRC, the research projects funded by NHS R&D Programmes tend to across the entire spectrum of health and social care research.

The MRC seldom funds translational research and the application of knowledge and technology gained through research to practice. While the NHS R&D Programmes do more of this it is still not sufficient to address the needs of the NHS.

The pharmaceutical industry and medical equipment industries fund their own research. Neither the MRC nor the NHS R&D Programmes do enough to meet the needs of industry.

An added complication is that much of the NHS R&D money is tied up in annual allocations to the health service and it is not clear how much is being used to support clinical services rather than research. In order to contribute to the proposed single fund, these funds would have to be extracted from the health service. This was done successfully in Northern Ireland but it is a difficult and time consuming 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?

A major challenge is how to encourage more grammar and secondary school students to study science subjects. This has and will continue to have an impact on the attraction of good students into science. Another issue is the salary and working conditions of many academic scientists across the UK. Better remuneration packages are offered overseas and this encourages a significant brain drain, which undermines health research. The UK Government must make science subjects attractive to students and careers in UK science attractive to high quality scientists.

The medical profession no longer represents the largest professional group in UK universities. This distinction now falls on nursing and the allied health professions. The same is true within the NHS. However, the funding provided to build research capacity among these disciplines has been miniscule in comparison to that channeled to medical researchers. Ironically, in most cases it is these groups that are closest to patients, families and communities. Therefore, one of the major challenges is how best to prepare these health professionals to undertake high quality clinical research. This can only be

achieved with an increase in funding to build research capacity and capability. As alluded to above, to date the MRC has not made much of a contribution to this goal.

Interestingly, the RCN Congress in April 2006 voted unanimously to lobby for a Nursing Research Council. This illustrates the disenchantment that nurses have with the existing research councils. It also reflects the fact that the establishment of the National Institute of Nursing Research in the USA has led to well funded research programmes that have had positive implications for patients, families and communities.

Sir David Cooksey asks that comments on his review should take cognizance of 'Best Research for Best Health'. This is the new health research strategy for England. There is a challenge of moving away from this anglophile approach to research policy and strategy and embracing a UK wide approach. Furthermore, the senior investigators and investigators in the National Institute of Health Research cannot be employed within universities and will favour medical research.

Other scientific challenges include harnessing the expected increase in information management and technology, telecare, the implications of the human genome project, managing risk while encouraging innovation, the ethical dilemmas associated with stem cell research and new, yet expensive and scarce technologies. These challenges can be addressed through the following:

- Utilise opportunities for multi professional research training recognising that some disciplines have a greater need than others;
- Develop technology in the context of the best research evidence of both clinical and cost effectiveness;
- Develop a clear and strong ethical framework within which the developments linked to the human genome can be furthered;
- Encourage innovation within a risk assessment framework.

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?

According to the World Health Organisation (1999), the 21st century offers a bright vision of better health and social care for all. It holds the prospect not merely of longer life, but superior quality of life, with less disability and disease. However, fundamental changes are taking place in health and social care and these are likely to increase as we move towards 2015. The drivers for these changes include new discoveries, new treatments and globalisation.

Specific challenges will be a continuing shortage of resources, greater demand for cure and palliation, emphasis on care closer to home, a better educated and assertive public, a greater incidence of diseases of old age, changing family structure and globalisation of

health care. International travel will lead to an increase in new diseases in some parts of the world and faster transmission of virus related illnesses.

The government's priorities for health research should take cognizance of these challenges and also fund more research into old age and chronic diseases from pathology through to the support, treatment and caring of these individuals.

The public fund the MRC and the NHS R&D Programmes and therefore more research should be undertaken into issues that affect the general population and that are of immediate importance to communities. Within the MRC the balance between basic, translational and applied research is weighted towards basic research. Therefore, this balance must be recalibrated; blue skies research takes many years for any results to percolate to the general population and many of the projects do not result in evidence that has a direct impact of patient care. In contrast, translational and applied research have rapid impacts on clinical knowledge and skill development. Obviously, blue skies research must be supported but their should be a better funding balance across basic, translational and applied continuum and the watchword should be quality.

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 judgments about this balance?

Internationally, the NHS is unique in terms of the provision of health services and many billions of pounds are required to keep it functioning. Because of its complexity there are a number of problems in terms of how best to manage and maintain the NHS in order that the population obtain the best possible health care. Many of these problems can be addressed through research projects and programmes in the form of translational science and applied science. As alluded to above in the MRC the balance is in favor of basic science while there is more of an equitable balance in the NHS R&D Programmes. The balance should be determined by government priorities. While basic research id required into diseases such as cancer there may be other priorities; for example during times of impending disease crises (e.g. Avian Flu, AIDS, CJD) more funding may need to be channeled into basic science. Similarly, during times of crises in the NHS (e.g. long waiting lists, increased trolley waits, staffing shortages) or demographic crises (e.g. chronic illness, elderly care) more funding may be channeled into translational and applied sciences.

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 are many examples within acute, community services where publicly funded research has underpinned improvements in the health of the population. These include research that drives the NICE and NIH guidelines. Other examples include research outcomes showing the effectiveness of behaviour therapy with acutely ill psychiatric patients, of folic acid in the prevention of spina bifida, of TENS in the control of chronic pain, of the importance of nurse practitioners and medical assistants in relation to NHS staffing policy.

The question posed above **- What lessons can usefully be learned to improve the uptake of advances in science and medicine?** illustrates once again the emphasis there is on funding research into advances in medicine. This ignores the largest group of health professionals who are undertaking research with limited funding from the NHS R&D Programmes and even less from the MRC.

Where research is focused on clinical patient centered problems, there are benefits in terms of decreased morbidity and mortality. Many of these patient centered problems do not lend themselves to RCTs or to medical research alone.

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 should be special multidisciplinary funding available to encourage these links. It seems obvious that basic research should lead to translational research and then onto applied research. Incentives should be put in place to encourage researchers to collaborate across these linkages. The same principle should be applied to promoting research collaborations between researchers in different fields of science. This will also be stimulated through research priorities and calls for research proposals that emphasise partnerships between different disciplines coming together to work on research programmes. For example, a research programme that focuses on rehabilitation of stroke patents can bring together engineers, computer scientists, physiotherapists, nurses and physicians.

Such collaborations could also be encouraged if a greater emphasis was placed on this by the Research Assessment Exercise or the metric system that may replace the RAE post 2008.

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

Entrepreneurship should be a core element in the curriculum of all health and social care courses. Similarly, universities and the NHS should include innovation and knowledge transfer as criteria for promotion and advancement. KTP schemes that have proved so successful in industry should have a greater emphasis on health care.

It was stated previously that the MRC and the NHS R&D Departments tend to focus their funding on the generation of new knowledge rather than the application of this knowledge to practice through translation, entrepreneurship and innovation. The latter is often denigrated as evaluation research and audit. Ring fenced funds should be made available to support 'proof of concept' research, practice developments and research into technology and knowledge transfer.

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?

This will not happen by continuing with the *status quo*. Rather, there must be a strategic decision to fund the infrastructure to underpin basic, translational and applied research. Funding streams should be available to train health researchers in the most appropriate and robust methodologies for undertaking translational and applied research. Alongside this there should be ring fenced funds to support such research. There is the need to ensure that the boards of the research funding agencies are composed of peer reviewers and experts from different disciplines and from different methodological backgrounds.

NICE produces excellent evidence based guidelines. However, such guidelines are not self executive and therefore research into the application of these into practice and an evaluation of their effectiveness and efficiency is required. The view that translational research is indicative of weak or soft science has to be challenged if it is to be utilized to improve the quality of patient care.

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?

There are lessons to be learned from the USA and Canada. In the former the NIH has a number of research institutes that focus attention on the Government's research priorities. The English NIHR reflects this model but is unduly complicated. One of the drawbacks of the US NIH is that most of the Institutes (while US wide) have their base in Bethesda, Maryland. In contrast, the Canadian Institutes of Health Research (CIHR) are spread

across the country. This illustrates the value that the Canadian government places on geographic diversity as well as disciplinary and methodological diversity.

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.

The MRC and the NHS R&D Programmes should only be brought together if the philosophy of the new body embraces the broadest spectrum of health research, health researchers, and research methodologies. If the MRC's narrow perspective of research permeates the new body, then issues of relevance to the majority of patients, members of the public and most health professionals will not be addressed. The proposed single fund should be accountable to the public through their elected representatives. However, decisions on scientific merit should continue to be by independent peer review.

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?

This question is based on the assumption that the Clinical Research Networks are successful. More evaluation need to be undertaken with regard to their success. In addition, all the coordinating centers for the seven CRNs are in England are mostly medical and RCT focused. This does not give due regard to the devolved administrations or the importance of having plurality with regard to discipline or methodology.

The reliance on Connecting for Health NHS IT is not strong nor should it be. While this would have the potential to encourage research collaborations, IT systems become outdated easily and attract greater and greater costs as rapidly redundant systems are patched up, added to and updated. The NHS has a poor history of robustness within its IT systems and if predicated upon this link research could suffer if problems of IT interdigitation occurred.

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?

If the NHS R&D Programmes and the MRC merge to form a single ring fenced funding stream the new fund should be devolved not only in terms of processes but also with regard to infrastructure. In a recent issue of Research Fortnight (Mar 06) tables showed that the MRC mostly funded universities in England and the other three countries did less well *pro rata*. Furthermore, in those universities where nursing and allied health professionals were the healthcare majority, the MRC funding was low. Therefore, if the

new single fund merely became a bigger version of the MRC, research from the largest professional groups in the health service who have greatest contact with patients would decline.

However, accepting the limitations of the MRC, it is a UK wide funding body. In contrast, the NHS R&D programme is England only. This has implications for the devolved administrations. For instance, would Scottish, Welsh and Northern Ireland research funding streams be 'raided' and amalgamated into the proposed single fund? In Northern Ireland the Research and Development Office funds multidisciplinary research and a mix of basic and applied research. It also funds cross border research with the Irish Republic on issues of mutual strategic interest and utility. If these funds were re-allocated to the single funding stream, research of great importance to the population of the province may be threatened. However, if research funding streams in the three countries were not subsumed within a 'Cooksey fund' would researchers in these countries be excluded from applying for funding from this source?

In conclusion, if a single fund is inevitable, the University of Ulster favours a more evenly balanced allocation to basic, translational and applied science. Evidence from history would suggest that a larger NHS R&D Programme fund has more attractions in this regard than a larger MRC fund.