

**Royal National Orthopaedic Hospital NHS Trust
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Response to Cooksey Review of UK Health Research by Royal National Orthopaedic Hospital, Stanmore UK

The RNOH is grateful for the opportunity to outline its views regarding the Cooksey Review and to respond to several of the specific questions posed by the Cooksey Review Team.

The RNOH takes great pride in the clinical leadership it provides in specialist neuro-musculoskeletal medicine. Through close working with our academic partner, the Institute of Orthopaedics and Musculoskeletal Science at University College London, significant advances have been made developing the science and advances in clinical for a wide range of orthopaedic conditions ranging in age to include:

- new born babies with obstetric brachial plexus injury
- children with gait abnormalities associated with cerebral palsy
- teenagers with idiopathic scoliosis
- young adults who as a consequence of accidents have sustained severely disabling conditions such as spinal cord injury and brachial plexus injuries
- people of all ages diagnosed with rare bone cancers for whom new technologies have been developed to preserve affected limbs
- sports injuries
- metabolic bone disease that increases the risk of fractures and deformity
- treatment for delayed and non-union fractures
- in later years, degenerative conditions that profoundly affect quality of life such as back, neck and shoulder as well as the joints of the knees and hips

Safe pain-free mobility and function are central to sustaining quality of life, self-sufficiency and independence. For young people providing optimum physical function is vitally important to ensure their full participation in society. With a rapidly ageing population aspiring to work longer before retirement, musculoskeletal health is a key determinant in achieving this goal with concomitant impact on the national economy.

There is great promise for new treatments for “super-charged” priorities such as cancer, dementia and cardio-vascular disease. Very substantial NHS and MRC resources have been directed to tackling these conditions, many of which are relating to ageing. However the “priority approach” fails to take a holistic view of the patient or the financial implications for society in the long term.

We submit that as the clinical conditions associated with the “super-charged” priorities respond to the research resources being spent on them, the need for these patients (and others) to enjoy a fulfilling and active life should not then be limited by musculoskeletal degeneration, which may not be life-threatening, but will certainly be quality of life-limiting.

Although musculoskeletal medicine has traditionally been seen to be driven by new technologies and advances in surgical techniques, this is now an outdated perspective. Cell-based therapies including use of stem cells, cancer treatments based on the molecular genetics of rare bone tumour cells, tissue engineering and nano-technologies are all core areas of our research. RNOH plays a leading role in a wide international collaborative networks encompassing many disciplines in medicine, veterinary science, engineering and the physical sciences.

Despite the importance of these contributions academically, clinically and to the national economy, musculoskeletal science struggles to gain recognition when measured using the values of the RAE. This relatively small research community does not command the high impact factors of many medical disciplines. Although very strong in translational research, musculoskeletal science gains little recognitions from traditional academic measures of research quality for its contributions to clinical care and the development of successful new products.

The promise of the new NHS Research Strategy “Best research for Best Health” has been the potential to support and promote research excellence that is NHS and patient led with academia and NHS staff working in partnership to bring about improvements in patient treatments and care.

Our concerns about establishing a single “Health Research Council” are centred on the significant risks of “homogenisation” of what are currently important and distinct differences in the roles of NHS funded research (designed to impact clinical care), and MRC funded research (many would argue has a stronger basic research drive). Indeed the greatest fear is that the homogenisation effect of the merger would be to skew the net research agenda further in the direction of laboratory-based, basic research. This would further weaken the clinical research base of the UK, which has experienced considerable decline in the last decade due to the clinical target culture of DOH and in specialist trusts is further threatened by PBR. This in turn will further reduce the potential for basic researcher to translate their science into clinical and economic benefits.

We therefore urge the Cooksey Review, should they propose to merge these two health-related research bodies into one, to ensure that clinical and health systems research is demarcated clearly from laboratory based, more basic research. This demarcation should include separate, top-sliced allocation of funds, a process of peer review that encompasses excellence and a set of values that support research that delivers tangible benefits to patients and NHS staff. We do not believe there is a ubiquitous set of values that can be applied to determine research quality across the research spectrum and that in fact at least two distinct value systems are needed.

Response to questions posed by Cooksey Review Team

1 – Strengths & weaknesses of MRC/NHS R&D

MRC has an established centralised infrastructure and track record for dealing with large volume of applications and coordinating peer review. MRC research management does not have the capacity to nurture research tending to fund established excellence rather than “grow” new capacity. This is perfectly acceptable in the HEFC environment as academic institutions are expected to take on this role. NHS has a more dispersed infrastructure for funding research. This has the disadvantage this may lead to lack of uniformity of research quality across NHS institutions. However it has the advantage of providing a locally responsive and achieves a more grass-roots led approach to establishing research priorities. The NHS approach also has the capacity to nurture research-capacity, particularly among professionals allied to medicine and clinicians wishing to participate in research but who perhaps not wish to provide the academic lead.

NHS R&D has a long-standing focus on translating research outcomes into clinical practice – so getting values for money on research investments.

2 – challenges

It is vital that the new configuration can guarantee that it will obtain good quality research projects/outcomes across the whole spectrum - not allowing a focus on basic research only.

Unclear if new RAE will still encourage basic research at the expense of translational/clinical /applied research – if so we need to ensure that clinical research is still encouraged and valued if it is good quality against an NHS value-set.

Appropriate peer review of translational /applied research. Requires an analysis of whether the research will have an impact on the health service/society – and a need for an auditable delivery plan to show how the research will be put into practice.

3-priorities

It is vital that the government provides funding for medical research that generates value for the tax-payer. The super-charged research priorities represented by the UK Clinical Research Networks has neglected to prioritise orthopaedics and musculoskeletal disease. We strongly recommend, given the strong correlations between ageing, musculoskeletal disease and quality of life, that the government accepts the importance of recognising this field as a high priority for a society that is both ageing and expected to work longer.

4 – balance

Currently approx 50/50. Should stay same for next 5 years, to allow R&D strategy to be implemented

5 –Examples of publicly funded health research affecting treatment or policy

At RNOH we have numerous examples of technologies that we have developed in association with our academic partner that are the result of collaboration between engineers, scientists & clinicians.

Lesson learnt:

- Sometimes gaps between hard funding have to be filled with “flexible”/soft funding
- Need close collaboration (on-going) between relevant scientists/engineers and clinicians – and each need to recognize the input of the others (i.e. clinician will often come up with question, help develop/firm the answer and then make the answer something that can work in practice – translating it to routine practice and acting as an opinion leader to other clinicians.
- Funders and collaborating organisations need to decide whether they want access to the IP or if they want a solution put in practice

6 Experience of links

Person – to – person, rarely organisation to organization. Takes time to develop, need environment that supports collaboration (IP sharing, access to a variety of funding)

7 Encourage translation/innovation

Risk taking culture is important to promote real innovation. This is difficult for some organisations. Translation takes time and commitment (often from clinicians) to make research findings work in practice.

Suggest include “translators” with very clinical role – highly networked in clinical organisations and with other clinicians – these will provide pathway to change service delivery – need to be involved in project all the way through.

8 Use of funds

The NHS R&D strategy has a variety of levels of funding from applied research to Service Delivery research as well as funding innovation. NHS R&D also support significant research infrastructure in the NHS trusts and used extensively by university-based academics. Future funding will need to ensure full coverage of these costs. It will be necessary to ensure that these elements are covered by the new research strategy (especially ring-fenced funding for research-active staff working in the NHS delivering clinical research close to the patient). These staff are very vulnerable under the PBR system.

9 Lessons from other countries

Need to demarcate funding between disciplines and between basic and clinical research as with National Institutes of Health in USA.

As in USA “Model Systems” research centres should be funded for specialist clinical research that can then be translated through a hub and spoke model to other clinical centers (examples exist for spinal injury, head injury). These “model systems” centres should be funded at centres of clinical excellence rather than automatically at centres of academic excellence, although often (but not always) they go hand-in-hand.

10 Merging MRC and DH/NHS funding

Need to be brought together, but not merged as they have different remits (MRC – basic/experimental medicine; DH/NIHR – experimental/applied/translational & implementation/dissemination - research into practice)

11 Reliance on Connecting for Health

Seamless IT will allow GP's to discuss treatments and clinical trial options with patients, so giving patients more "choice" and ensuring recruitment – (a primary. Secondary & tertiary care centers). If IT isn't there, a GP-based approach to recruitment of patients to trials will still be effective, but will require more manpower.

12 Devolution

Devolved administrations will/have developed different priorities for health research that are more locally responsive. Need for good information exchange, to reduce duplication.

Yours sincerely

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