Joint funding bodies' review of research assessment

Response from the Department of Health to the public consultation launched in September 2002

We welcome the opportunity to contribute to this consultation. The need for an assessment system that rewards science of the highest quality is beyond question and we endorse calls for greater discrimination at the top end of the quality spectrum. As well as encouraging cutting-edge basic science it is crucial that the value of applied research receives full recognition, and we are concerned that health related research has been disadvantaged under past arrangements for research assessment. It is also vital that future assessment systems allow capacity to develop in areas of strategic national importance including nursing and public health. Our comments are detailed below and take into account views received from the other UK health administrations.

Excellence in research

At the core of the Research Assessment Exercise (RAE) rating scale has been the belief that high research quality equates to international excellence. This may hold good for cutting edge basic science, but may not be appropriate for applied research or research that aims to be relevant to the situation in one particular country (the UK). There is also an urgent need for clarity about the definition of 'international excellence'. We consider that this should be understood to refer to research of internationally competitive *quality* rather than implying international *generalisability*.

Value of health related research

The 2001 RAE made some progress in addressing concerns that had been expressed previously about the handling of health-related research in the 1996 RAE. Greater recognition was given to the value to Health Departments and the NHS of systematic reviews, meta-analysis and other methodologies important in this field, and assessment by the relevant RAE Units confirmed that the overall quality of UK health-related research had increased significantly since the previous RAE.

However, limitations in the philosophy underlying Research Assessment remain and the impact has been to undervalue and discourage university participation in the national effort to translate research into better health and social care for the population.

Primary research

To substantiate the above statements it is necessary to consider first the *structure* of successful primary research in the field:

(i) It is almost always multidisciplinary;
(ii) It is almost always multi-institutional;

(iii) It is usually collaborative across research and service personnel.

The reasons are that projects often have to recruit sizeable numbers of patients in a particular diagnostic category, requiring participation of several or many service providers (e.g. hospitals or general practices), and have to call on a wide range of skills to deliver a comprehensive result (e.g. typically several clinical disciplines, medical statistics, health economics). The contributors to a single project may be university or NHS or research council employees, often with honorary contracts (either NHS or academic) in addition to their substantive contract. The RAE has taken a narrow view of the research contribution of individuals, which are then aggregated to the level of a single institution but no further. The result has been a disincentive to the development of those multidisciplinary and multi-site networks that are best fitted to tackle really substantial problems in health care.

The *content* of applied health research may also be judged harshly by the criterion of "pure intellectual quality" (para.6, consultation document) since it commonly represents an incremental application of more basic research to health care. It may therefore appear somewhat derivative and lacking in new insights. Nonetheless, it represents an essential step in realising the value of the 'upstream' research investment upon which it draws. Conducting valid, ethical and informative research in sick human subjects poses intellectual challenges that are not encountered in the laboratory. It is essential that research assessment should be able to give credit for "value added to professional practice, applicability, and impact within and beyond the research community" (para.6), for example in the fields of public health, healthcare in acute and community settings, and in social care.

The NHS, by virtue of its size and concentration of services, offers the UK a leading international research position. Experience has shown that the UK can successfully undertake research at the cutting edge of technology that no other country has the infrastructure to support. An example is extra-corporeal membrane oxygenation (ECMO), a technique of respiratory support in intensive care. A landmark study in neonates funded by the Department of Health has influenced practice worldwide; a second study in adults is in progress.

Secondary research

The randomised controlled trial (RCT) is the clinical paradigm of the laboratory experiment. Following its innovation by the UK Medical Research Council in 1948 it has been hugely influential as a research tool to assess the efficacy of all interventions in health care. The literature now contains well in excess of half a million published trials.

Much decision-making in health care, and in the commissioning of new research, requires a valid synthesis of the research that has already been done on the topic. This requires the technique of systematic review, which uses explicit search and inclusion criteria to ensure that the evidence synthesis is so far as possible protected from bias. The statistical technique of meta-analysis may be used where appropriate to combine validly quantitative data from a number of separate trials. The UK has been a leading contributor world-wide to the methodology of research synthesis (e.g. the NHS Centre for Reviews and Dissemination at the University of York; the Cochrane Collaboration, initially in Oxford and now in over 50 centres internationally). The UK also leads in applying systematic reviews to decision-

making at the levels of national policy (e.g. by the National Institute for Clinical Excellence and the National Screening Committee), of regional/local health service commissioning and of individual patient care.

Systematic review is of particular relevance to healthcare because the published research base is so rich that decision-makers are faced with a "knowledge problem", and therefore systematic reviews are now an essential component of decision-making within healthcare. Systematic reviews and meta-analysis constitute "research" in that they create generalisable new knowledge from the valid synthesis of data from multiple primary studies. However, the research assessment may under-value them on the criterion of "pure intellectual quality" (though each is challenging to do validly), but they should be given recognition for their "value added to professional practice, applicability, and impact within and beyond the research community". Failure to give systematic reviews and meta-analysis that recognition is seriously undermining the willingness of universities to host such research, which in turn is threatening the availability of scientific expertise to support decision-making in healthcare.

Approaches to assessment

In general, we consider that the 2001 RAE Units of Assessment (UoAs) functioned well and we would not wish expert review to be excluded from any future system of assessment. However, future arrangements for assessment must ensure consistency not only between UoAs (or whatever succeeds them), but also between expert assessors within Units. Decision-making must rest on calibrated judgements and thresholds must be consistent. To increase objectivity, some of the metrics listed in the consultation document (under *Group 2: Algorithm*) could be used in conjunction with expert review.

Frequency of assessment

The burden of work and both the direct and opportunity costs of preparing a submission for assessment are considerable. This argues for fewer major assessments. There may also be merit in avoiding the strong cyclical patterning of research activity that has occurred in recent years under the RAE. Do all subjects have to be reviewed at the same time? The RAE has had a potentially dramatic effect on income every five years. It might be easier for institutions to have income fluctuating more frequently, but between more modest ranges.

Research assessment and medical schools

While it is accepted that the RAE has improved the performance of science as a whole in the UK it is not at all clear whether it has benefited clinical medicine and indeed may have harmed it. Medical schools are obliged to educate and train their students broadly. In order to do this they must teach a wide range of specialities.

One change that might be beneficial would be to reduce the expectation that 100% of academic staff in medical schools should ideally be 'research active' to an international level. This has clearly been the expectation under the RAE, as maximum funding would come to a unit with a 5-star rating and over 95% of its staff returned. If maximum funding was given for a return at a lesser level, for example 80%, this would allow medical schools to take strategic decisions on what research they would undertake and who would undertake the

research, and would take the pressure off those who undertake the many other vital roles in academic medicine.

We would also want future systems of research assessment to give equal weight to the contributions of all university-employed staff, irrespective of whether they are funded from HEFCE allocations or by the NHS.

Nursing and Allied Health Professions

We have had mounting concerns that less well established disciplines such as nursing research or Allied Health Professions' (AHPs) work have been disadvantaged in a process where the quality standards have risen faster than such new subjects could be expected to keep up. This is discouraging at the personal level and financially damaging at the institutional one. This becomes even more pronounced since such new topics are frequently based in newer universities with only limited research resources.

The report of the joint HEFCE/DH task force on research in nursing and AHPs (November 2001) highlighted the underfunding in this field. In response to the report's recommendations, the Department is now funding researcher development and postdoctoral awards in nursing and AHPs. It is vital that future arrangements for research assessment make provision for the funding councils and universities to support the development of research capacity in emerging areas of strategic national importance including nursing and AHPs through, for example, a development fund. This also applies to other areas within the more established field of health services research.

Implications for pre-registration education for professional groups

The Department would be concerned if any developments in research assessment deterred higher education institutions from seeking contracts for pre-registration education for professional groups in which research capacity is currently under-developed, and therefore high scores may not be achieved in assessment exercises.

Health Sciences as an entity

We see some merit in assessing all the UoAs related to clinical sciences together and aggregating the units to a greater or lesser extent. This could allow some of the special considerations pertaining to these subjects to be taken into account. In particular, there would be a need to nurture research capacity in certain disciplines critical to effective applied research (statistics, health economics) and promote emerging research capacity in other areas (nursing, AHPs).