

Wellcome Trust response to HEFCE 2nd consultation on the assessment and funding of research (December 2009)

Consultation questions

(Boxes for responses can be expanded to the desired length.)

Consultation question 1: Do you agree with the proposed key features of the REF? If not, explain why

The Wellcome Trust strongly supports the continuation of the dual support system for university research, which recognises that HEFCE and research council funding are provided for different purposes and require different allocation mechanisms. We welcome the consultative approach HEFCE has taken to the development of the REF and the opportunity to comment on the current proposal.

A robust and proportionate research assessment process that rewards excellence and inspires confidence within the sector is essential to maintaining the strength and diversity of the UK research base. While the Trust agrees that excellence, impact and the quality of the research environment are the three elements that should be assessed, we do not agree with the proposed approach to measuring impact. There are three main reasons for this:

- Because impact is unpredictable and relies on a wide range of factors outside the control of researchers, we do not consider it to be a reliable measure at the discipline level.
- We are not convinced that a simple, robust approach to impact measurement that is equally applicable to all disciplines can be found, although we commend HEFCE for being up front about the challenges and for its attempts to address these through the pilot exercises.
- We are concerned that impact assessment will impose a significant additional burden on institutions, which is out of proportion to any benefits that are likely to result.

The limitations of attempting to measure impact at the discipline level are significant and have the potential to create perverse and undesirable incentives in the system. There is a significant risk in continuing in the direction set out in the consultation document.

The Trust's view is that both impact and research environment are more appropriately assessed at the level of the institution. We recommend that HEFCE consider adopting a two-stage research assessment approach, incorporating:

1. A simplified discipline-based assessment focused on reviewing the excellence of research and the strength of the discipline in an international context. This should draw on expert review and a range of metrics, including citations and external research income. Appropriate metrics may vary by discipline.
2. An institution-level assessment focused on assessing research environment and research impact. This assessment should consider a range of broader quality indicators such as

commitment to a long-term research strategy; infrastructure investment; support for career development; external collaboration activities; public engagement; support for data sharing; recent research impacts and activities to secure ongoing impact. The assessment could be carried out through a site visit, with areas of focus informed by the results of the excellence assessment.

Irrespective of the approach to research assessment, we consider that confidence will be enhanced if there is full transparency in how funding allocations are made following the assessment process. Such transparency may assist in providing a greater level of comfort to the research community that fundamental research will not be disadvantaged as a result of the additional focus on research impact.

While noting that the Trust has significant reservations about the REF proposal and our preference is for a substantially amended approach, we have also sought to respond to the specific questions that follow. Many of these require an assumption that the proposed approach will go ahead.

Consultation question 2: What comments do you have on the proposed approach to assessing outputs? If you disagree with any of these proposals please explain why.

Comments are especially welcomed on the following proposals:

- that institutions should select research staff and outputs to be assessed
- for the categories of staff eligible for selection, and how they are defined
- for encouraging institutions to submit – and for assessing – all types of high-quality research outputs including applied and translational research
- for the use of citation information to inform the review of outputs in appropriate UOAs (including the range of appropriate UOAs, the type of citation information that should be provided to panels as outlined in Annex C, and the flexibility panels should have in using the information)

and on the following options:

- whether there should be a maximum of three or four outputs submitted per researcher
- whether certain types of output should be ‘double weighted’ and if so, how these could be defined.

Although there are sound reasons for the REF to assess selected staff chosen by institutions (as opposed to all staff at an institution), this can make it difficult to draw meaningful comparisons between institutions. We consider that HEFCE could usefully provide guidance to institutions on the types of staff that should be included.

The Trust is supportive of the proposals for the use of citation information, which seem both flexible and pragmatic. Although bibliometric data will play a smaller role than envisaged in earlier consultations, we are comfortable that HEFCE has adopted a best practice approach which will mean that good quality citation data should still play a part in assessments where it is appropriate to the subject.

The types of output that justify double-weighting will vary considerably by discipline, and it may be difficult to define universal rules. We suggest a similar approach to that proposed for citations, with assessment panels given flexibility to develop their own processes and HEFCE providing guidance to ensure consistency and robustness. As for citation data, panels should specify their approach to double-weighting as part of their criteria, to guide the submission process.

Consultation question 3: What comments do you have on the proposed approach to assessing impact? If you disagree with any of these proposals please explain why.

Comments are especially welcomed on the following:

- how we propose to address the key challenges of time lags and attribution
- the type of evidence to be submitted, in the form of case studies and an impact statement supported by indicators (including comments on the initial template for case studies and menu of indicators at Annex D)
- the criteria for assessing impact and the definition of levels for the impact sub-profile
- the role of research users in assessing impact.

As discussed above, the Wellcome Trust has significant reservations about the proposed approach to measuring research impact. This is notwithstanding our mission to support research that will improve human and animal health, and our belief in the importance of rewarding high quality applied and translational research within the research assessment process. If research impact is to be assessed as part of the REF this should occur at a level of granularity which will enable meaningful comparisons to be made – in the Trust’s view the appropriate level is the institution, rather than the discipline.

While research funders commonly use track record to estimate future research performance, a wider range of factors are involved in determining research impact, many of them outside researchers’ control. For this reason, past impact is not a reliable predictor of future impact and investment in a broad base of fundamental, underpinning research must be maintained. It is crucial that areas of research where societal impact is more difficult to achieve, demonstrate or measure are not disadvantaged. Although the consultation document makes it clear that the emphasis on impact is not intended to disadvantage fundamental research, it is difficult to see how this will be avoided under a one-size-fits-all approach.

We note that different definitions of impact exist within different disciplines, and in more fundamental disciplines measures such as journal citations are traditionally considered evidence of ‘high impact’ research. If the REF ‘impact’ measure is intended to encompass broader societal impacts only, renaming it ‘economic and social impact’ or ‘societal impact’ may help avoid confusion or creating an impression that scientific impact is somehow less valuable.

Using a mix of qualitative case studies and impact statements supported by more quantitative indicators seems appropriate given the complexity of measuring impact, although we note the potential to impose an additional burden on institutions. Where practical HEFCE should seek to align the format of the information it requests with that requested by other funders, in particular

the research councils. As discussed above, the Trust's overall view is that assessing impact at the discipline level adds little value and we would prefer to see a streamlined institution-level process.

The draft definition of levels for the impact sub-profiles indicates that impacts must be both ground-breaking *and* relevant to a range of situations in order to qualify for the higher impact scores. As some types of research are more likely than others to create impacts 'relevant to a range of situations', we consider that this should be an *and/or* clause. Under the current criteria it is difficult to see how research that has a transformative impact in a specific area – eg a ground-breaking new treatment for a rare disease - would score. As truly ground-breaking impacts are very rare, assessing impact at the level of the institution rather than the discipline is likely to lead to more meaningful results.

We note that various types of external research income, including income from the NHS and medical research charities, have been included on the draft list of impact indicators. We question their inclusion. While in some areas external income may be a reasonable proxy for user relevance, it is equally likely to be a reflection of research quality. For biomedical research our preference is for external research income to be considered as an excellence measure alongside the quality of research outputs.

The Trust's view is that the challenges associated with time lags and attribution will be very difficult to address, and are a key reason why we do not support the impact proposal as it stands. They are particularly challenging issues for biomedical research, where the time frame to commercial uptake of medical products and technologies is typically very long. The independent report *Medical Research: What's it worth?*, part-funded by the Wellcome Trust, found an average time lag of 17 years between research and impact. This suggests that for medical research it may be inappropriate to limit eligibility to research undertaken 10-15 years ago, as suggested in the consultation document. Further, many impacts are incremental, and can arise as the result of a body of research rather than a particular project (for example, an individual being asked to give advice to government on the basis of his/her expertise). It is difficult to see how the rules around attribution of impact will cater for these types of situations.

The document suggests that research units will not be able to claim credit for the impact of research exploited or applied through the efforts of others. While it is appropriate for the REF to acknowledge and value application and dissemination activities, it should not create an expectation that researchers must be personally involved in the subsequent exploitation of their work. There are two reasons for this:

- As discussed above, many impacts occur incrementally over time. Research teams are less likely to be involved in subsequent applications of their work, such as uptake of a treatment piloted in a single hospital into multiple hospitals, or international licensing of a technology. As this is where the most significant or far-reaching impacts often occur, it would be perverse if they were ineligible for consideration within the REF.
- In many cases the most efficient route to research impact will be to transfer the relevant intellectual property or technology to the private sector. For example, the development of a new pharmaceutical product will typically involve an initial research phase, followed by a long process of development, which is usually led by the private sector due to the significant capital requirements and need for market knowledge. There is a risk that by requiring a direct link between research and impact, the REF may create undesirable incentives for

institutions to hold on to IP, or promote the formation of spin-out companies ahead of collaborations with existing firms. Such behaviours may restrict the delivery of economic and social impact.

If HEFCE is committed to proceeding with impact assessment in spite of the very significant challenges that exist, the Wellcome Trust has the following suggestions:

- Overall weighting for impact: HEFCE should consider applying a lower weighting to impact for the first REF exercise (i.e. significantly less than 25%) to enable refinement of the methodology and minimise any adverse effects. This proportion could increase in future exercises if the approach is shown to be sound.
- Approach to disciplinary variation: The pilot studies will clearly be very important in identifying any limitations that exist with regard to measuring impact within particular disciplines. In the event that significant limitations are found there may be a need to consider variable impact weightings for different units of assessment, although we acknowledge that this may have trade-offs in terms of transparency.
- Approach to time lags: rather than imposing specific time limits, we recommend that HEFCE adopt a more flexible approach that recognises the range of time frames and pathways to impact that occur in different disciplines. The key test should be the presence of a clear link between the previous research that led to the impact and the current work of the submitted unit (e.g. via continuity of people or research programmes).
- Attribution of impacts to research activity: we again suggest a flexible approach based on guidelines rather than strict rules. There should be no requirement to link impacts to particular research outputs and the rules must be sufficiently flexible to recognise incremental impacts and impacts that arise as a result of a body of research.

We also suggest that the impact criteria and indicators be revised to clarify two important matters, which are implicit in the proposal but potentially subject to misinterpretation.

- the importance of international as well as UK impact – we suggest that contributions to building research capacity should be considered as part of international impact.
- HEFCE's willingness to consider demonstrable efforts to have impact, for example through participation on advisory groups, in addition to tangible evidence of impact.

We refer HEFCE to the separate submission from the UK Collaborative for Development Sciences, which highlights these issues.

Consultation question 4: Do you have any comments on the proposed approach to assessing research environment?

The Wellcome Trust supports consideration of research environment as part of the REF. We suggest that many indicators of a healthy research environment, such as the presence of a clear long-term research strategy, and support for infrastructure investment, occur at the level of the institution rather than the individual unit of assessment and it is at this level that research environment should be assessed. Considering institutional research strategies as part of the research environment assessment would help to avoid perverse drivers seen with previous research assessment exercises, such as a focus on increasing short-term research volume rather than investing in research infrastructure and long-term sustainability. Grant income from research councils and other funders, such as medical research charities, should be considered as part of a separate research excellence assessment, at the discipline level. For the biomedical

sciences external research income provides the best proxy indicator of research excellence, as a result of the intensity of peer review that is associated with making funding decisions.

We agree with the proposal to develop a standard template, which will enhance transparency and reduce the burden on institutions. This burden could be further reduced if research environment was assessed via a site visit approach. We suggest that the template, and associated assessment criteria, need to provide clear definitions and guidance on terms such as 'public engagement' and 'research collaboration'. It is important that the quality and effectiveness of public engagement is considered in addition to the amount of activity.

We particularly welcome the inclusion of staff development and support for early career researchers as one of the aspects being considered as part of research environment. It would be useful to link this more specifically to institutions' efforts to implement the principles of the Concordat to support the career development of researchers.

HEFCE should also consider including support for data sharing as part of the research environment assessment. Sharing the outputs of publicly funded research will help ensure that these can be fully utilised by the international research community, and that as a result the public benefit of research is maximised. One of the key challenges of data sharing is how to change the culture and provide incentives to encourage people to create and share resources. The REF could assist with providing such incentives.

Consultation question 5: Do you agree with our proposals for combining and weighting the output, impact and environment sub-profiles? If not please propose an alternative and explain why this is preferable.

We agree that the REF should avoid a trade-off between excellent research activity and impact. We consider that the best way to avoid this trade-off is to assess research excellence separately from research impact and research environment. Research excellence should be assessed at the unit of assessment level, while research impact and environment should be assessed at the institution level.

Given that impact is proposed to make up 25% of the total weighting, it will be important to demonstrate that it can be assessed in a robust, transparent and objective way. Given the uncertainties that exist, the Trust would prefer to see impact given a lower weighting in the first REF exercise (i.e. significantly lower than 25%), which can be increased in subsequent exercises if the methodology is shown to be robust. This would be a responsible approach that would minimise any unforeseen negative impacts or behaviours that may result.

Consultation question 6: What comments do you have on the panel configuration proposed at Annex E? Where suggesting alternative options for specific UOAs, please provide the reasons for this.

We are comfortable with the proposed approach to panel configuration. The smaller number of panels should lead to more consistent outcomes across panels, less opportunity for game-playing by institutions, and easier assessment of inter-disciplinary research.

There may be some challenges associated with large, heterogeneous units of assessment that combine basic and applied sub-disciplines - public health, health services and primary care is a possible example, as is engineering. Different sub-disciplines may have very different profiles for outputs and impact and care will need to be taken to identify and respond to any systematic bias.

Consultation question 7: Do you agree with the proposed approach to ensuring consistency between panels?

Achieving consistency across panels is important and we generally agree with the approach proposed. Depending on the outcome of the impact pilot exercises there may be a need to accommodate some diversity in the approach to assessment of impact across panels.

Consultation question 8: Do you have any suggested additions or amendments to the list of nominating bodies? (If suggesting additional bodies, please provide their names and addresses and indicate how they are qualified to make nominations.)

We are pleased to see a number of medical research charities on the list and have no further suggestions.

Consultation question 9: Do you agree that our proposed approach will ensure that interdisciplinary research is assessed on an equal footing with other types of research? Are there further measures we should consider to ensure that this is the case and that our approach is well understood?

Assessing interdisciplinary research as part of a disciplinary process is always challenging. We are comfortable that HEFCE is taking all practical efforts to promote interdisciplinary research within the constraints of the REF approach. However, we consider that the approach favoured by the Wellcome Trust would be more likely to promote inter-disciplinary research as both research impact and environment would be assessed at the level of the institution rather than the individual discipline.

Consultation question 10: Do you agree that our proposals for encouraging and supporting researcher mobility will have a positive effect; and are there other measures that should be taken within the REF to this end?

The Wellcome Trust broadly agrees with the proposals, although we consider that an institution-level approach to assessing research environment would provide stronger incentives for institutions to develop a strategic approach to supporting researcher mobility.

We note that while delivering highly skilled people is proposed as a measure of impact, the draft indicators refer only to the movement of staff between academia and industry. We suggest that

this should be broadened to acknowledge the benefits of movement of researchers between HE and the public and voluntary sectors, as stated in paragraph 109 of the consultation document.

Consultation question 11: Are there any further ways in which we could improve the measures to promote equalities and diversity?

The proposals in this area appear sensible and we have no further suggestions.

Consultation question 12: Do you have any comments about the proposed timetable?

No, although with regard to the census dates and the proposal to consider only research impacts that 'become evident' in the period 2008 to 2012, we suggest the definition will need to be clarified to make allowance for incremental impacts that may have commenced prior to 2008.

Consultation question 13: Are there any further areas in which we could reduce burden, without compromising the robustness of the process?

Insofar as HEFCE is requesting similar information from institutions to that collected by other funders, it should explore opportunities to align the format of information requested.

Consultation question 14: Do you have any other comments on the proposals?

No. We look forward to seeing the outcome of the consultation.