

# Evaluating grant peer review

## Key findings of a literature review of grant peer review in the health sciences

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### Abstract

Public funding for medical research in the UK is allocated almost entirely according to peer review. However, both the effectiveness and efficiency of this process have been questioned, and research to address the criticisms has produced contradictory results. Without sufficient evidence for the best way to improve the system of peer review, its use in awarding grants should be balanced with a range of other fund allocation methods.

**Key Finding 1: Grant peer review is the primary funding allocating system in health research but has experienced continuous criticism.** More than 95% of the £2 billion of public funding for medical research each year in the UK is allocated by peer review. In its most basic form, peer review involves academic reviewers deciding which funding applications are rewarded with financial support. Long viewed as a respected process of quality assurance for research, grant peer review has lately been criticised by a growing number of people within and without the scientific community.

**Key Finding 2: Both the effectiveness and efficiency of grant peer review have been put into question.** Regarding efficiency, critics point to the high bureaucratic burden of grant peer review on individuals, the cost of the system as well as the, often, low proportion of work funded. Others also question whether peer review is an effective system for award-

ing grants and the extent to which it funds the ‘best’ science and supports innovative, interdisciplinary or applied research, as well as early career researchers. Other weaknesses include reliability, fairness, accountability, timeliness and the confidence of key stakeholders.

**Key Finding 3: Research addressing those criticisms is limited and has produced contradictory findings.** Robustly evaluating the strengths and weaknesses of peer review in the health sciences is difficult and very few studies have provided empirical grounds either for its censure or continued support. As a result, there remain large areas in which the evidence base is arguably as poor as it was over ten years ago, highlighting an urgent need for achieving a better understanding of peer review.

**Key Finding 4: Initiatives aiming at improving grant peer review have generated a range of outcomes.** Options for improving the efficiency of grant peer review included moderating demand, streamlining assessment procedures and consolidating grant awards. In terms of effectiveness, measures sought to increase its capacity to support applied and innovative research. However, there is a general lack of evidence to assess whether these changes contributed extensively to improving peer review.

**Key Finding 5: The recurring criticisms aimed at peer review, as well as its inherent limitations, highlight the need for a spectrum of funding allocation systems.**

Grant peer review presents important limitations and there may be better ways of allocating research funding if the aim is to fund highly innovative work, to support early-career researchers, or interdisciplinary research. The complex range of requirements from a research funding system – whether driven by policymakers, the public, or researchers themselves – may only be adequately served by a mixed approach. Furthermore a range of allocation systems would allow for the evaluation of their effectiveness. ■



**Don't put all your eggs in one basket: A mixed system of allocating funds may be better for meeting a range of different aims**

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RAND Europe  
Westbrook Centre  
Milton Road  
Cambridge CB4 1YG  
United Kingdom  
TEL +44 (0)1223 353 329  
FAX +44 (0)1223 358 845

Rue de la Loi 82  
1040 Brussels  
Belgium  
TEL +32 (0) 2 669 2400

Steven Wooding  
wooding@rand.org

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This Project Resource note summarises the RAND report TR742:

Ismail, S., Farrands, A. & Wooding, S., *Evaluating Grant Peer Review in the Health Sciences: A review of the literature*, RAND Europe (TR-742-DH), 2009.  
[www.rand.org/pubs/technical\\_reports/TR742.html](http://www.rand.org/pubs/technical_reports/TR742.html)

Associated resources are available on the PRiSM website at:

[www.science-of-science.org/projects/targeted-literature-review-into-peer-review-in-grant-making-process](http://www.science-of-science.org/projects/targeted-literature-review-into-peer-review-in-grant-making-process)

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