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Redefining the paradigm: incentivizing the peer review process for scientific advancement

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Navigating the complex world of peer review is becoming problematic for journals and academics around the globe. The search for reviewers who are willing and able to evaluate scholarly manuscripts is turning into a challenge of significant proportions. This difficulty arises not simply because the peer review process is time-consuming but because it often goes unrewarded and unrecognized despite the critical deadlines that reviewers are expected to meet.

A comprehensive survey involving 890 reviewers from five leading biomedical journals [1] sheds light on the underlying factors contributing to this predicament. The findings reveal that most reviewers cite conflicting workload demands (76%) and the pressure of tight deadlines (30%) as their primary reasons for declining review invitations. Conversely, the decision to accept a review request is often motivated by the manuscript's relevance to the reviewer's own research interests (51%) and the opportunity to contribute to the advancement of their field (60%). The average acceptance rate for review invitations is approximately 69% [2, 3]. Notably, Intensive Care Medicine (ICM) boasts a higher acceptance rate, of about 75.1% in 2023, underscoring the journal's success in engaging a broad and committed reviewer base, part of the community of intensive care doctors (electronic supplementary material, ESM, Table 1).

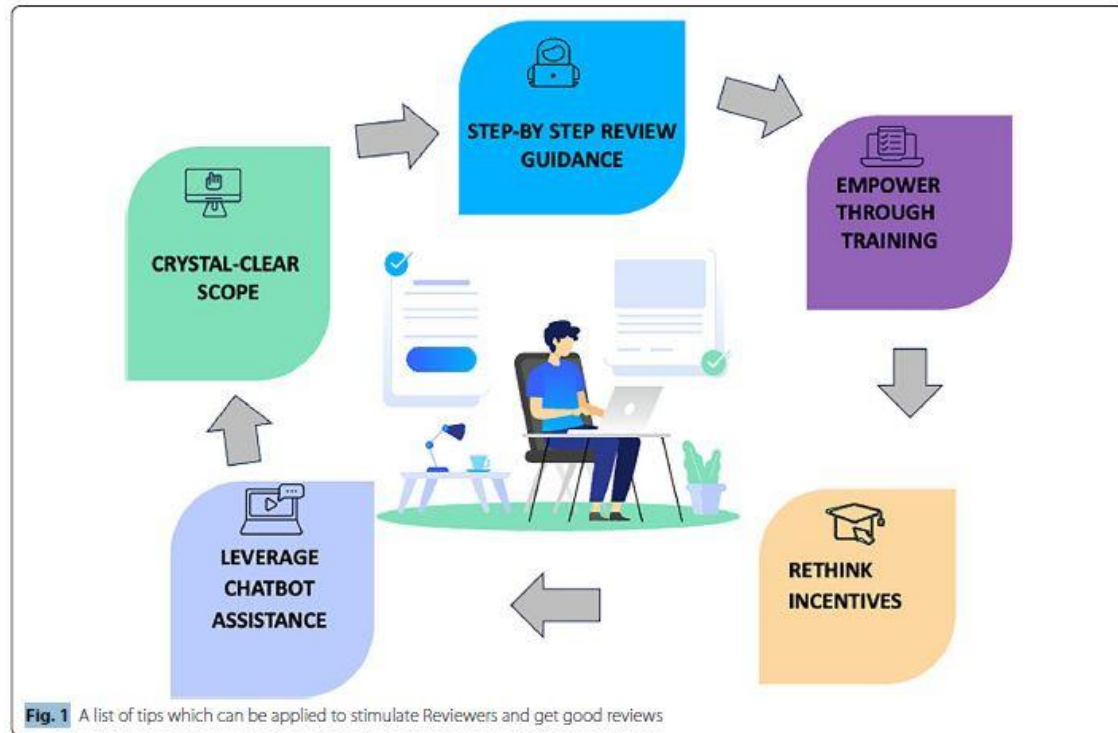
In general, the trend of declining review invitations has evolved from a rare occurrence to a commonplace phenomenon.

Reviewers stand at a crossroads. They are torn between their commitment to contribute to the collective knowledge of their field and the allure of personal academic pursuits that promise greater professional advancement. In this light, peer review is increasingly perceived as a distraction, a detour from the path to recognition and career progression. This shift in perception has led to a gradual decline in enthusiasm for participating in the peer review process, as the potential rewards seem to pale compared to the effort and time invested.

The consequence of this evolving landscape is a looming threat over the future of scholarly publishing. If this trend continues, the academic community may face a critical shortage of qualified individuals willing to undertake the vital peer review task. This scenario poses a direct challenge to the quality and integrity of academic discourse, potentially compromising the advancement of knowledge across disciplines.

In response to these challenges, some journals have begun experimenting with innovative strategies to incentivize the peer review process. For instance, over the past 5 years, ICM has successfully enhanced reviewer participation by offering Continuing Medical Education (CME) credits for completed reviews. This initiative represents a promising shift towards recognizing and rewarding the critical contributions of reviewers, framing their involvement as an opportunity for professional development and continuous learning.

Further investigation into the motivations of reviewers reveals a complex landscape of potential incentives. Beyond the tangible benefits of CME credits, reviewers strongly prefer non-monetary rewards, such as public acknowledgement of their contributions on the journal's website and detailed feedback to improve their academic skills [1]. Perhaps most compelling is the opportunity for reviewers to ascend to positions within the journal's editorial board, a recognition of their expertise and dedication to the field [1].



The journey towards enhancing reviewer participation and improving the quality of the peer review process is complex and multifaceted.

We here summarize several key strategies which have been identified to elevate review acceptance rates further and enhance the overall quality of the peer review process (Fig. 1). These include: (1) Provide a crystal clear scope: be clear about the journal’s aims, common grounds for rejection, and revision considerations like study design and ethics. (2) Step-by-step review guidance: offer a structured approach to peer review, from a quick initial read to a comprehensive evaluation focusing on scientific significance and ethical standards. (3) Empower through training: regular webinars or workshops can equip reviewers with the expertise needed to contribute meaningfully and possibly join the Editorial Board. (4) Rethink incentives: while financial rewards have their place, they’re not the be-all and end-all. Non-monetary perks like editorial board invitations, access to content, and recognition on the journal’s website can significantly boost motivation. (5) Leverage artificial intelligence assistance: a chatbot could revolutionize the review process by offering instant guidance on the journal’s scope, answering procedural queries, and providing real-time assistance during the review process. This digital ally could streamline the review process, making it more efficient and engaging for reviewers.

In this context, potential tools for reviewers might be useful, but may also be a threat if misused, and current discussion is focusing on the importance of regulating and acknowledging the use of Artificial Intelligence for the revision process as a matter of basic research integrity [4, 5], highlighted by communications from some journals to their reviewers’ board.

By embracing a holistic approach that addresses the needs and motivations of reviewers, the academic community can forge a more engaging, efficient, and rewarding peer review process. This endeavour serves to uphold the high standards of scholarly communication and fosters a culture of recognition and professional development among reviewers. As we navigate the challenges and opportunities of the peer review landscape, we must remain committed to nurturing academic discourse's integrity, diversity, and dynamism for generations to come.

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Declarations

Conflicts of Interest

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