External peer review, the review of a research manuscript by a peer expert of the field who is not a part of the editorial team, is the heart of the scientific research publishing process that ensures the propagation of the correct scientific evidence information. History of peer review is as old as the publication of research. Its prime aim is to improve the quality of research and add correct scientific evidence to the practice. Editors of biomedical journals particularly those from non-medical or non-specialty background tend to rely heavily on peer review to assess the worth of a research communication. Quality of a journal is highly dependent on the in-house and its external review process so much so that the rate of rejection of submitted manuscripts during the various steps of processing - initial assessment, review, revision etc. and the number of reviews and revisions, is often taken as a surrogate measure of the quality of a research publishing journal.\(^1\)

However, peer review has also proven to be the most unpredictable link in the chain of pre-publishing processing. There are many reasons for this.

First, there are not sufficient reviewers for the increasing number of submissions which in turn is due to greater awareness of research credentials requirement by all the faculty, serving forces professionals, even undergraduate medical students; and greater number of original research papers required for promotion and such like. Then there is a general dearth of good reviewers. A good reviewer - from an editor's point of view - is the one with sound technical expertise, efficient and clear decision maker with an optimistic, unbiased attitude. This combination is very hard to find. And it is the responsibility of the editor to find a suitable good reviewer for a particular research communication.

There is no lack of those with excellent command of their respective subjects but whether they have the time to review academic and research articles, the motivation and the aptitude for critical reading and analysis of research is another matter. This results in delay in the processing of articles which may be extremely annoying and frustrating for both the authors and the editors.

At Journal of the College of Physicians and Surgeons Pakistan (JCPSP), some articles have been sent to as many as 20+ reviewers without getting a response from any but the last reviewer and decision had to be made largely based on the in-house comments. This trend was also observed in a survey of Iranian editors.\(^2\) In an in-house audit of tracking record of articles submitted to JCPSP from January 2011 - June 2013, it was found that about 55% cause of processing lasting for over 180 days (our stated limit of processing) was due to delay in receiving comments from two external reviewers, followed by a 36% delays due to authors' non-compliance with the instructions for archival or statistical rectification or replying to the reviewers objections. The rest were caused by the non-submission of the authors' certification proforma, delaying the processing (unpublished data). We found that about two-thirds of the prospective authors would be satisfied with 30 days or less for peer review where the average review time reported was 80 days; only 9% would accept more than 6 months.\(^3\) Local editorial experiences identify similar urgency and expediency pressure from authors.\(^4\) One might choose to publish in a low-quality journal, for that very reason because it offers rapid reviewing and acceptance of articles with fast publication making it a major attraction for authors, particularly those with deadline for promotion.

This has many other related aspects. Whereas there has been an increasing emphasis on 'how to write a research manuscript' and many guides are available on that subject, there is minimal literature on 'how to be a good reviewer'. Just over a decade back, Pakistan Medical and Dental Council (PM&DC) published guidelines for editors, authors and reviewers of biomedical journals which was a commendable effort. Many journals adopted the structured guide given therein to guide their reviewers. However, it was seen that new editors sent the structured guidelines meant for reviewing original articles along with case reports and review articles, which were not relevant at all. So there is a need for training reviewers as well and a remarkable effort has taken off from the platform of PAME (Pakistan Association of Medical Editors) in this regard by conducting the first workshop for training reviewers targeting middle level faculty.

Another problem is identification of a good reviewer who is able to critically analyze a research and identify the true shortcomings with suggestions for its improvement without any hidden competing interest. While affiliation...
with an academic institute of repute and good personal research credit are said to be the predicting characteristics of good reviewers, this is by no means a hard and fast rule.

Then there should be motivation and reward for this contribution to science and practice for the reviewer. Reviewing a manuscript is usually an honorary service, despite being demanding and time-consuming and only a couple of journals in Pakistan offer honorarium to reviewers. JCPSP has been the local pioneer for this practice. One of our worthy readers recently suggested in an unpublished letter that journals should give financial incentive to reviewers to get speedy reviews. After the aforesaid audit for identifying the causes of processing delay at JCPSP, the honorarium already being paid to reviewers was not only raised but also linked to the quality and speed of review. Obviously, it was still not a sufficiently motivating amount since it did not markedly reduce the length of review in about a year of the implementation of the rise.

For academic services, it is more logical to have academic rewards. CPSP has started to award CME credits to our reviewers. A leading Medical University also gives CME credits to its Faculty and consultants for reviewing research articles. According to another worthy reviewer, selecting the best reviewer of the year and handing out a certificate to the effect or a monitory reward would be an encouragement. These are very practical incentives and need to be taken up by journals and academic institutes as well to motivate academia.

Efforts are underway for overcoming the flaws in the current peer review system. Coupled with motivational incentives, there is a need to train reviewers for identifying the flaws and disparity in different study designs, concepts and research execution and reporting. Other efficient complementing systems are suggested such as post publication peer review among others, however, traditional peer review system still needs to be further fortified.

REFERENCES