

Editorial

Scientific Editors: The roles, responsibilities and essential core competencies

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In many situations where scientific editors are appointed and called upon to perform their duties, it is assumed that their roles, responsibilities and the core competencies that they are expected to have, are well known and appropriately documented. Scientific Journals and their publishers would be expected to appoint such editors taking into account all these necessary requirements.

The roles and responsibilities of scientific journal editors are reasonably well known. As elucidated by the Council of Science Editors¹, these span across a very wide spectrum of duties ranging from providing guidelines to authors for preparing and submitting manuscripts, formulating a clear statement of the Journal's policies on authorship criteria, treating all authors with fairness, courtesy, objectivity, honesty while maintaining transparency, guaranteeing confidentiality, arranging peer review of articles, ensuring ethical conduct of all who are involved in the publication processes as well as dealing with misconduct. This is not a complete list and is only a record of the more important duties of an editor. As a very general rule, editorial responsibilities include those that involve authors, reviewers, publishers, advertisers and anyone else involved in the contents of the journal. The editors are ultimately responsible for anything and everything that appear in their journals.

To create and sustain journal content of good quality, an editor should be provided with an unambiguous written statement from the publisher which enumerates the editor's responsibilities and autonomy. Irrespective of the scientific field, editors ought to be given complete responsibility for editorial verdicts on individual manuscripts. The editor's right to editorial freedom may be supported by the mission statement of the journal, written editorial primacies as well as the aims and processes of success. An Editorial Board generally facilitates the work of the editor. Well organised lines of communication with all involved in publishing the journal is an essential commodity. A standard procedure to avert inappropriate influence on the editor by others and to handle skirmishes in an impartial and clear manner with the sole objective of conflict resolution and preservation of faith is also necessary.

An added sensitive area that has arisen with developments in science, technology and world-wide

exchange of research material is reflections on "dual use research" (DUR). This rather new component is best defined as research with a genuine scientific resolve that could be wrongfully used to pose a hazard to public health or national security or both. As defined by the United States National Science Advisory Board for Biosecurity (NSABB), dual use research of concern (DURC) is a subset of dual use research, elucidated *verbatim* as "that, based on current understanding, can be reasonably anticipated to provide knowledge, products, or technologies that could be directly misapplied by others to pose a threat to public health and safety, agriculture, plants, animals, the environment, and material"². Examples include awareness, products or skills that could be misused to generate or augment harmful effects of biological agents or poisons, disturb the immune potential of vaccines, increase transmission of harmful materials or alter biological compounds and toxins to make them resistant to clinical, therapeutic or agricultural interventions. The ultimate determining factor is the feasibility of the said research venture and its results boosting the vulnerability of a host population to some form of detriment. These possible connotations are more than likely to lead to a considerable and significant influence on the work of a scientific editor.

What about the core competencies that are required for proper functioning of a scientific editor? A scoping appraisal of the skills and requirements for scientific editors of biomedical journals had shown that most of the literature that contained recommendations on this issue was not research-based³. In fact, recommendations that are around have only been documented in position papers and in publications designed as guidelines for members of editor organisations^{4,5,6}. There is no previous record of any proper documentation of the required knowledge, skills, and characteristics, or the existence of any formal core competencies, based on well performed research, for the role of a scientific editor. In point of fact, publications on a set of core competencies, determined on a research based approach and deemed to be essential attributes of a scientific editor, were notoriously evident by their absence.

This glaring deficiency has now been corrected by an innovative research endeavour that has documented the core competencies for scientific editors of biomedical journals in the form of a consensus

statement⁷. In a well-designed study, incorporating an integrated knowledge translation approach to engage stakeholders in a consensus-based process to develop a minimum set of core competencies for scientific editors of biomedical journals, Moher *et al* have documented these basic minimal requirements⁷. The contents are based on information provided by a scoping review and editors' perspectives. A wide range of stakeholders and organisations involved in editorial work had taken part in this project. The authors identified 14 key core competencies, divided into three major areas, with each competency having a list of associated elements or descriptions of more specific knowledge, skills, and characteristics that contribute to its fulfilment⁷. The authors conclude that they believe these core competencies to be a baseline of the knowledge, skills, and characteristics needed to perform competently the duties of a scientific editor of a biomedical journal⁷. It would be a really worthwhile exercise for journals and publishers to have a very good look at the principles expounded in this ground breaking study.

It is now up to the journals and their publishers to ensure that these competencies are there in those whom they appoint as editors. The work of Moher *et al* should be the benchmark, among other considerations, on which the selection processes of editors of bio-medical journals should be based. When these core competencies are reviewed from a Sri Lankan national perspective, we believe that the medical journals incorporated into the Sri Lanka Journals On Line portal⁸ do have people of the necessary calibre who have been entrusted the tremendously important task of editorships of those publications.

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The author declares that there are no conflicts of interest.

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