

# Editor's Note

## *Who is an "Author" in Medical Publishing?*

Three vexing questions that researchers ask when considering writing a paper are: Who should be included as an author? Who should be first author? What is the appropriate order of the authors? Too often, these questions are raised after the research is complete and the manuscript is prepared. In some cases, the research team has changed over time; in others, longstanding departmental authorship "agreements" exist. This Editor's Note addresses some challenges created by authorship dilemmas. We do not claim to have all the definitive answers, but aim to increase awareness in the diabetes research community regarding authorship issues.

*Canadian Journal of Diabetes* updated its author guidelines in October 2006 to include the requirement for a signed statement regarding specific contributions of each author. This statement is required at the time of submission and is published with the manuscript under the heading "Contributions of Authors." This policy is consistent with the International Committee of Medical Journal Editors (ICMJE) guidelines, which were developed in 1997 and updated in 2004 (1). These guidelines have been adopted by many international journals and by the Council of Science Editors (2).

The ICMJE criteria to qualify as an author include: a) a meaningful contribution to the conception and design, or acquisition of data, or analysis and interpretation of data; and b) drafting the article or revising it critically for important intellectual content; and c) approval of the final version of the manuscript to be submitted (1). This statement implies that each author has participated sufficiently to take public responsibility for all or part of the work.

Publications are an important currency of academic life, affecting promotion, tenure, career awards and research grants. The rewards of authorship can be great, especially for the first author. Canadian academics are very familiar with the authorship conflict that arose at the University of Toronto with the Nobel prize for the discovery of insulin. Complexity of research teams has led to an increase—not a decrease—in authorship conflicts since that time. The comprehensive review of authorship by Claxton examines issues such as acknowledgements, rights and responsibilities, qualifications, order, duplicate publications, conflicts of interest, and corrections and retractions of manuscripts, and reviews the current published guidelines on authorship (3,4). Richard Smith, previous editor of the *British Medical Journal*, argued passionately in 2006 for use of the term "contributor" in the modern context of medical publishing rather than "author" (5).

Common to all authorship guidelines is intolerance of

"gift" authors and "ghost" authors. A "gift" author is one who is included but without substantial contribution to the work. The reasons for inclusion of a senior investigator as an author might be to raise the profile of the paper, to increase the chance of publication, to return a favour or to maintain a collegial relationship. Inclusion of a junior colleague might be to provide motivation or encourage team collaboration. Inclusion of a previous supervisor might be as a courtesy, because of departmental politics or, in some cases, because of coercion or intimidation. None of these reasons for authorship are legitimate. Canadian universities have policies to define academic fraud, including misrepresentation of authorship on publications, and policies for investigating and reporting it. These policies can usually be found on university websites under research governance; take the time to examine your institution's policy. Journal editors hope that disclosure of authorship contribution avoids this type of academic misconduct.

A "ghost" author is one who is contracted to write a paper, but whose name does not appear on the author list. Some authors legitimately hire professional writers to enhance the quality of the final manuscript. While this practice may be acceptable—similar to the role of statisticians or colleagues who provide materials or study subjects—these writers should not be listed as authors; rather, they should be listed in the acknowledgements.

Defining authorship at the outset of any large research project, including a description of the communication strategy for abstracts, manuscripts and press releases, can minimize later conflict and misunderstanding. The communication strategy must be able to adapt to changes in personnel, extend to community partners involved in the research and have a mechanism to arbitrate any disputes.

Modern systems for documentation of academic activities use sophisticated assessment tools to measure productivity, including the quality of research publications (journal impact factor) and order of authorship. This assumes that there is a standard order for authors, but there is not. The ICMJE guidelines indicate that this should be the joint decision of the authors. Historically, the first author was the person who did most of the work and wrote the first draft of the manuscript. The last author was the most senior author, and was often the supervisor of the first author. Increasingly, however, the ordering of authors is based on the size of the contribution. This has partly been driven by journals that limit reference citations to the first 3 or 4 authors. Granting agen-

cies now allow co-principal investigators, but there is no parallel mechanism for recognition in publishing. Order based on the descending size of the authors' contributions raises the problem of determining the relative size of the contribution of team members who contributed significantly to the execution of the study, compared with others who made a significant intellectual contribution. Another problem is created when graduate students move on to new positions at different institutions.

One solution to this problem is a faculty policy stating that the person who wrote the first draft of a manuscript remains the first author through to publication of the manuscript (6). None of these problems are easy to resolve and ultimately the inclusion and order of authors must be decided by consensus, best planned at the outset of the project.

The method of disclosure of author contributions chosen by *Canadian Journal of Diabetes* is a detailed text description outlining each author's role, which is used by a number of journals. Other journals use checklists or questionnaires. Although the format of the disclosure may affect the number and type of contributions reported by authors (7), we believe that a signed disclosure of each author's contribution will ultimately improve communication, fairness and equity in academic advancement.

In our current world of academia driven by "bibliometrics" (6), we must be vigilant in protecting scholarly integrity by continuously refining our systems for academic advancement and rewarding success. Ensuring that author contributions are clearly documented is one step forward in transparency for academic recognition.

Heather J. Dean MD FRCPC  
Editor-in-Chief  
Canadian Journal of Diabetes

Noni MacDonald MD FRCPC  
Senior Editor, Canadian Medical Association Journal  
Co-Editor-in-Chief, Pediatrics and Child Health

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