

Becoming a peer reviewer

Engaging in sharing and gaining knowledge

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*A little learning is a dangerous thing;
Drink deep, or taste not the Pierian Spring:
There shallow draughts intoxicate the brain,
And drinking largely sobers us again.*
Alexander Pope, *Essay on Criticism*

If research is defined as “organized curiosity” and the dedication of Canadian family physicians to lifelong learning is observed, it can then be assumed that, in order to provide the best possible care, every member of the College of Family Physicians of Canada is a part of the family medicine research continuum. College members engage with the research continuum in multiple ways: reading research papers; critically appraising the literature; applying or utilizing evidence in practice; asking and systematically answering a clinical or research question; participating in a practice-based research network; teaching about evidence and research; or being a family medicine researcher.¹

Thinking critically about what and how information is being presented is a core competence within clinical practice. Given that family medicine is the cornerstone of the health care system in Canada,¹ knowledge and awareness of family medicine research is part of the vision articulated by the College for a stronger, more robust, patient-centred system. Likewise, learning about and engaging in peer review will build and enhance skills needed in an era of ever changing technology and information.¹

Why read research articles?

There are many reasons to read research articles, but the most important is to have up-to-date, valid, clinically relevant evidence to guide optimal patient-centred care.² Being able to assess if a research article does or does not have merit frequently leads to discussions with colleagues and interdisciplinary members of the primary health care team. Reading research articles has the potential to enhance one’s knowledge and, in turn, encourages each of us to provide evidence-based or evidence-informed patient-centred care. The ability to critically evaluate research articles, especially those that directly apply to patient care, must be a core competence of all family physicians: It is one of the fundamental ways of engaging with family medicine research. Most family physicians have exposure to critical appraisal skills during their training, but

participating in the peer-review process is an important, yet often underused, way to embed and enhance those skills.

What is peer review?

Peer review is the thoughtful critique by peers (one or more people with similar competence to the authors) of articles that have been submitted to the journal by individuals seeking to publish their thoughts, ideas, and research results or findings. Because unbiased, independent, critical assessment is an intrinsic part of all scholarly work, including scientific research, peer review is an important extension of reflective and scientific processes.³ Peer review is the internationally accepted benchmark for ensuring quality and excellence in scientific research.⁴ It is a process that is much more than an editing function of ensuring clarity and grammatical correctness of the manuscript. It is about ensuring that the conclusions presented by the authors arise from the results or findings.

What is the purpose of the peer-review process?

The privilege that society grants to a “profession” carries with it the responsibility to use its special knowledge and reserved skills in the best interests of society and its citizens. Embedded in this social contract is the obligation of members of the profession to ensure that their knowledge and skills are of the highest order and are applied selflessly and well. Self-assessment through reflective practice is a necessary but not sufficient mechanism to ensure this. A web of peer review, both formal and informal, is society’s best way of ensuring ongoing improvement in the care its citizens receive. The foundation for this quality is the knowledge we use every day. The purpose of peer review is to ensure excellence, in this case in the presentation of new knowledge or the presentation of old knowledge in a new way, in the form of a publishable manuscript.⁵ The peer review system is designed to ensure accountability not only to funding sources but also to the research community and those who read research articles. Peer review is carried out by individuals or committees that are familiar with the content and the research methods used and are knowledgeable in the field being presented in the article. They should also be capable of providing feedback that is

timely, specific, constructive, and fair so that colleagues can constantly learn and improve.

What is the value of the peer-review process?

Although the value of the peer-review process is widely debated, the process is meant to facilitate the fair consideration of an article by members of the discipline and the research community.^{6,7} In addition, it helps editors and editorial boards to decide which articles would be most suitable for the journal, in this case *Canadian Family Physician* (CFP). Peer review often helps authors and editors to improve the clarity of the issues being raised and the ways of reporting the outcomes that have evolved from answering the research questions.

What are the responsibilities of the editors and Editorial Advisory Board?

As outlined by the International Committee of Medical Journal Editors (ICMJE), it is the responsibility of the journal to ensure that processes are in place for the selection of appropriate peer reviewers.⁸ An appropriate reviewer would be an individual who has expertise in the content area or in the design or methods used in the article. It is the responsibility of the editor to ensure that reviewers have access to all materials that might be relevant to the peer review of the article. In addition, she or he must ensure that the comments from those who have completed the peer review are properly assessed and interpreted in the context of their declared conflicts of interest.⁸

The ICMJE indicates that a peer-reviewed journal like CFP is under no obligation to send submitted articles for peer review or to follow the recommendation (favourable or negative) provided by the individual who undertook the peer review.⁸ The editor of a journal is ultimately responsible for the selection of all its content. As a result, editorial decisions should be based on the relevance of an article to the journal and on the article's originality, quality, and contribution to the evidence for important clinical and research questions. Thus, decisions might be informed by issues unrelated to the quality of an article, such as suitability for the journal.⁸ An editor can reject any article at any time before publication, including after acceptance if concerns arise about the integrity of the work.

In addition, the ICMJE says that journals might differ in the number and types of articles that are sent for peer review; the number and skills of individuals sought to participate in the peer-review process; whether the review process is open (reviewers know who the authors of the article are) or blinded (authors are unknown to the individuals participating in the peer-review process); and other aspects of the review process. In the case of CFP, every physician is considered eligible to participate in peer review, and most CFP reviewers are physicians practising family medicine or other specialties.⁹ Many are also engaged in research,

medical writing, or teaching. *Canadian Family Physician* depends upon peer review to ensure that the material published is accurate and relevant,⁹ and there is a process in place for responding to appeals and complaints, thereby ensuring transparency and fairness.⁹

Editors are expected to notify those individuals who participated in the peer-review process about the decision on the article (accept or reject), as well as to acknowledge the contribution of those individuals that have participated as peer reviewers for the journal.⁸ Editors are also encouraged to share the comments from all individuals that participated in the peer review of a specific article as a way of developing and enhancing the capacity of individuals participating in the peer-review process.⁸ This was emphasized by a peer reviewer who stated:

It has always been my experience that the comments from the editors helped to highlight areas where I should learn more before undertaking the next peer review or validated my thoughts and reflections on the article which I was not able to clearly articulate.

What are the responsibilities and skills required of individuals doing peer review?


Articles submitted to a journal are considered to be confidential property of the authors. Therefore, it is the responsibility of the individual undertaking the peer review not to discuss the content of the article with anyone. Questions regarding the process can be directed to the editorial team. Individuals who agree to be peer reviewers are expected to respond promptly to requests to review and to submit reviews on or before the deadline date agreed to unless there are extenuating circumstances. If the peer reviewer is unable to respond or complete the review, it is important to contact the editorial team before the deadline to make alternate arrangements. All comments provided by peer reviewers should be constructive, honest, respectful, and reasonable.

Those who agree to do a peer review are expected to declare their conflicts of interest and excuse themselves from the peer-review process if a conflict exists or if they are unacquainted with the methods used or the analysis undertaken.^{8,9}

Conclusion

Becoming a peer reviewer for family medicine journals such as CFP is a great way to engage with family medicine research and to embed, enhance, and maintain core critical appraisal skills. Most family physicians engage with research as readers and many have the capacity to engage further by becoming peer reviewers. Peer review can be daunting at the beginning, but the time required is modest, the skills practised and acquired are valuable, and most journals provide the support and the tools to facilitate the process. If you are interested in becoming

a peer reviewer for *CFP*, more information is available online (www.cfp.ca/site/misc/cfp_authors.xhtml).

The side benefits of this modest investment of time are the many joys of our profession: the fun of learning; the pleasure of working with colleagues; the ability to earn Mainpro credits; and the confidence that comes from being the best physician you can be. 

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Competing interests

None declared

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Hypothesis is a quarterly series in *Canadian Family Physician*, coordinated by the Section of Researchers of the College of Family Physicians of Canada. The goal is to explore clinically relevant research concepts for all *CFP* readers. Submissions are invited from researchers and nonresearchers. Ideas or submissions can be submitted online at <http://mc.manuscriptcentral.com/cfp> or through the *CFP* website www.cfp.ca under "Authors and Reviewers."

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