

# Medical research and social media: Can wikis be used as a publishing platform in medicine?

SALLY MURRAY, DEAN GIUSTINI, TAREK LOUBANI, STEPHEN CHOI, ANITA PALEPU

The authors are on the editorial team of *Open Medicine*.

**T**HIS PAST MONTH MARKED AN EXCITING DEVELOPMENT at *Open Medicine*: the launch of the *Open Medicine* wiki. The first publication to be housed on the wiki is a scoping review of studies examining the use of asynchronous telehealth<sup>1</sup> by Deshpande and colleagues. The interactive article allows users to log in and edit, delete or add content to the review and to look at changes other users have made to the document.

Why are we using wiki technology as a publishing platform? Wikis enable a network of users to edit documents collaboratively and on an ongoing basis. This may be particularly relevant to scoping and systematic reviews, which, depending on their area of focus, can quickly become outdated as new studies are published.<sup>2</sup> A wiki — a potentially revolutionary tool for knowledge transfer — makes it possible to keep reviews as current and relevant as possible. Just as knowledge evolves in medicine, a wiki evolves as new evidence emerges and is incorporated into it.

Providing authors and readers with the means to update documents has rarely been done by biomedical publishers, despite some clear advantages. First, updates are publicly available as soon as they are incorporated into the wiki. Second, wikis create a centralized platform for easy editing. Third, they offer their own form of post-publication peer review in an open space where readers can see what changes have been made to a document and — if anonymous editing is prohibited — who made those changes; consequently, contentious points undergo close scrutiny and monitoring. It is important to note that as the authorship of the article expands to those contributing to the wiki, responsibility for the content expands as well. “Peers,” in this sense, are defined as those having adequate knowledge of an area to make responsible contributions.

However, unlike three popular medical wikis — AskDrWiki, Ganfyd and Medpedia — *Open Medicine* will not limit contributions to qualified biomedical researchers, clinicians and experts. Contributors to the

wiki may be patients who have undergone telehealth procedures, or health care practitioners who have used those procedures. Such contributions may lead to a re-evaluation of how credible research, objective reporting and intellectual rigour are defined. Keeping the *Open Medicine* wiki open to everyone is an experiment, and we watch with interest. Some medical wikis ask contributors to send copies of their qualifications, something that not everyone is prepared to do. We have decided not to verify the credentials of contributors, since this can be onerous and intrusive, and may limit user participation.

The option of allowing anonymous editing on *Open Medicine*'s wiki files triggered debate within our editorial team. As an open access journal, we are committed to removing barriers to shared medical research, and there is no doubt that permitting anonymous editing on the wiki would increase participation levels. However, as we have noted, authorship and responsibility are linked, and although anonymous contributors do forego credit for their work, they are also abdicating their responsibility for content. Moreover, anonymity allows participants to bypass the declaration of competing interests that is essential to credibility and public trust. Ultimately, anonymous editing contravenes the guidelines on authorship, peer review and competing interests set by the International Committee of Medical Journal Editors and the World Association of Medical Editors.<sup>3,4</sup> We therefore require all contributors to state their name and affiliation (if any) and to complete a statement of competing interests before they contribute to the *Open Medicine* wiki; this information will appear on the site. Having said this, we welcome your thoughts on whether, and how, anonymous editing can be safely incorporated in the future.

It is important to acknowledge the guidelines and protocols that researchers have developed to improve the reporting quality of systematic reviews. *Open Medicine* endorses the new PRISMA Statement, as it did the previous QUOROM guidelines. It may be a

challenge for a systematic review that is updated on a wiki to adhere to these protocols, and if it is, the usefulness of the review may be compromised.

This new wiki provides an opportunity to clarify procedures around the use of wikis in medical publishing and to determine where boundaries should be set with respect to using social media and large-scale, open editing of medical research articles. We realize that establishing procedures that ensure accuracy, quality and safety is critical before any systematic reviews of therapies for disease states are placed on wikis that can be edited by any identified reader. We also recognize that the openness associated with a wiki makes it a controversial and even problematic platform.<sup>5</sup> Moreover, some say that wikis should not be used for medical research because the highest standards of accuracy must be maintained to ensure human safety.<sup>6</sup> However, we believe that by instituting appropriate guidelines on wiki use, public trust in medical research can be maintained and the body of scientific knowledge extended in new and exciting ways. As with all *Open Medicine* publications, the scoping review by Deshpande and colleagues underwent rigorous peer review and editing before publication. We have published and archived the baseline version so that subsequent iterations can be compared against it. This will allow us to identify how the wiki is used, and what impact this technology has on updating scoping and systematic reviews. We may publish future versions of the article in a traditional format when, or if, it becomes materially different from its original version.

To protect against spam and dangerous fabrication, Deshpande and colleagues will monitor changes to the wiki. Unresolved disputes will be mediated by the *Open Medicine* editorial team and may involve consultation with peer reviewers. Our use of Web 2.0 tools at *Open Medicine* reflects our commitment to innovative medical publishing. As our use of open source software shows,<sup>7</sup> we take seriously our mandate to push the boundaries of new technologies for publishing and knowledge generation. As such, we thank Deshpande and colleagues, and their study sponsors, the Canadian Agency for Drugs and Technology in Health, for the idea to create the wiki and their support in placing it online. We acknowledge the contributions of the People, Health Equity and Innovation Group at the Centre for Global eHealth Innovation at the University of Toronto and University Health Network, who participated in the study design and who are responsible for its evaluation.

We invite authors of future systematic and scoping reviews to post their work online in a similar wiki format. And we invite you to join *Open Medicine* in exploring other ways we can improve or even change medical publishing; we are limited only by your ideas and willingness to share them.

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**Citation:** Murray S, Giustini D, Loubani T, Choi S, Palepu A. Medical research and social media: Can wikis be used as a publishing platform in medicine? *Open Med* 2009;3(3):121-122

**Published:** 21 July 2009

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