

## Open Medicine at five years: Onwards and upwards

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The launch of *Open Medicine* five years ago combined traditional scholarly values with modern norms of open access to information. Working at the Canadian Medical Association Journal, many of us observed how the influence of revenue-driven and professional interests could violate editorial independence in scholarly publishing (1). We had an opportunity to create a different kind of journal and our re-emerging editorial team adopted the principles of open access to research and editorial independence from commercial and special interests. We created a journal built on technological innovation, collaborative education and enterprise, and giving back to the open source software system as well as the open access scholarly publishing community. In our first month, the journal was visited by tens of thousands of readers, while attracting press coverage from across Canada. It enabled *Scientific American* (2), as well as a number of bloggers, to pick up one of its initial papers, which compared health care expenditures and outcomes in the U.S. and Canada (3), a trend in media and community outreach success that has continued to our most recent publications (4).

We think *Open Medicine* has been a significant achievement. The Journal provides an independent forum to debate issues related to medical practice, health research and health policy for the Canadian and international medical community. Open medicine is a significant achievement by our editorial team and all of our supporters, especially as almost all processes are voluntary, and rely heavily on our team's dedication and belief that medical research findings should be accessible to all. With new opportunities on the horizon, we look to the next 5 years with a sense of optimism and excitement. Although our content has only been appearing in MEDLINE for one year, we have an H-index of 12. Since our launch we have received 508 manuscript submissions and published 146

individual articles (as of April 24, 2012), including in-house editorials, 50% of which received generous media coverage.

There are many accomplishments to boast about. *Open Medicine's* commitment to editorial independence allowed us to provide frank commentary and analysis on relevant conflict-of-interest issues concerning the appointment of Dr. Bernard Prigent (Pfizer Inc. executive) to the Canadian Institutes of Health Research Governing Council (5, 6) and the position of Barbara McDougall, who was chair of board for the International Development Research Agency and simultaneously on the board of Imperial Tobacco (7). Both situations sparked national and international discourse, with *Open Medicine* actively contributing to the expressions of concern.

Our editorial independence has also allowed us to flexibly respond to current issues in biomedical publishing. Examples include publishing explanatory editorials on policies such as ghostwriting (8), financial conflict of interests (9, 10), and systematic review registration (11). We have endorsed and implemented the recommended reporting guidelines from the EQUATOR Network, which are intended to improve the quality of reporting of health-related research (12) for use by our authors and peer reviewers. *Open Medicine* participated in the simultaneous, broad publication of the PRISMA guidelines (for systematic reviews and meta-analysis) in 2009 (13) and the CONSORT 2010 update (randomized controlled clinical trials) (14) as a step in increasing the uptake of these guidelines among authors, peer reviewers and editors.

*Open Medicine* has contributed to technical advances and experiments key to the transformation of healthcare publishing. *Open Medicine* is the first refereed journal to publish the content of a scoping review (15) and a systematic review with meta-analysis (16) in a wiki format. Both articles were peer reviewed, revised and edited prior to publication on our site in html and PDF format. We concurrently created a wiki version of these reviews in order to push the

boundary of publishing content as “living documents” to be edited by the scientific and broader community. We have been engaged in the development and sharing of additional code to optimize the commenting system for our published articles and have customized a program designed to help render the journal’s articles suitable for submission to PubMed Central, which requires meeting National Library of Medicine standards

([http://www.nlm.nih.gov/pubs/factsheets/j\\_sel\\_faq.html](http://www.nlm.nih.gov/pubs/factsheets/j_sel_faq.html) Accessed April 20, 2012). All of this was accomplished through the use of free and open source software (17, 18) and in turn can be used to improve the functionality of other publications. We have contributed to an easing of the learning curve in this form of publishing, which has been successful in many areas outside of biomedical publishing, and have outlined the process, issues and responsibilities involved in turning a research article into an open access wiki (19). These technological innovations have paid off: Web traffic indicates increasing readership of the journal. The traffic to the *Open Medicine* website has steadily risen over time as presented in Table 1.

Despite our voluntary nature, *Open Medicine* has mentored 3 editorial fellows, all of whom have graduated to our editorial team. *Open Medicine* fosters a student peer review group based at the University of Calgary. Under the mentorship of editors based in Calgary, a group of graduate students in the Department of Community Health Sciences has been involved in the peer review process for the Journal. The group meets on an ad hoc basis to review manuscripts submitted to *Open Medicine*; the students independently review the manuscript before meeting to discuss their comments and reach a consensus on recommendations for the editors. Overall, the students have found this experience rewarding because it gives them insight into the peer review and editorial process, helps them develop their critical appraisal skills, teaches them about aspects of health research that may be beyond their current domain of study and refines their own manuscript writing (20). The Journal also supports the *Open Medicine* Clinical Audit prize at the Notre Dame University Australia. The winner is able to work with an *Open Medicine* editor to develop their clinical audit report for publication

in a peer reviewed journal, be supported through the peer review process, and to attend an editorial meeting to learn how and why manuscripts are selected by a journal's editorial team.

Open access may enable immediate presence but we have struggled to create a sustainable economic model for publishing the journal. The editorial team is an all-volunteer, collaborative, professional editorial effort. We have received donations, Canadian research library support and, more recently publication fees at a reduced rate compared to other open access and hybrid journals, which allow us to produce high-quality articles by paying for professional copy editing and article production. At this point, the *Open Medicine* team is considering a variety of economic models aimed at sustaining and expanding this open access journal, including leveraging developing partnerships with like-minded organizations.

We recognize that we are not alone in taking our principled stand. *PLoS Medicine*, which was first issued in 2004, continues to be an inspiration in its open access policies and independence in terms of professional associations and medical advertising. But *Open Medicine* has been able to demonstrate how this re-assertion of scholarly principles can happen on a far more modest and immediate scale, born of an urgent national need for an alternative publishing model in general medicine (21). Our peer review and editorial work adds value to the research we publish through our personal attention, careful copy edit, high quality production, individualized media attention, and wide dissemination by allowing authors to retain copyright of their work. We remain committed to these values, and look forward to forging new partnerships that will leverage our role as the only open access, adaptable, peer-reviewed general medical journal in Canada. We will continue to advocate for the growing recognition of policies that are transforming the landscape of health research. Open Medicine is more than a repository for information – we offer a voice for the healthcare values we believe in: equality, accountability and accessibility. And we want our platform to reflect the real health challenges and solutions in Canada and around the world.

Onwards and upwards.

**Table 1: Snapshot of website traffic to Open Medicine**

Date	Unique sites	Monthly hits
March 2009	8,092	181,971
March 2010	17,174	350,554
March 2011	17,206	375,756
March 2012	18,435	403,006

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