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## **Closing Open Medicine**

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DESPITE OUR PASSION FOR MAKING HIGH-QUALITY medical information freely and widely accessible, we always knew it would come down to sustainability. This is our final editorial in *Open Medicine*. It has been an inspiring journey for all who have been involved in the journal's inception, launch, and day-to-day operations. Around the idea that there is a need for unbiased, publicly accessible platforms for the dissemination of medical research and discussion, a lively community gathered. There were great debates, wonderful authors and articles, excitement and enthusiasm for what was

possible, and freedom from the constraints of paper

and for-profit ownership. We are closing Open Medi-

cine knowing that we have made a meaningful contri-

bution to something bigger than ourselves, and that our

efforts have helped to change the landscape of medical

publishing.

Open Medicine was born from our refusal to stand behind blatant interference with editorial independence in biomedical publishing.<sup>1,2</sup> Such interference is a recurring theme in medical publishing, a fact hinging on the vested interests of medical journal publishers (typically, medical associations and societies, who sometimes find themselves at odds with outspoken editors) and of their advertisers (mainly, pharmaceutical and medical device companies). Our desire to free ourselves from this model launched us quickly and passionately into the emerging and evolving world of open access.¹ Our presence caused other journals to change, to become more open, and to evolve with the times. Although there is some debate about whether these efforts are open enough (*Open Medicine* is both open access and open source, for instance), they have helped to make information access more equitable.

While inspiring, the process was also chronically frustrating. Despite everyone's best intentions, it was challenging for a small team to keep stoking the interest and engagement of the general academic community, and it was difficult to recruit members to our editorial board and board of directors who could provide the kind of hands-on involvement that our small but ambitious operation required. Academic medicine has been slow to recognize the importance of stepping out of the comfort zone of traditional publishing: unfortunately, the benefits of disseminating information freely still takes second place to the allure of publishing in a prestigious forum, however difficult that forum may be for readers to access. By the end, despite continual efforts to deepen our bench strength, there were few stalwart supporters. Perhaps our mistake was to focus our recruitment efforts too much on those who were well established in their careers, rather than on up-and-coming authors and editors, who might have been more likely to embrace new possibilities.

The work was also exacting. Launching and running a medical journal is more work than it might seem.<sup>3</sup> Based on our previous experiences, we thought we might need operational funding of about \$3 million dollars per year. Ultimately, by dint of optimism and volunteerism, we were able to run the journal and publish articles for a tiny fraction of that. We built upon the Public Knowledge Project's Open Journal System, the open source platform whose development was led by our friend and publisher John Willinsky, and which now hosts over 7000 open access journals in 105 countries.4 We were also accepted for indexing in PubMed after three short years; this was no small achievement.<sup>5</sup> We had immense support from Canadian research libraries, thanks to their own commitment to making knowledge freely available and their frustration with ever-escalating fees for bundled journal subscriptions. We also had contributions from our own colleagues and institutions to build on in our early years. Finally, thousands of volunteer hours were generously given Editorial Kendall et al.

to journal logistics, technical support, and web design, not to mention what accrued from the editorial and communications expertise of team members and the contributions of our valued bank of peer reviewers.

The publishing landscape we are leaving is very different from the one we entered seven years ago. The Canadian Institutes of Health Research have adopted, and now strengthened, an open access policy for their publicly funded research and are collaborating with the Social Sciences and Humanities Research Council of Canada and the Natural Sciences and Engineering Research Council of Canada to develop a tri-council policy that will broaden and further reinforce these requirements. Many Canadian universities now have institutional repositories to help their faculty meet these open access requirements, as well as author funds to help authors pay publication charges that allow their work to be freely (if not openly) available. Most researchers now recognize that high-quality open access publications require the same level of peer review and editorial input as traditional journals.

Despite these achievements by *Open Medicine*, and progress in the landscape of scientific publishing more generally, further change is needed. First, while there has been a substantial shift toward making articles freely available, whether in scientific journals or in institutional repositories, many of our colleagues still do not understand that, in view of the restrictions imposed by traditional copyright licences, "free to read" doesn't necessarily mean free to distribute or to create derivative works. Second, budget lines for open access fees in grant funding are rarely adequate, are often incorporated with skepticism, and are generally used with reluctance. Third, many traditional toll-access publishers have capitalized on the open access movement by adopting the appearance, but not the spirit, of open access, charging hefty subscription fees to individuals and libraries while offering free access after charging a substantial fee to their authors. This double-dipping leaves little incentive to adopt new models and further entrenches an unfavourable view of open access. Finally, the onslaught of predatory journals has added confusion to the mix by causing authors to associate publication charges with unscrupulous behaviour.<sup>6</sup>

Policies adopted to ensure access to research findings for those who are unable to pay have largely failed because of a lack of enthusiasm in the high-income world. The WHO-administered Health InterNetwork Access to Research Initiative (HINARI) is a collaboration between commercial publishers and the WHO that provides researchers at institutions in low-income countries with free access to medical literature published by participating journals. Unfortunately, in 2011 Elsevier withdrew its journals, with little warning, in Bangladesh, Kenya, Nigeria, and Tanzania as opportunities for commercial licensing developed in urban areas, even though there are many places in those countries where the costs are prohibitive. After a substantial outcry, the access via HINARI was reinstated and confirmed—but only until 2015. Donor solutions lack sustainability and are governed by market forces that restrict information, as illustrated above. If more journals were open access, there would be no need for HINARI.

Had we a crystal ball in 2006, what would we have done differently? There is no question that financial sustainability has been foremost in our minds. Although we have attempted to pay modest stipends for journal operations, neither our scientific editors nor our editors-in-chief have been compensated, and most of our administrative and production staff have volunteered much of their time. For fear of turning away authors, we delayed instituting publication charges until quite late in the game. As researchers, we struggled to be good fundraisers, communication specialists, information technology and web developers, and public relations experts. As busy doctors, we struggled to create space in our lives to accommodate our enthusiasm for what was possible.

As scientists ourselves, we would have liked to experiment more. We published the first wiki-based systematic review,<sup>8</sup> formed student peer review groups,<sup>9</sup> and last month published the first Wikipedia-based clinical article in a peer-reviewed format.<sup>10</sup> We would have loved to experiment with novel forms of peer review, making them open, for instance, or recording our editorial discussions, but getting and writing high-quality peer reviews is hard work. We would have liked to explore more options to use paid advertising that is not conflict-ridden. We would have especially liked to develop strategies for reader engagement by providing more opportunities for rating, commenting, and post-publication dialogue.

We are grateful to our board of directors and editorial board for their support over these years. We are especially thankful to the many authors who entrusted their work to us, and we are proud to see their articles archived in PubMed Central, on MEDLINE, and on the *Open Medicine* website. They are the reason we embarked on this journey, and we will continue to advocate for accessibility, transparency, and accountability

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in health care publishing in Canada. We hope *Open Medicine*'s readers and authors will as well.

It is with sadness that we write these last sentences. We survey the landscape of publishing in general and see questions and struggles everywhere. If articles are made freely available, how does one assign them value? How can one capture the dozens of hours that went into reviewing, editing, and publishing an important article? Are there better ways to do biomedical research and report it, thus enhancing its ability to improve health and health care? We know there are. Although we are not accepting submissions for the foreseeable future, our enthusiasm for what gathered us around Open Medicine remains, and a few of us are exploring possibilities about how we might continue, re-visioned. In that spirit, we will keep our eyes intently focused on the horizon, alert to new opportunities to make medicine as open as possible, so that no one is excluded from the benefits of medical knowledge and research.

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